



I-80/SR 65 Interchange Improvements

Transportation Analysis Report

Placer County, CA

03-PLA-80-PM 1.9 to 6.1
03-PLA-65-PM R4.8 to R7.3

EA 03-4E3200
Project ID 0300000696

August 2014



PLACER COUNTY
TRANSPORTATION
PLANNING AGENCY

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August 2014

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This report was prepared under my direction and responsible charge. I attest to the technical information contained herein and have judged the qualification of any technical specialists providing engineering data upon which recommendations, conclusions, and decisions are based.



David Stanek

8/15/14

David Stanek, P.E.
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Date

RS11-2872

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Chapter 1. Introduction

This transportation analysis report was prepared for the Interstate 80 (I-80)/State Route 65 (SR 65) interchange improvements project. The report contains the results and findings of the traffic forecasts and traffic operation analysis, while the detailed analysis calculations are compiled in the separately bound Technical Appendix.

1.1. Purpose of the Transportation Analysis Report


The purpose of this report is to analyze project design alternatives and their effects on the highway and arterial transportation network. The report focuses on a comparison of alternatives that are each designed to improve future traffic operations and safety at the I-80/SR 65 interchange consistent with the purpose and need statement. Portions of the analysis results will also be used to comply with environmental impact analysis requirements for the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).

1.2. Project Description

The proposed project is located at the I-80/SR 65 freeway-to-freeway interchange in Placer County. Figure 1 shows the project vicinity and location map. The project would increase capacity at the interchange with the following actions.

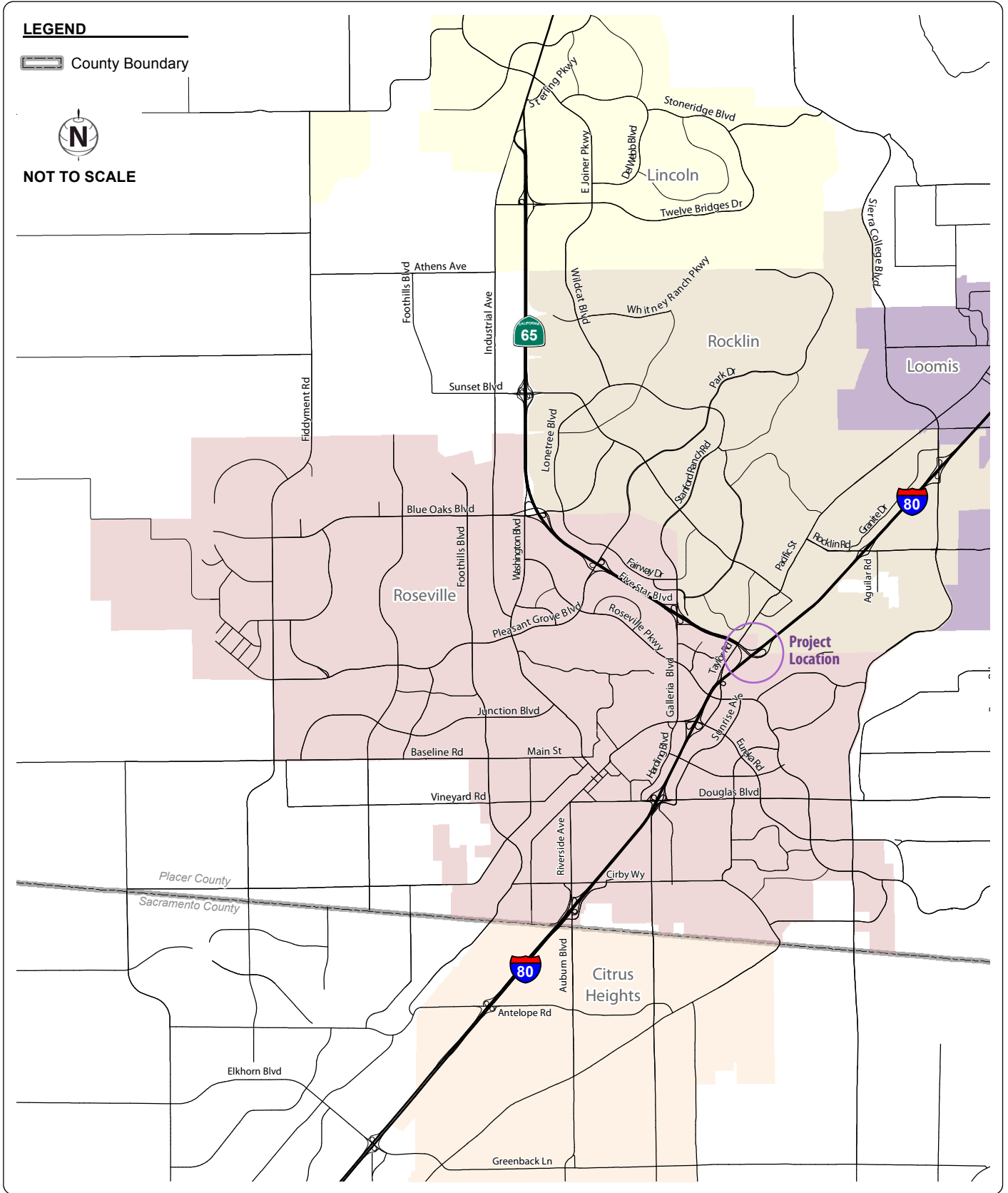
- Replace the eastbound I-80 to northbound SR 65 two-lane loop off-ramp with a three-lane direct flyover ramp.
- Construct new median direct connectors from eastbound I-80 to northbound SR 65 and from southbound SR 65 to westbound I-80. The median connectors would be restricted to high occupancy vehicles (HOVs) – vehicles with two or more occupants, motorcycles, or registered “Clean Air Vehicles” – during the AM and PM peak periods (weekdays 6:00 to 10:00 AM and 3:00 to 7:00 PM) to conform to HOV lane operation elsewhere in the Sacramento region. During off-peak times, the HOV lane would be available to all vehicles (except commercial trucks, which are restricted to the outside lanes).
- Widen the southbound SR 65 connector to westbound I-80 to three lanes, widen the southbound SR 65 connector to eastbound I-80 to two lanes, and widen the westbound I-80 connector to northbound SR 65 to two lanes.
- Taylor Road would be widened to four lanes from Roseville Parkway to the Rocklin city limits.

LEGEND

 County Boundary



NOT TO SCALE



Widening or expansion of the adjacent freeway mainline segments and interchanges would be needed to facilitate some of these changes.

1.3. Project Purpose and Need

The current purpose and need statement for the I-80/SR 65 interchange improvements project is provided below.

The purpose and objectives of the project are listed below:

- Upgrade the I-80/SR 65 interchange and adjacent transportation facilities to reduce no-build traffic congestion.
- Upgrade the I-80/SR 65 interchange and adjacent transportation facilities to comply with current Caltrans and local agency design standards for safer and more efficient traffic operations while maintaining and, if feasible, improving the current level of community access, at a minimum.
- Consider all travel modes and users in developing project alternatives.

The project is needed for the following reasons:

- Recurring morning and evening peak-period demand exceeds the current design capacity of the I-80/SR 65 interchange and adjacent transportation facilities, creating traffic operations and safety issues. These issues result in high delays, wasted fuel, and excessive air pollution and greenhouse gas emissions, all of which will be exacerbated by traffic from future population and employment growth.
- Interchange design features do not comply with current Caltrans design standards for safe and efficient traffic operations and limit existing community access to nearby uses.
- Travel choices are limited in the project area because the transportation network does not include facilities for all modes and users consistent with the complete streets policies of Caltrans and local agencies.

1.3.1. Logical Termini and Independent Utility

Project limits for proposed improvements were developed through an iterative process involving engineering design and traffic operations analysis. Preliminary design concepts were tested with the traffic operations analysis model to evaluate how lane transitions and weaving influenced peak hour conditions. Refinements were made to ensure that mainline lane balance was logical and that transitions did not cause unacceptable traffic operations such as extensive queuing or reduced speeds.

1.4. Project Alternatives

The concept presented in the PSR replaced the eastbound to northbound loop ramp with a flyover ramp and added median HOV ramps from eastbound to northbound and southbound to westbound. Through an alternative generation and screening process, the project development team (PDT) developed and reviewed several alternatives. The final set of alternatives is listed below.

1. Taylor Road Full Access Interchange
2. Collector-Distributor System Ramps
3. Taylor Road Interchange Eliminated
4. Transportation System Management (TSM)
5. No Build

Each of the alternatives is described below.

The Taylor Road Full Access Interchange Alternative includes the I-80/SR 65 interchange expansion with a new Taylor Road interchange that has all four movements to and from I-80. A detailed drawing of this alternative is shown in Figure 2. The Taylor Road interchange would be co-located with the I-80/SR 65 interchange. The ramp connections to eastbound I-80 would be in approximately the same location as the existing SR 65 connector ramps. The westbound ramps would have a Tight Diamond configuration. To fit the Taylor Road ramps within the I-80/SR 65 interchange requires adjusting the location of the freeway-to-freeway connectors compared to the Collector-Distributor System Ramps and Taylor Road Interchange Eliminated Alternatives. Due to the close ramp spacing, traffic to and from the Eureka Road/Atlantic Street interchange on I-80 and the Galleria Boulevard/Stanford Ranch Road interchange on SR 65 would be prohibited from using the HOV direct connector ramps at the I-80/SR 65 interchange.

Figure 3 shows the Collector-Distributor System Ramps Alternative. In this alternative, the existing Taylor Road ramps are maintained. In the eastbound direction, a collector-distributor roadway would be constructed between the Eureka Road/Atlantic Street, Taylor Road, and SR 65 interchanges. The eastbound to northbound connector would start as two lanes at the I-80 mainline and a third lane would be added from the collector-distributor roadway. On-ramp traffic from Eureka Road/Atlantic Street would join the eastbound mainline between the SR 65 off-ramp and on-ramp connectors. In the westbound direction, the Taylor Road on-ramp would be maintained in its existing location.

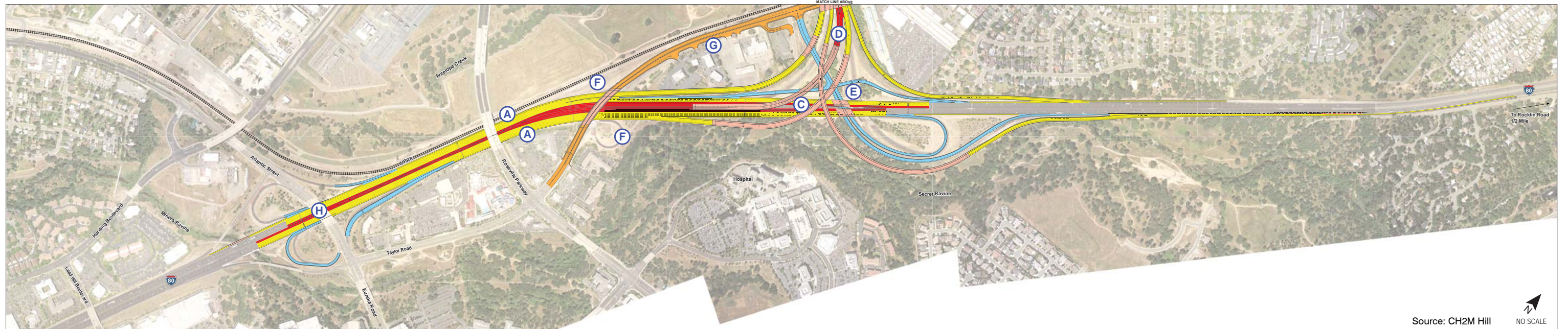
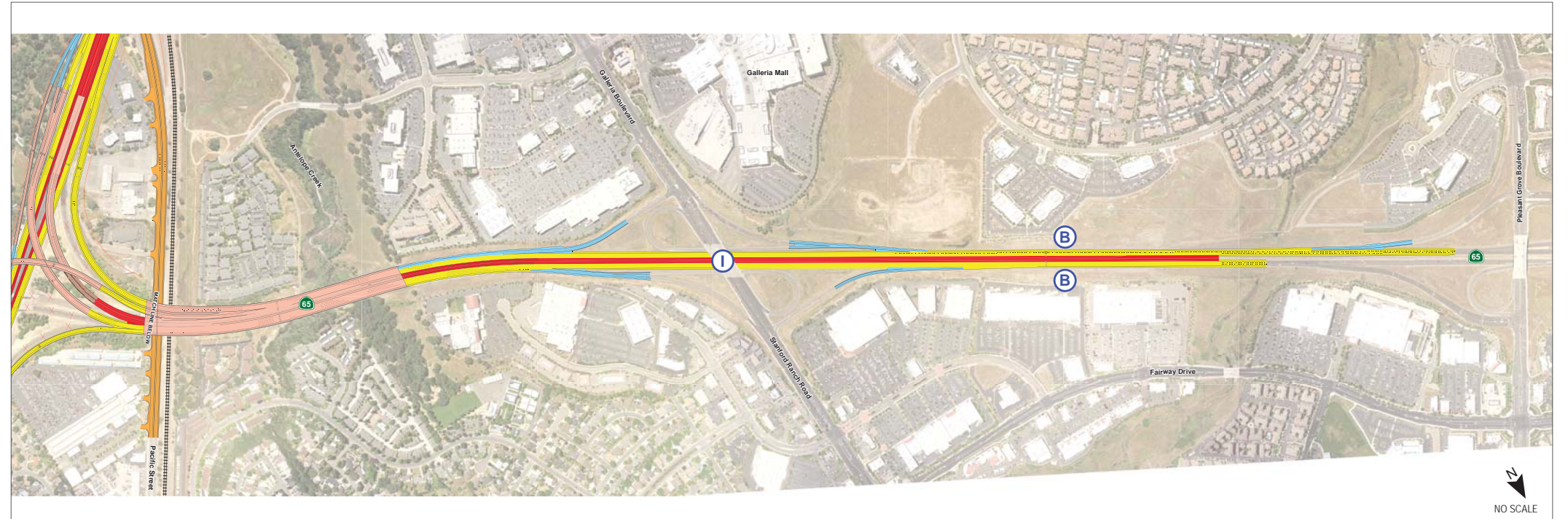
Alternative 1 Improvements:

- (A)** Widen I-80 - add mixed-flow and auxiliary lanes
- (B)** Widen SR 65 - add HOV, mixed-flow, and auxiliary lanes
- (C)** Improve I-80/SR 65 Interchange – add ramp lanes and realign the eastbound I-80 to northbound SR 65 loop ramp
- (D)** Add direct connecting HOV ramp between I-80 and SR 65
- (E)** Add a full access local interchange connection for I-80/Taylor Road
- (F)** Remove existing I-80/Taylor Road ramp connections
- (G)** Improve Taylor Road
- (H)** Modify ramps and intersections at I-80/Eureka Road/Atlantic Street Interchange
- (I)** Modify ramps and intersections at SR 65/Galleria Boulevard/Stanford Ranch Road Interchange

LEGEND

- █ Mainline General Purpose Lane
- █ High Occupancy Vehicle (HOV)/Carpool Lane
- █ Structures
- █ Local Street Improvements
- █ Local Interchange
- ✗ To Be Removed
- Union Pacific Railroad (UPRR)








NOTE: Colored lines represent limits of proposed improvements. See legend for type of improvement.



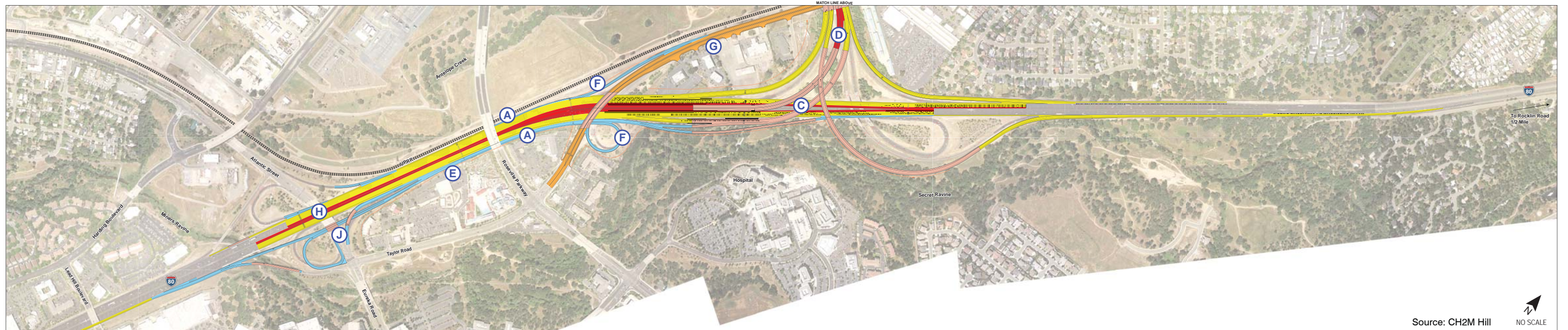
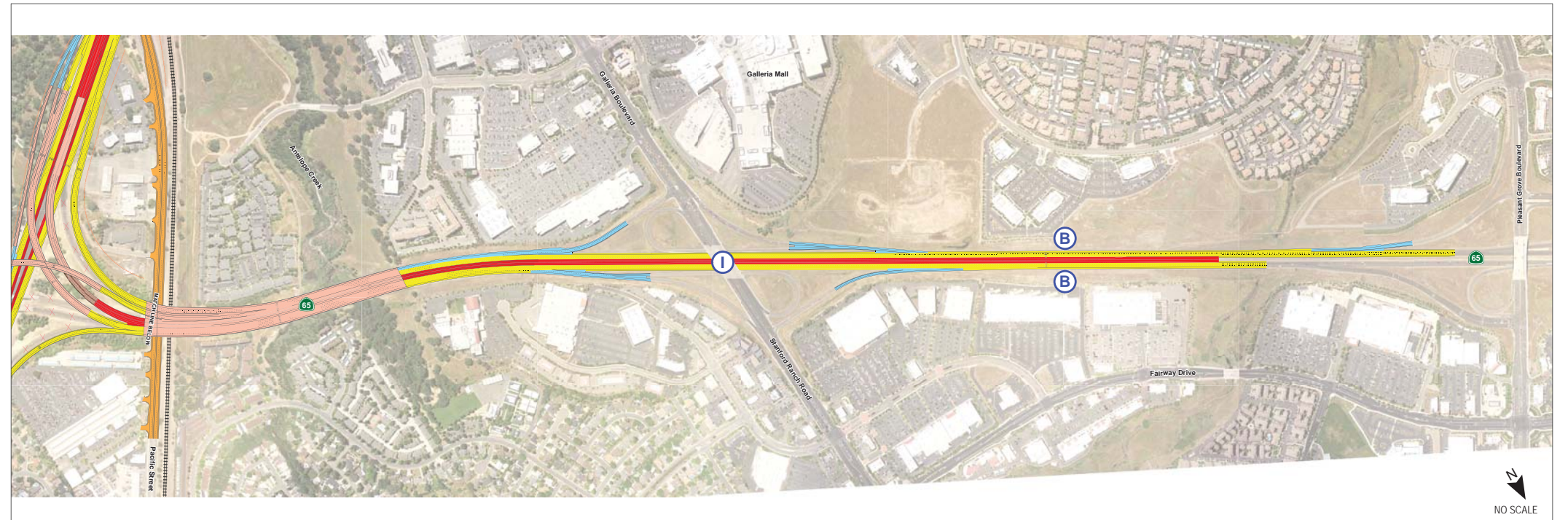
Alternative 2 Improvements:

- (A) Widen I-80 - add mixed-flow and auxiliary lanes
- (B) Widen SR 65 - add HOV, mixed-flow, and auxiliary lanes
- (C) Improve I-80/SR 65 Interchange – add ramp lanes and realign the eastbound I-80 to northbound SR 65 loop ramp
- (D) Add direct connecting HOV ramp between I-80 and SR 65
- (E) Add eastbound collector-distributor road, separated from eastbound I-80
- (F) Modify ramps at I-80/Taylor Road Interchange
- (G) Improve Taylor Road
- (H) Modify ramps and intersections at I-80/Eureka Road/Atlantic Street Interchange
- (I) Modify ramps and intersections at SR 65/Galleria Boulevard/Stanford Ranch Road Interchange
- (J) Modify the eastbound I-80/Eureka Road ramps as part of the collector-distributor road

LEGEND

- | | |
|---|---|
|  Mainline General Purpose Lane |  Local Interchange |
|  High Occupancy Vehicle (HOV)/Carpool Lane |  To Be Removed |
|  Structures |  Union Pacific Railroad (UPRR) |
|  Local Street Improvements | |

NOTE: Colored lines represent limits of proposed improvements. See legend for type of improvement.



The Taylor Road Interchange Eliminated Alternative is shown in Figure 4. The alternative is similar to the Collector-Distributor Roadway System Ramps Alternative. The primary difference is that the Taylor Road ramps are removed. As a result, the eastbound collector-distributor roadway starts further east at the Eureka Road/Atlantic Street on-ramps. To handle the traffic diverted from the closure of the Taylor Road ramps, two intersections would be widened. The Eureka Road/Taylor Road/I-80 Eastbound Ramps intersection would be widened to add a second northbound left turn lane and a second southbound right turn lane. At the Taylor Road/Roseville Parkway intersection, a second westbound right turn lane would be added.

The Transportation System Management Alternative would add operational enhancements to the planned transportation network. As shown in Figure 5, these enhancements include auxiliary lanes, increased ramp meter storage, signal coordination, and greater access control along major arterials.

Under the No Build (or No Project) Alternative, no improvements would be made at the I-80/SR 65 interchange. However, numerous transportation capacity expansion projects are planned to be constructed within the study area under construction year (2020) and design year (2040) conditions as displayed in Figures 6 and 7, respectively. All of these projects are assumed to be in place under all alternatives.

1.5. Design Options

As part of the alternative development process, two design options were evaluated at a conceptual level. The first option was the extension Antelope Creek Drive from its current terminus west of the Union Pacific Railroad to Taylor Road near I-80. This option would improve the efficiency of local circulation and access (that is, reduce VMT) and divert some traffic from the freeway.

The Antelope Creek Drive extension could be constructed in addition to any of the build alternatives. Design year traffic forecasts and meso-scale network performance measures were prepared for the Taylor Road Full Access Interchange Alternative with this design option as reported in the Technical Appendix. The diversion of freeway traffic would not affect bottleneck locations, so the option would not provide substantial congestion relief to the I-80 and SR 65 freeway mainline beyond that of the build alternatives. This option would be costly to construct given the railroad overpass, and its alignment would conflict with a recently approved development. For these reasons, this option was not justified for detailed analysis, but it could be pursued as a separate local project.

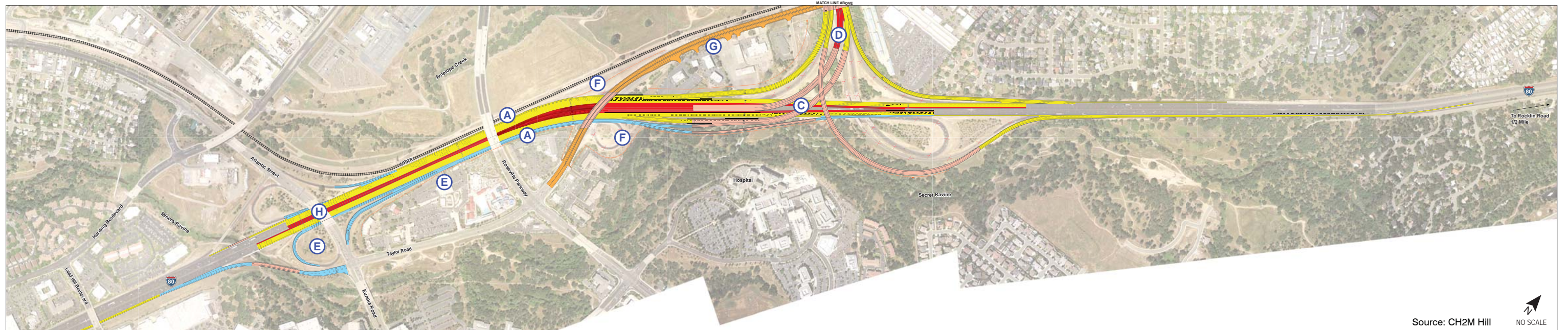
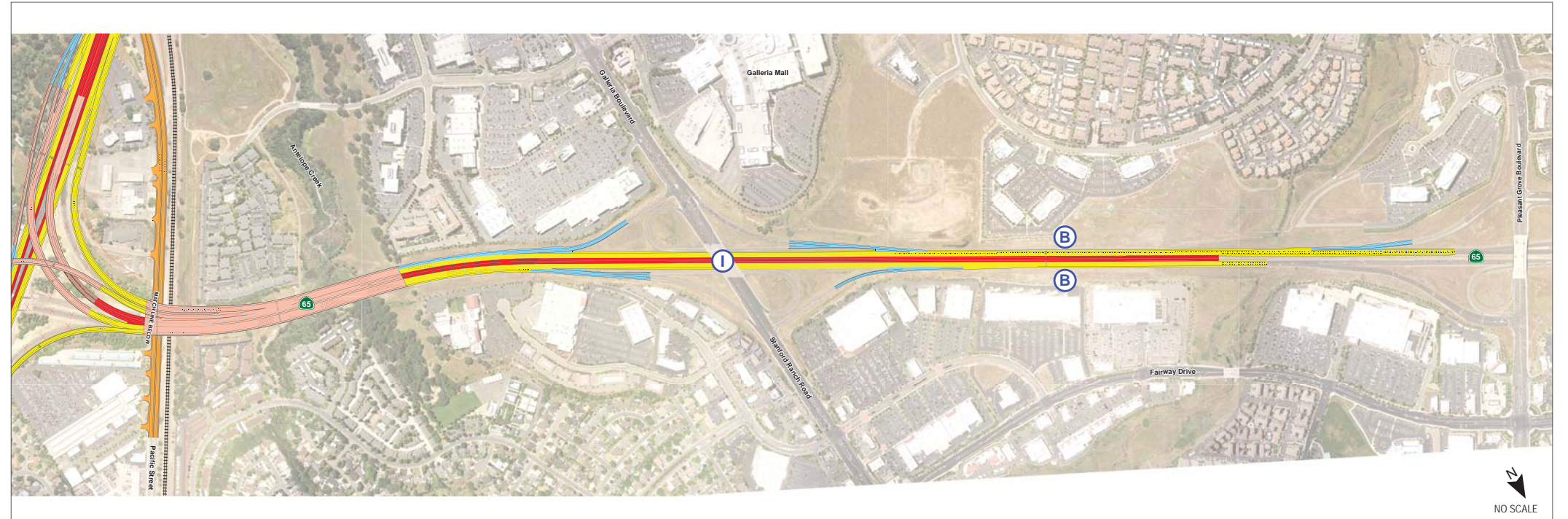
Alternative 3 Improvements:

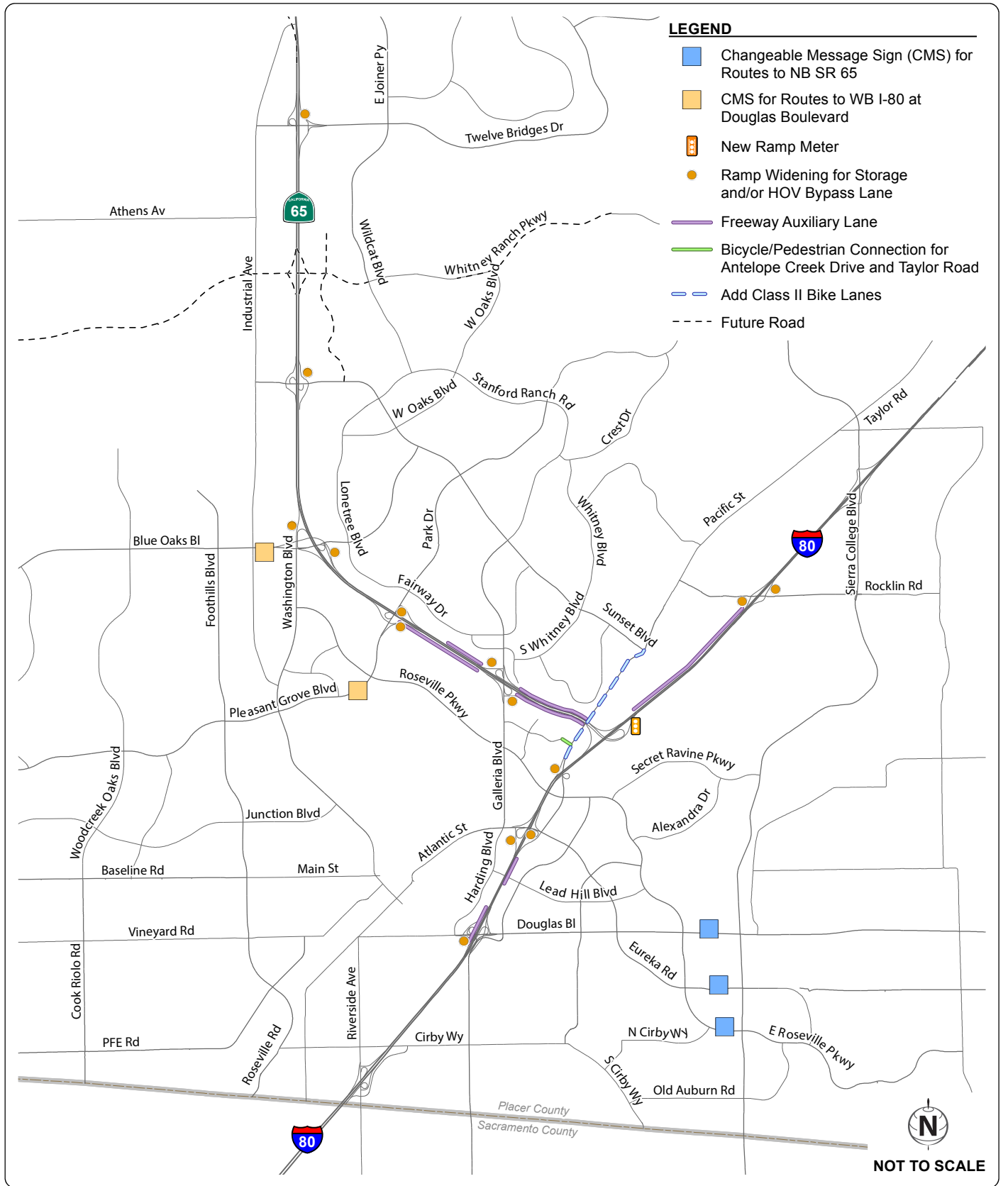
- (A) Widen I-80 - add mixed-flow and auxiliary lanes
- (B) Widen SR 65 – add HOV, mixed-flow, and auxiliary lanes
- (C) Improve I-80/SR 65 Interchange - add ramp lanes and realign the eastbound I-80 to northbound SR 65 loop ramp
- (D) Add direct connecting HOV ramp between I-80 and SR 65
- (E) Modify the eastbound I-80/Eureka Road ramps to be separated from I-80. Access to Taylor Road would be accommodated by the adjacent local interchanges
- (F) Remove existing I-80/Taylor Road ramp connections
- (G) Improve Taylor Road
- (H) Modify ramps and intersections at I-80/Eureka Road/Atlantic Street Interchange
- (I) Modify ramps and intersections at SR 65/Galleria Boulevard/Stanford Ranch Road Interchange

LEGEND

- █ Mainline General Purpose Lane
- █ High Occupancy Vehicle (HOV)/Carpool Lane
- █ Structures
- █ Local Street Improvements
- █ Local Interchange
- ✗ To Be Removed
- Union Pacific Railroad (UPRR)







NOTE: Colored lines represent limits of proposed improvements. See legend for type of improvement.





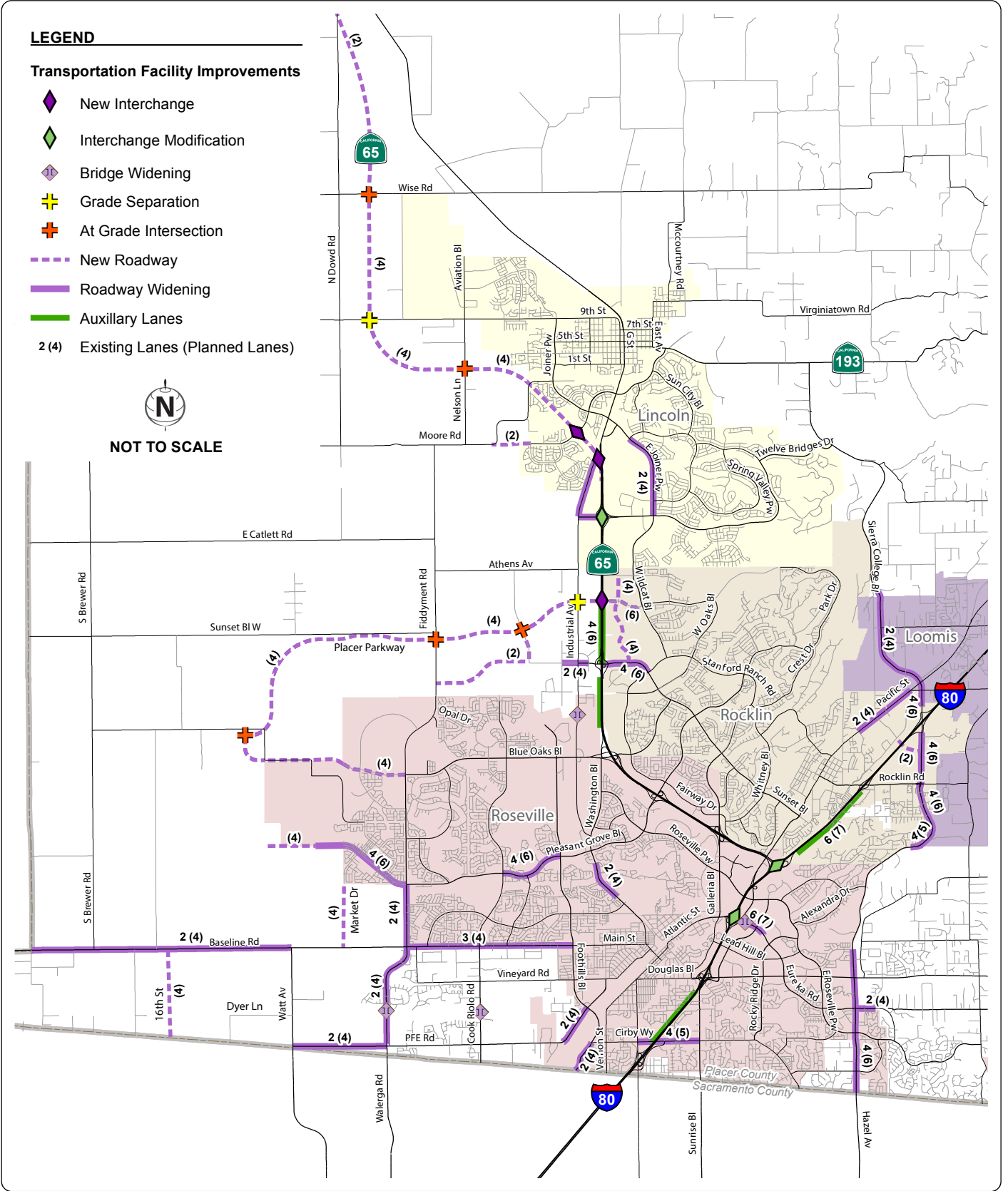
LEGEND

Transportation Facility Improvements

-  New Interchange
-  Interchange Modification
-  Bridge Widening
-  Grade Separation
-  At Grade Intersection
-  New Roadway
-  Roadway Widening
-  Auxillary Lanes
- 2 (4)** Existing Lanes (Planned Lanes)












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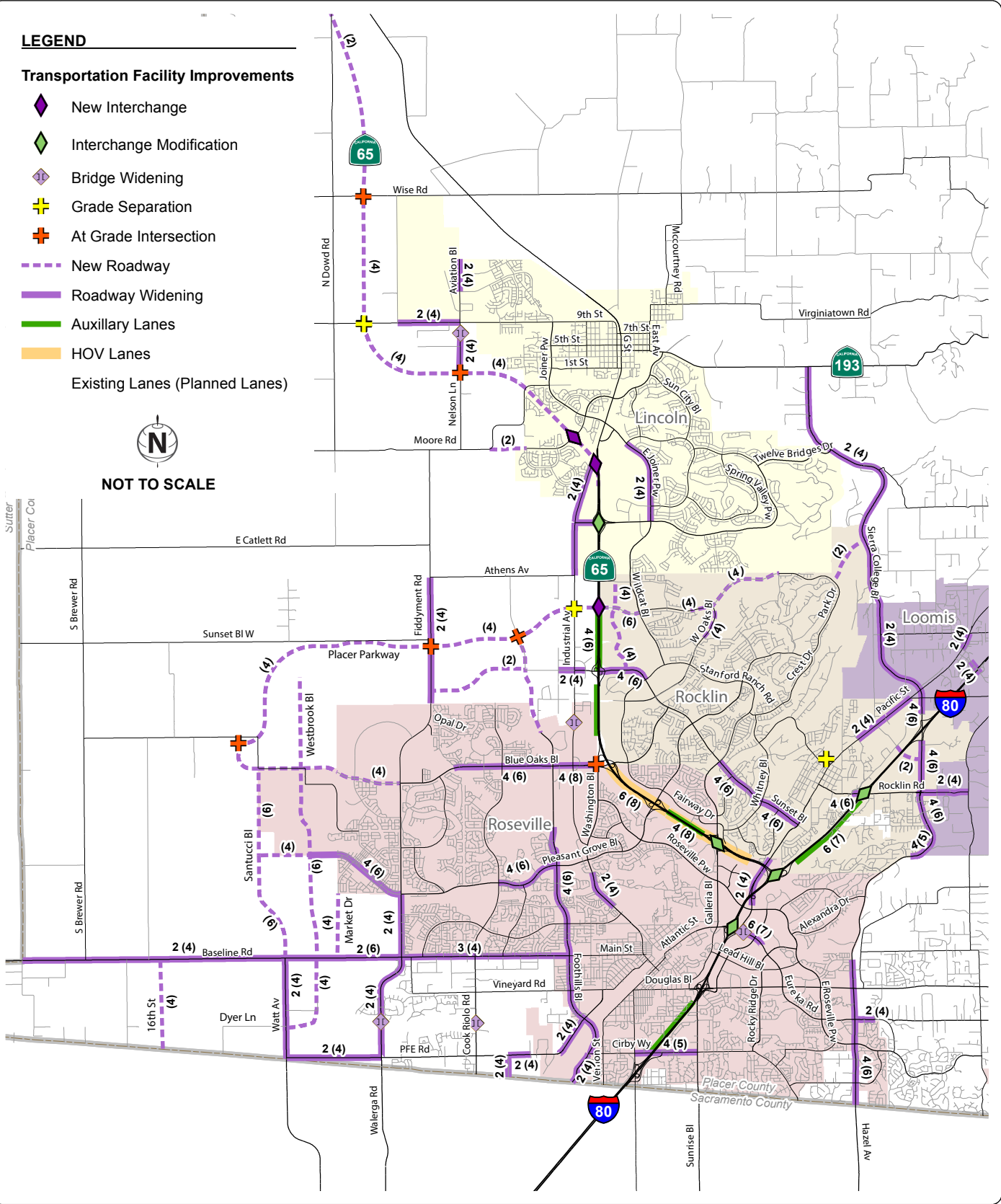
LEGEND

Transportation Facility Improvements

-  New Interchange
 -  Interchange Modification
 -  Bridge Widening
 -  Grade Separation
 -  At Grade Intersection
 -  New Roadway
 -  Roadway Widening
 -  Auxillary Lanes
 -  HOV Lanes
- Existing Lanes (Planned Lanes)



NOT TO SCALE



The second design option would be to construct ramp meters on the freeway-to-freeway connectors at the I-80/SR 65 interchange. Elsewhere in California, ramp meters on freeway connectors are used to reduce congestion on downstream freeway corridors. A ramp meter on the southbound SR 65 connector to westbound I-80 was evaluated. A three-lane ramp meter would serve about 900 vehicles per hour per lane assuming the typical operation of two cars per green for high volume on-ramps. The design year demand volume ranges up to 3,700 vehicles per hour during the AM peak hour. With a metered flow rate of 2,700 vehicles per hour, this would result in a queue of approximately 1,000 vehicles, or 1.6 miles long during the peak hour. The ramp meter would cause severe queuing that would delay all movements on southbound SR 65 at I-80. The queuing would have substantial impacts to the interchange operations at Galleria Boulevard/Stanford Ranch Road, Pleasant Grove Boulevard, and Blue Oaks Boulevard.

Operations with three cars per green may provide up to 1,200 vehicles per hour per lane. Although not currently used in the Sacramento area, "three cars per green" operation is used on freeway connector ramp meters in Los Angeles (for example, I-105 to northbound I-405). With a higher throughput, the queues for southbound SR 65 could be managed such that effects on the upstream interchanges would be minor.

During project meetings, concerns were also raised about driver expectation, sight distance, and safety. As a result, the PDT directed that ramp meters not be included on the freeway connectors in the project alternatives.

1.6. Sensitivity Tests

The project alternatives were refined based in part on sensitivity testing of the freeway configuration of I-80 between Riverside Avenue and SR 65. The sensitivity analysis used the initial set of traffic forecasts prepared for the February 2013 draft transportation analysis report (see appendix). In this section, the results of four sensitivity tests are discussed. The technical details for these tests can be found in the appendix.

In the first test, an option for westbound I-80 at Atlantic Street was analyzed. In this option, the slip off-ramp would be closed and traffic re-routed to the loop off-ramp. The ramp terminal intersection would be re-built to accommodate the left-turn movement from the off-ramp. The option was analyzed using macro, rather than micro, level methodologies. The freeway weaving section from SR 65 to Atlantic Street was analyzed using the Leisch Method as recommended in the Highway Design Manual. The ramp terminal intersection was analyzed as an isolated intersection using the Highway Capacity Manual methods. The results showed that this configuration for Alternative 3 (Taylor Road Interchange Eliminated) would operate acceptably under design year peak hour conditions.

The second test used the Leisch Method to evaluate four I-80 weaving sections with Alternative 3 (Taylor Road Interchange Eliminated) under design year peak hour conditions: two eastbound sections – Douglas Boulevard to Eureka Road and Eureka Road to SR 65 – and two westbound sections – SR 65 to Atlantic Street and Douglas Boulevard to Riverside Avenue. All four segments operated acceptably using the forecasted travel volumes in the microsimulation analysis, but the Leisch Method reported LOS F for eastbound I-80 between Douglas Boulevard and Eureka Road. For the other segments, the volumes were adjusted by increasing the overall volume and by increasing the volume of weaving traffic (with a corresponding decrease in non-weaving traffic) to determine how close each segment was to reaching LOS F. The key location, eastbound I-80 between Eureka Road and SR 65, would have to have an overall growth of 25 percent or a shift in the percentage of on-ramp traffic going to the mainline from 27 to 63 percent before LOS F conditions would occur.

In the third test, the lane change distance for the eastbound SR 65 off-ramp in the microsimulation model was varied. For longer lane change distances, vehicles anticipate the off-ramp farther upstream. This can cause congestion in the right-hand lanes in the distance is longer than the length of the auxiliary lanes between Eureka Road and SR 65. This effect was already being captured in the model; increasing the lane change distance did not result in significantly different speeds for eastbound I-80.

The fourth test used the traffic forecasts presented in this report (see Chapter 4). Alternatives 2 (Collector-Distributor System Ramps) and 3 include the addition of an eastbound auxiliary lane from Douglas Boulevard to Eureka Road and a two-lane Eureka Road off-ramp. However, Alternative 1 (Taylor Road Full Access Interchange) does not. In the test, the eastbound auxiliary lane and second off-ramp lane were added to Alternative 1 under design year PM peak period conditions. The additional lane improves the freeway operations in this section from LOS E to D, and increases the peak hour average speed from less than 60 to greater than 60 mph.

Chapter 2. Analysis Methodology

2.1. Study Area

The project study area for transportation analysis extends beyond the immediate vicinity of the I-80/SR 65 interchange as shown in Figure 8. The larger study area for transportation analysis purposes was based on two key factors.

1. The area needed to be large enough to capture the influence of potential changes at the I-80/SR 65 interchange. This was determined through field observations and travel forecasting analysis that assessed traffic volume changes associated with the project's mixed-flow and HOV lane changes. This information revealed peak period traffic operations at the I-80/SR 65 interchange influence upstream and downstream conditions through multiple local interchanges.
2. The Placer County Transportation Planning Agency (PCTPA) wanted to develop travel forecasting and traffic operations model that would cover an area large enough for anticipated future projects such as Placer Parkway and the SR 65 mainline widening project between Lincoln and I-80.

Depending on the analysis scenario, up to 155 individual analysis locations are included in the study area. These locations consist of freeway mainline segments, freeway ramp junctions, freeway weaving areas, and intersections. For a complete listing of all analysis locations, refer to the Technical Appendix.

2.2. Data Collection Methods

This section describes the data that were collected for use in the traffic analysis.

2.2.1. Geometric Data

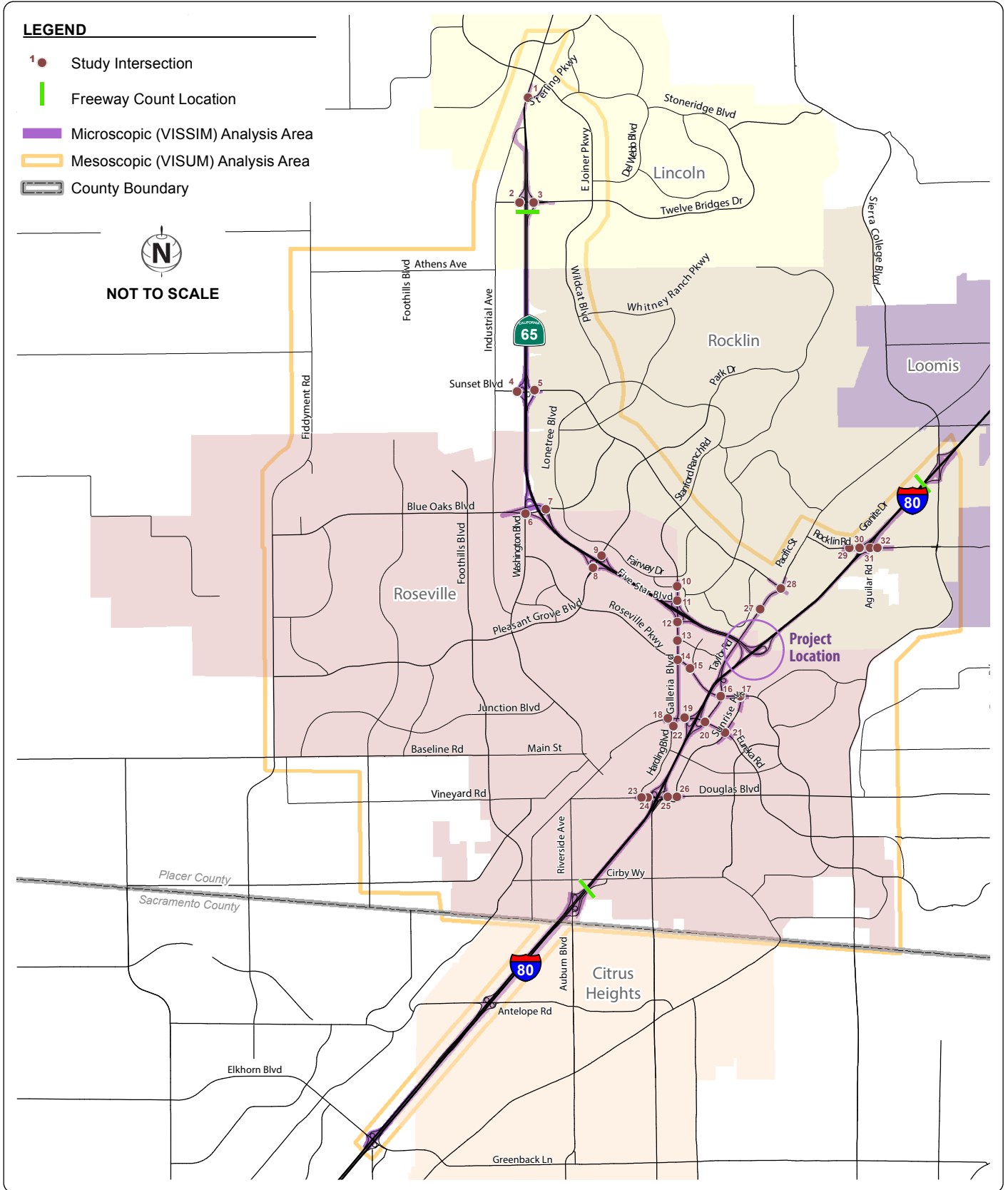
Roadway geometric data were gathered using aerial photographs, design plans (for the I-80 HOV lane project), and field observations. The lane configurations that were taken initially from aerial photographs were confirmed or revised based on field observations.

LEGEND

- 1 ● Study Intersection
- █ Freeway Count Location
- █ Microscopic (VISSIM) Analysis Area
- █ Mesoscopic (VISUM) Analysis Area
- ▭ County Boundary



NOT TO SCALE



2.2.2. Traffic Control Data

Traffic control data (i.e., signal phasing/timings) were provided by the responsible operating agencies including Caltrans, the City of Roseville, the City of Rocklin, and Placer County. The Caltrans Traffic Operations Sacramento Area office provided timing information for the ramp meters that were operating when the traffic counts were collected. The posted speed limits for the network were collected during field observations.

Traffic signals are modeled as either free operation or coordinated according to the control plans specified in the controller. Traffic control at unsignalized intersections were taken from aerial photographs and confirmed during field observations.

2.2.3. Traffic Flow Data

Freeway and intersection traffic counts were collected in 15-minute intervals for the 6 to 10 AM and 3 to 7 PM peak periods during January and February 2012. At intersections, cars, trucks, bicycles, and pedestrians were counted by turning movement. For freeways, traffic counts include vehicle classification by number of occupants for passenger cars and vehicle type. Table 1 contains the hourly HOV and truck percentages at the freeway gateway locations from the traffic counts (complete traffic count data are contained in the Technical Appendix).

Hour	Eastbound I-80 at Riverside Ave		Westbound I-80 at Sierra College Blvd		Southbound SR 65 at Twelve Bridges Dr	
	HOV	Truck	HOV	Truck	HOV	Truck
6 to 7 AM	12.4%	7.9%	11.6%	3.8%	13.1%	1.8%
7 to 8 AM	13.7%	3.7%	10.7%	3.8%	10.5%	1.4%
8 to 9 AM	15.6%	4.0%	13.9%	5.2%	14.8%	1.1%
9 to 10 AM	18.3%	5.3%	18.1%	5.9%	19.0%	2.2%
3 to 4 PM	20.0%	3.2%	24.3%	7.5%	31.1%	1.7%
4 to 5 PM	19.2%	2.6%	24.5%	5.1%	26.6%	0.9%
5 to 6 PM	13.9%	2.2%	18.8%	5.1%	31.0%	1.0%
6 to 7 PM	12.7%	2.8%	17.1%	5.2%	29.5%	1.5%

Source: Fehr & Peers, 2014

2.2.4. Travel Time Data

Travel time surveys were conducted during the same day of the mainline counts using global positioning system (GPS) units. The following routes were traveled for a minimum of every 15 minutes during the morning and evening peak periods.

- Southbound SR 65 at Blue Oaks Boulevard to westbound I-80 at Elkhorn Boulevard
- Eastbound I-80 at Elkhorn Boulevard to northbound SR 65 at Blue Oaks Boulevard
- Westbound I-80 from Sierra College Boulevard to Elkhorn Boulevard
- Eastbound I-80 from Elkhorn Boulevard to Sierra College Boulevard

2.3. Travel Forecasting Methodology

The transportation analysis for the I-80/SR 65 Interchange project used an integrated modeling approach that has three different levels of detail: macro, meso, and micro. At the macro level, the regional travel forecasting model (SACMET) was used to forecast peak period origin-destination (OD) traffic volume flows between traffic analysis zones both internal and external to the study area. At the meso level, the peak period OD flows were divided into four one-hour trip tables and disaggregated into three modes – single occupant vehicle (SOV), HOV, and truck – and then assigned to the sub-area roadway network using the VISUM software. The assignment process was based on congested travel times that reflect roadway link speeds and capacity. At the micro level, the traffic volumes were converted to individual vehicles that were assigned to the operational study area using the VISSIM software that contains detailed inputs governing traffic controls (signal timings), geometrics (lane configurations), and driver behavior.

The traffic forecasts were developed using the first two modeling platforms (macro and meso). The first platform is a modified version of the regional SACMET model developed by the Sacramento Area Council of Governments (SACOG) for the Metropolitan Transportation Plan (MTP)/Sustainable Communities Strategy (SCS). The second platform is the VISUM sub-area trip assignment model, which was used to assign the trips generated from the SACMET model to a detailed roadway network within the study area. Figure 8 above shows the mesoscopic and microscopic analysis areas.

The SACMET and VISUM models were calibrated and validated according to the *2010 California Regional Transportation Guidelines* (California Transportation Commission, 2010) and criteria approved by the PDT. Both models passed applicable static and dynamic validation tests. The detailed validation results are contained in Chapter 4.

Traffic volume forecasts were developed for construction year (2020) and design year (2040) conditions. The forecasts relied on modified inputs to the MTP/SCS SACMET model based on PDT refinements to land use projections and the planned roadway network as explained below.

2.3.1. Socioeconomic Forecasts

The traffic volume forecasts are derived from future socioeconomic projections that started with regional socioeconomic projections developed by SACOG for the regional MTP/SCS. These were reviewed by the PDT and modified to better reflect local plans. Figure 9 displays the final growth projections within the study area. Socioeconomic projections are the largest single influence on traffic volume forecasts, so they will affect volume projections to a greater extent than the roadway network changes or any other modeling component. If these forecasts vary in reality, it will have a direct effect on future traffic volumes.

2.3.2. Planned Transportation Network

The traffic volume forecasts are also influenced by modifications to the existing transportation network according to improvement projects anticipated to be constructed by the construction and design years (refer to Figures 3 and 4). These projects are based on the financially constrained project list contained in the MTP/SCS, but also consider projects the PDT agreed would likely be constructed by the design year. The rationale for adding projects to the MTP/SCS list was that the design year is five years beyond the 2035 horizon of the MTP/SCS. This creates a longer timeframe for revenue to accumulate. Further, the additional socioeconomic growth added to the model would also be contributing to transportation revenue to help pay for these improvements. A list of the planned projects is provided in Table 2.

2.4. Traffic Operations Analysis Methodology

Because the study area already experiences peak period congestion, which is forecast to worsen, the traffic operations analysis required the use of simulation-based analysis. A congested network is very sensitive to any change in capacity or demand and the analysis tools need to be able to capture how changes in one location of the network affect the overall performance. Therefore, a VISSIM traffic simulation model was developed as follows.

- The model was constructed from roadway network (lane configuration), traffic volume (traffic counts), and traffic control (traffic signal and ramp meter) data.
- Additional detail was incorporated into the VISSIM network (posted speed limits, grades, etc.) to reflect observed field conditions.
- Driver behavior parameters were adjusted based on field observations.

TABLE 2: PLANNED SEPARATE PROJECTS

Category	Project
Complete by 2020 (Construction Year)	<ul style="list-style-type: none"> • Atkinson St: widen from 2 to 4 lanes from Foothills Blvd to south of Dry Creek • Baseline Rd: widen from 3 to 4 lanes from Brady Ln to Fiddymment Rd • Baseline Rd: widen from 2 to 4 lanes from Fiddymment Rd to Watt Ave • Baseline Rd: widen from 2 to 4 lanes from Watt Ave to (future) 16th St • Baseline Rd: widen from 2 to 4 lanes from (future) 16th St to county line • Blue Oaks Blvd: construct 4 lanes from Fiddymment Rd to Hayden Pkwy and 2 lanes from Hayden Pkwy to Westbrook Blvd • Blue Oaks Blvd: widen from 2 to 4 lanes from Hayden Pkwy to Westbrook Blvd and construct 4 lanes from Westbrook Blvd to Santucci Blvd • Cirby Way: widen from 4 to 5 lanes from Riverside Ave to Regency Ave • Cook Riolo Rd: widen from 1 to 2 lanes Dry Creek Bridge • Dominguez Rd: construct 2 lanes from Granite Dr to Sierra College Blvd • East Joiner Pkwy: widen from 2 to 4 lanes from Del Webb Pkwy to Twelve Bridges Dr • Eureka Rd: widen from 2 to 4 lanes from Sierra College Blvd to city limits • Ferrari Ranch Rd: construct 2 lanes from city limit to Moore Rd • Fiddymment Rd: widen to 4 lanes from Pleasant Grove Blvd to Baseline Rd • I-80 from Douglas Blvd to Riverside Ave: add a westbound auxiliary lane • I-80 from SR 65 to Rocklin Rd: add an eastbound auxiliary lane • I-80/Eureka Rd On-ramp Improvements • Industrial Ave: widen from 2 to 4 lanes from SR 65 to Twelve Bridges Dr • Industrial Ave: replace 2 lane bridge at Pleasant Grove Creek • Market St: construct 2 lanes from Baseline Road to Pleasant Grove Blvd • Pacific St: widen to 4 lanes from Sierra Meadows Dr to Loomis town limits • PFE Rd: widen from 2 to 4 lanes from Watt Ave to Walerga Rd • Placer Pkwy: construct 4-lane expressway from SR 65 to Santucci Blvd • Pleasant Grove Blvd: widen from 4 to 6 lanes from Foothills Blvd to Woodcreek Oaks Blvd • Pleasant Grove Blvd: widen from 2 to 4 lanes from Fiddymment Road to Santucci Blvd • Rocklin Rd: widen from 4 to 6 lanes from Granite Dr to I-80 Westbound Ramps • Roseville Rd: widen from 2 to 4 lanes from city limits to Cirby Way • Santucci Blvd: construct 4 lanes from Baseline Road to Blue Oaks Blvd • Sierra College Blvd: widen to 6 lanes from county line to Olympus Dr • Sierra College Blvd: widen from 4 to 5 lanes from Nightwatch Dr to Aguilar Tributary • Sierra College Blvd: widen from 4 to 6 lanes from Aguilar Tributary to I-80 • Sierra College Blvd: widen from 4 to 6 lanes from Granite Dr to Bankhead Rd • Sierra College Blvd: widen from 2 to 4 lanes from Taylor Rd to north town limits • SR 65 Lincoln Bypass – Phase 1 & 2A • SR 65/Ferrari Ranch Rd Interchange • SR 65/Whitney Ranch Pkwy: construct interchange • Sunset Blvd: construct 2 lanes from Fiddymment Rd to Foothills Blvd • Sunset Blvd: widen from 2 to 4 lanes from Cincinnati Ave to SR 65 • Sunset Blvd: widen to 6 lanes from SR 65 to West Stanford Ranch Rd • Twelve Bridges Dr: widen from 2 to 4 lanes from Industrial Ave to SR 65 including interchange • University Ave: construct 4 lanes from Whitney Ranch Pkwy to Ranch View Dr • University Ave: construct 4 lanes from Sunset Blvd to Whitney Ranch Pkwy • Walerga Rd: widen from 2 to 4 lanes from Baseline Rd to county line • Washington Blvd: widen to 4 lanes from Sawtell Rd to Pleasant Grove Blvd • Whitney Ranch Pkwy: construct 6 lanes from SR 65 to east of Wildcat Blvd

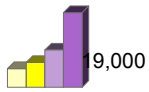
TABLE 2: PLANNED SEPARATE PROJECTS

Category	Project
Complete by 2035	<ul style="list-style-type: none"> • Aviation Blvd: widen from 2 to 4 lanes from Venture Dr to 0.5 mi north of Venture Dr • Dyer Ln: construct 4 lanes from Watt Ave to Baseline Rd • Fiddymnt Rd: widen from 2 to 4 lanes from Roseville city limits to Athens Rd • Foothills Blvd: construct 2 lanes from Roseville city limits to Sunset Blvd • I-80/Horseshoe Bar Rd Interchange: widen overcrossing from 2 to 4 lanes • I-80/Rocklin Rd Interchange improvements • Industrial Ave: widen from 2 to 4 lanes from Twelve Bridges Dr to Athens Ave • Nicolaus Rd: widen from 2 to 4 lanes from Airport Rd to Aviation Blvd • Midas Ave: construct grade separation at UPRR • Rocklin Rd: widen from 2 to 4 lanes from Sierra College Blvd to Loomis town limits • Rocklin Rd: widen from 2 to 4 lanes from west Loomis town limits to Barton Rd • North Antelope Rd: widen from 2 to 4 lanes from county line to PFE Rd • Sierra College Blvd: widen from 2 to 4 lanes from SR 193 to Loomis town limits • Sierra College Blvd: widen to 4 lanes from (future) Valley View Pkwy to Loomis town limits • SR 65/Galleria Blvd Interchange Improvements (Phase II) • Sunset Blvd: widen from 4 to 6 lanes from Stanford Ranch Rd to Topaz Ave • Sunset Blvd: widen from 4 to 6 lanes from Topaz Ave to Whitney Blvd • Sunset Blvd: widen from 4 to 6 lanes from Whitney Blvd to Pacific St • Taylor Rd: widen from 2 to 4 lanes from Horseshoe Bar Rd to King Rd • Valley View Pkwy: construct 2 lanes from Park Dr to Sierra College Blvd • West Oaks Blvd: construct 4 lanes from terminus to (future) Whitney Ranch Pkwy • Whitney Ranch Pkwy: construct 4 lanes from terminus to Whitney Oaks Dr • Watt Ave: widen from 2 to 4 lanes from Baseline Rd to county line
Assumed to be Complete by 2040 (Design Year)	<ul style="list-style-type: none"> • Baseline Rd: widen from 4 to 6 lanes from Fiddymnt Rd to Watt Ave • Blue Oaks Blvd: widen to 6 lanes from Crocker Ranch Rd to Foothills Blvd • Blue Oaks Blvd: widen to 8 lanes from Foothills Blvd to Washington Blvd • Foothills Blvd: widen to 6 lanes from Cirby Way to Misty Wood Dr • Nelson Ln: widen from 2 to 4 lanes from SR 65 (Lincoln Bypass) to Nicolaus Rd • PFE Rd: widen from 2 to 4 lanes from North Antelope Rd to Roseville city limits • Santucci Blvd: construct 6 lanes from Baseline Road to Blue Oaks Blvd • SR 65 Capacity and Operational Improvements: I-80 to Blue Oaks Blvd • Taylor Rd: widen from 2 to 4 lanes from Roseville Pkwy to I-80 • Taylor Rd: widen from 2 to 4 lanes from I-80 to city limits • Westbrook Blvd: construct new road from Baseline Rd to Pleasant Grove Blvd • Westbrook Blvd: construct new road from Pleasant Grove Blvd to Blue Oaks Blvd • Westbrook Blvd: construct new road from Blue Oaks Blvd to city limits

Sources: SACOG, 2012 and Fehr & Peers, 2014

LEGEND

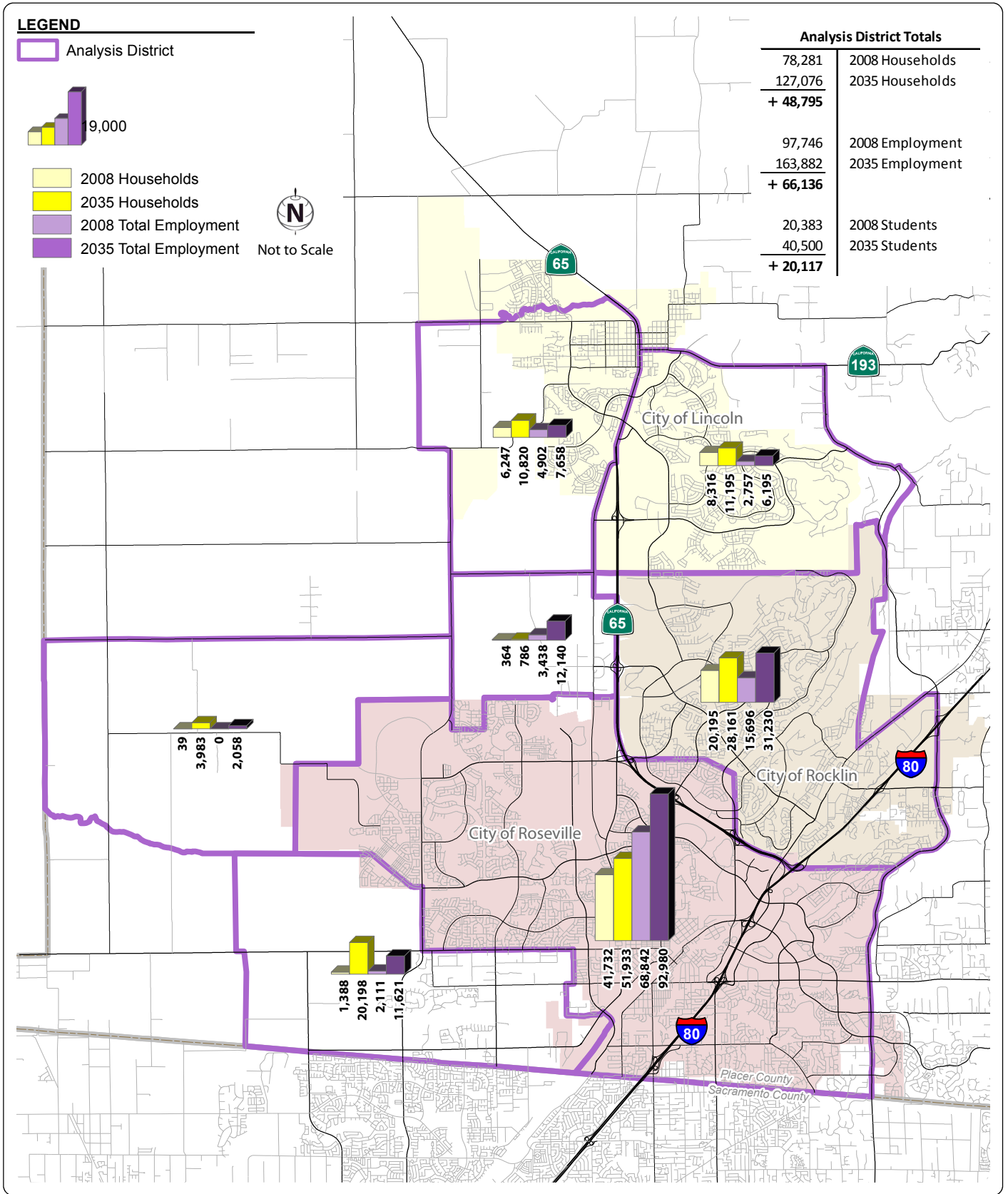
Analysis District



- 2008 Households
- 2035 Households
- 2008 Total Employment
- 2035 Total Employment

Not to Scale

Analysis District Totals	
78,281	2008 Households
127,076	2035 Households
+ 48,795	
97,746	2008 Employment
163,882	2035 Employment
+ 66,136	
20,383	2008 Students
40,500	2035 Students
+ 20,117	



- The distribution of vehicle types was calibrated to local conditions so that the percentages of trucks and HOVs match the traffic counts.

The VISSIM model was validated to existing conditions using the criteria contained in *Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software* (Federal Highway Administration, 2004). The default VISSIM parameters for geometrics and driver behavior were iteratively adjusted until the model was validated to observed conditions (refer to the Technical Appendix for a complete summary of the VISSIM model validation). Since microsimulation models, like VISSIM, rely on the random arrival of vehicles, multiple runs are needed to provide a reasonable level of statistical accuracy and validity. Therefore, the results of 10 separate runs (each using a different random seed number) were averaged to determine the final results.

The calibrated and validated model was used to generate a variety of traffic operations performance measures including person throughput, vehicle throughput, vehicle delay, passenger car density, travel time, speed, and percent demand served. Some of these measures were used to determine level of service (LOS) values for analysis locations consistent with the methodology contained in the *Highway Capacity Manual* (HCM) (Transportation Research Board, 2011).

The HCM methods use quantitative performance measures to determine LOS for analysis locations under AM and PM peak hour conditions. LOS is a qualitative measure of traffic operations from a driver's perspective, which varies from LOS A (the best) to LOS F (the worst), and is one of the main evaluation criteria for this study. Tables 3 and 4 describe the LOS thresholds from the HCM for freeway sections and signalized intersections, respectively.

To analyze construction year and design year conditions, Vissim models were built for each alternative based on the calibrated/validated existing conditions model. The network changes for each alternative were coded into the respective models. All models included separately planned projects (listed in Table 2) that were located in the microsimulation analysis area.

The roadway assumptions for the separately planned projects are listed below.

- Blue Oaks Boulevard Widening (design year only) – widening of the eastbound approach to Washington Boulevard to four lanes
- I-80 Auxiliary Lanes – a westbound I-80 auxiliary lane from the westbound Douglas Boulevard on-ramp to the Riverside Avenue off-ramp, an eastbound I-80 auxiliary lane from the lane drop east of SR 65 to the deceleration lane at the Rocklin Road off-ramp, and widening of the Rocklin Road eastbound off-ramp to two lanes

LOS	Average Density (vplpm)		Description
	Basic Sections	Ramp Junction & Weave Sections	
A	< 11	< 10	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver.
B	> 11 to 18	> 10 to 20	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.
C	> 18 to 26	> 20 to 28	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.
D	> 26 to 35	> 28 to 35	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.
E	> 35 to 45	> 35 to 43	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.
F	> 45	> 43	Represents a breakdown in flow.

Notes: vplpm = vehicles per lane per mile
Source: Fehr & Peers, 2014

LOS	Average Delay (sec/veh)	Description
A	< 10	Very low delay occurs with favorable progression and/or short cycle length.
B	> 10 to 20	Low delay occurs with good progression and/or short cycle lengths.
C	> 20 to 35	Average delays result from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.
D	> 35 to 55	Longer delays occur due to a combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop and individual cycle failures are noticeable.
E	> 55 to 80	High delay values indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.
F	> 80	Delays are unacceptable to most drivers due to over-saturation, poor progression, or very long cycle lengths.

Notes: sec/veh = seconds per vehicle
Source: Fehr & Peers, 2014

- I-80/Eureka Road On-ramp Improvements – widening of westbound Eureka Road from Sunrise Avenue to Taylor Road and the westbound to eastbound on-ramp to I-80 (project completed in 2013)
- I-80/Rocklin Road Interchange (design year only) – widening of Rocklin Road to six lanes from Granite Drive to Aguilar Road, with dual left-turn lanes eastbound at Granite Drive, westbound at westbound I-80, and eastbound at eastbound I-80
- SR 65/Stanford Ranch Road Interchange Phase II Improvements (design year only)– reconstruction of the northbound ramp terminal intersection to control all movements at the signal and add a second northbound left-turn lane, a third northbound through lane, a second eastbound right-turn lane, and a second westbound right-turn lane
- SR 65 Lincoln Bypass Phase 1 – realignment of SR 65 and construction of the Lincoln Boulevard and Ferrari Ranch Road interchanges (project completed in 2013)
- SR 65/Twelve Bridges Drive Interchange – widening of Twelve Bridges Drive from one to two through lanes in both directions
- SR 65/Whitney Ranch Parkway Interchange – construction of a partial cloverleaf interchange with connections to Whitney Ranch Parkway to the east and Placer Parkway to the west with auxiliary lanes to and from Sunset Boulevard to the south
- SR 65 Widening (design year only) – adding a HOV lane in both directions from Stanford Ranch Road/Galleria Boulevard to north of Blue Oaks Boulevard, with the northbound lane drop at Sunset Boulevard and a southbound auxiliary lane between Sunset Boulevard and Blue Oaks Boulevard
- Sunset Boulevard Widening (design year only) – widening of Sunset Boulevard at Pacific Street to provide a third northbound and eastbound left-turn lanes and a second southbound right-turn lane.

2.6. Evaluation Criteria

The analysis evaluation criteria were developed in collaboration with the PDT because the project has the potential to affect traffic operations across multiple jurisdictions. The main criteria used for this study is LOS as described below since each affected agency has establish policies and thresholds related to LOS expectations.

According to the *Interstate 80 and Capital City Freeway Corridor System Management Plan* and the *State Route 65 Corridor System Management Plan* (Caltrans District 3, May 2009), Caltrans has identified the route concept LOS for the following segments.

- LOS F for I-80 from Riverside Avenue/Auburn Boulevard to Sierra College Boulevard
- LOS F for SR 65 from I-80 to Blue Oaks Boulevard
- LOS E for SR 65 from Blue Oaks Boulevard to Industrial Avenue (Lincoln Boulevard)

LOS E conditions are desired when feasible but LOS F conditions are likely to occur in the study area under no build conditions as recognized by the concept LOS thresholds. The LOS E threshold will be used to identify minimum acceptable operations (that is, deficiencies) and potential impacts to State highway mainline segments, ramp junctions, weaving segments, and ramp terminal intersections. For locations with LOS F under the no build condition, an impact would occur if the project alternatives would worsen the LOS F condition based on the quantitative performance measure associated with the specific type of analysis.

For study intersections within the City of Lincoln, the City of Lincoln General Plan (Adopted March 2008) contains the following LOS policies:

- Strive to maintain a LOS C at all signalized intersections in the City during the PM peak hours.
- The City shall coordinate with Caltrans in order to strive to maintain a minimum LOS "D" for SR 65 and SR 193.

With the construction of the SR 65 bypass, the analysis locations on Lincoln Boulevard in Lincoln are local intersections. As a result, LOS C will serve as the minimum acceptable LOS for the intersections on Lincoln Boulevard and Twelve Bridges Drive for both AM and PM peak hours.

For study intersections within the City of Roseville, the City of Roseville General Plan (Adopted May 5, 2010) LOS policy states:

- Maintain a level of service (LOS) "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the PM peak hours.

Some of the study intersections are shown in the General Plan to operate at worse than LOS C under 2025 conditions. For this project, the following criteria are proposed.

- For intersections shown to be operating at LOS C or better in the General Plan under 2025 conditions, LOS C will be used as the minimum acceptable LOS.
- For intersections shown to be operating at LOS D in the General Plan under 2025 conditions, LOS D will be used as the minimum acceptable LOS.
- For intersections shown to be operating at LOS E in the General Plan under 2025 conditions, LOS E will be used as the minimum acceptable LOS.

- For intersections shown to be operating at LOS F in the General Plan under 2025 conditions, LOS F and the corresponding delay will be used as the minimum acceptable LOS.

Using the above criteria, the Stanford Ranch Road/Galleria Boulevard ramp terminal and Roseville Parkway/Taylor Road intersections will have a LOS D threshold, and the Galleria Boulevard/Roseville Parkway, Roseville Parkway/Taylor Road, Eureka Road/Taylor Road/I-80 Eastbound Ramps, and Douglas Boulevard/Harding Boulevard intersections will have a LOS E threshold. All other Roseville intersections will have a LOS C threshold. These thresholds will be used for both the AM and PM peak hours in both the construction and design year analysis.

For study intersections within the City of Rocklin, the City of Rocklin General Plan (Adopted April 3, 1991), Section C Policy 13 (Circulation) states:

- To maintain a minimum traffic level of service "C" for all streets and intersections, except for intersections located within ½ mile from direct access to an interstate freeway where a level of service "D" will be acceptable. Exceptions may be made for peak hour traffic where not all movements exceed the acceptable level of service.

Based on these standards and for the purposes of this study, LOS C is the minimum acceptable LOS for the Placer Parkway/Whitney Ranch Parkway, Sunset Boulevard, Blue Oaks Boulevard (northbound ramps), and the Pacific Street intersections at Woodside Drive and Sunset Boulevard. LOS D is the minimum acceptable LOS for the Rocklin Road intersections since they are less than one-half mile from I-80.

For this study, a project impact must satisfy two conditions. First, the study location must operate at a worse LOS than the threshold identified above. Second, the study location must operate at a worse condition (higher delay for intersections or higher density for freeway segments) than the similar case for Alternative 5 (No Build).

Chapter 3. Existing (2012) Conditions

The existing conditions analysis includes meso-scale network performance, micro-scale traffic operations, and traffic safety. The meso-scale network performance evaluates the entire network within the meso-scale study area based on vehicle miles of travel (VMT), vehicle hours of travel (VHT), vehicle hours of delay (VHD), and freeway VHD. VHD includes all hours of travel below the free-flow speed (for example, the free-flow speed on freeways is 65 miles per hour). Freeway VHD includes only hours of freeway travel below 35 miles per hour (mph). The operations analysis is more detailed and analyzes individual facilities with separate discussions for freeways and arterial intersections. The traffic safety evaluation focuses on freeway facilities.

3.1. Meso-Scale Network Performance

Table 5 contains estimates of existing (2012) meso-scale study area VMT, VHT, VHD, and Freeway VHD for AM and PM peak period conditions. This information shows that the PM peak period has the highest level of travel with VHD equal to almost 35 percent of all VHT. The AM peak period also experiences congested conditions with a VHD at approximately 25 percent of all VHT.

Measure of Effectiveness	AM Peak Period (6:00 to 10:00)	PM Peak Period (3:00 to 7:00)
VMT	1,182,073	1,562,794
VHT	31,314	49,967
VHD	7,807	17,423
Freeway VHD	1,459	4,564

3.2. Traffic Operations

Traffic operations were analyzed for existing (2012) conditions under AM and PM peak period and peak hour conditions. This analysis relied on the AM and PM four-hour, peak period VISSIM models from which peak hour results were extracted. The VISSIM model only includes the freeway network and the immediate arterial network around the I-80/SR 65 interchange. As a result, performance measures such as VMT and VHT reported from this model will contain much smaller values compared to the larger meso-scale network results presented in Table 5. Overall traffic operations performance of the micro-scale network is summarized in Table 6.

Measure of Effectiveness	AM Peak Period (6:00 to 10:00)	PM Peak Period (3:00 to 7:00)
VMT	645,270	730,100
VHT	13,760	16,850
VHD	2,670	3,950
Average Travel Speed (mph)	46.9	43.3

Similar to the Table 5 results, the PM peak period has the highest level of travel and delay with the most congestion lasting up to three hours for select segments.

3.2.1. Freeway Operations

Detailed freeway operations were analyzed for the entire four-hour AM and PM peak periods. The AM (7:30 to 8:30) and PM (4:30 to 5:30) peak hour results are reported in this section and reflect conditions based on estimates of peak hour freeway mainline and ramp traffic volumes for 2012 conditions shown in Figure 12. The existing conditions analysis confirmed field observations and provided some insight as to specific bottleneck locations, causes, and duration. Figure 10 and 11 below show the PM peak hour queue extending back from the eastbound I-80 on-ramp junction with the northbound SR 65 connector.

The existing (2012) conditions analysis of freeway and arterial performance matched observed conditions such as those shown in the photos above. Specific examples are listed below.

- Bottleneck areas have poor LOS results as highlighted in Table 7, which contains select LOS results for freeway operations. See the Technical Appendix for all study location results.

The speed contour maps of the I-80 and SR 65 corridors produced from the VISSIM models show reduced speeds in bottleneck areas (see Figures 13 through 16 below).



Figure 10 – Eastbound I-80 from Taylor Road Overcrossing (PM Peak Hour)



Figure 11 – Eastbound I-80 from Roseville Pkwy Overcrossing (PM Peak Hour)

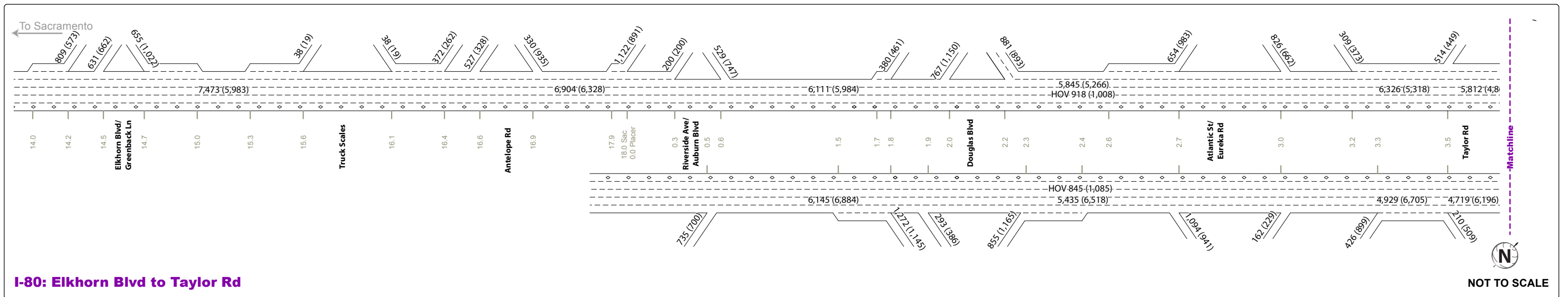
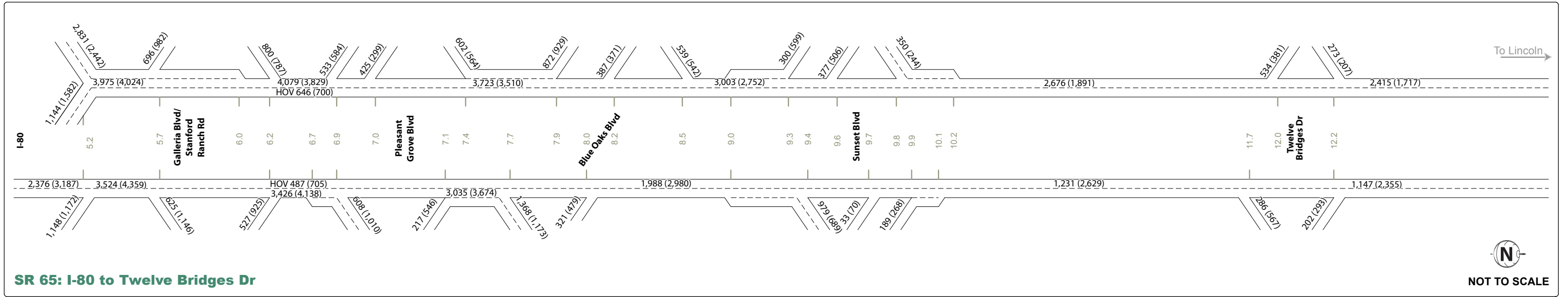
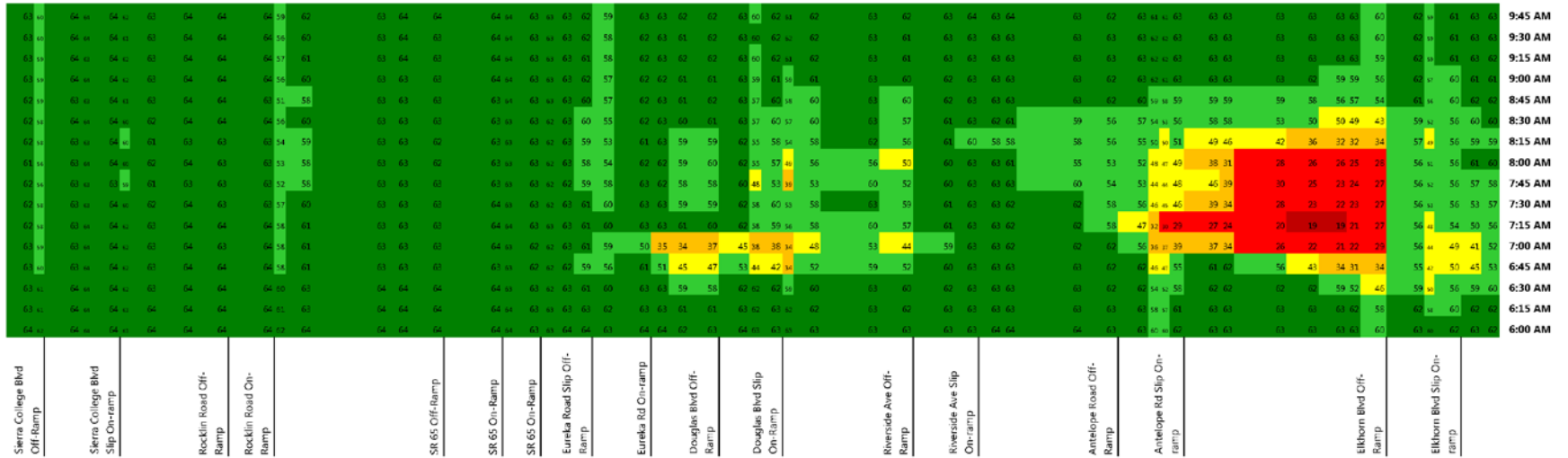


TABLE 7: SELECTED FREEWAY OPERATIONS RESULTS – EXISTING (2012) CONDITIONS				
Freeway	Location	Type	AM Peak Hour	PM Peak Hour
EB I-80	Eureka Rd Off-ramp	Diverge	C / 26	<u>F / 46</u>
	Eureka Rd Off to On-ramp	Basic	C / 21	C / 23
	Eureka Rd EB On-ramp	Merge	B / 19	B / 20
	Eureka Rd to Taylor Rd	Weave	C / 23	E / 42
	Taylor Rd to SR 65	Basic	D / 28	E / 42
	SR 65 Off-ramp	Diverge	C / 28	<u>F / 52</u>
WB I-80	SR 65 Off-ramp	Diverge	B / 18	E / 35
	Douglas Blvd Off-ramp	Diverge	D / 32	C / 26
	Douglas Blvd WB On-ramp	Merge	E / 36	D / 34
	Douglas Blvd EB On-ramp	Merge	E / 42	E / 37
	Douglas Blvd to Riverside Ave	Basic	D / 33	D / 31
	Riverside Ave Off-ramp	Diverge	E / 40	E / 36
NB SR 65	I-80 WB On-ramp	Merge	<u>F / 53</u>	<u>F / 95</u>
	I-80 to Stanford Ranch Rd	Basic	D / 32	<u>F / 77</u>
	Stanford Ranch Rd Off-ramp	Diverge	D / 33	<u>F / 62</u>
SB SR 65	Blue Oaks Blvd WB On-ramp	Merge	<u>F / 60</u>	B / 20
	Blue Oaks Blvd to Pleasant Grove Blvd	Weave	<u>F / 75</u>	C / 21
	Pleasant Grove Blvd Off to On-ramp	Basic	<u>F / 89</u>	C / 25
	Pleasant Grove Blvd WB On-ramp	Merge	<u>F / 72</u>	D / 31
	Pleasant Grove Blvd EB On-ramp	Merge	<u>F / 53</u>	E / 39
	Pleasant Grove Blvd to Galleria Blvd	Basic	E / 36	D / 32
	Galleria Blvd Off-ramp	Diverge	E / 35	D / 32
Note: Bold and underline font indicate LOS F conditions. The level of service and average density for the study segment are reported.				
Source: Fehr & Peers, 2014				

During the AM peak hour, congested LOS F conditions occur on northbound SR 65 at the I-80 on-ramp and southbound SR 65 between Blue Oaks Boulevard and Pleasant Grove Boulevard. On northbound SR 65, the merging of the westbound I-80 on-ramp causes congestion. For southbound SR 65, the constraint is the high demand from the mainline combined with the Pleasant Grove Boulevard on-ramp volume.

FIGURE 14 – I-80 WESTBOUND EXISTING CONDITIONS SPEED CONTOUR MAPS

AM PEAK PERIOD



PM PEAK PERIOD

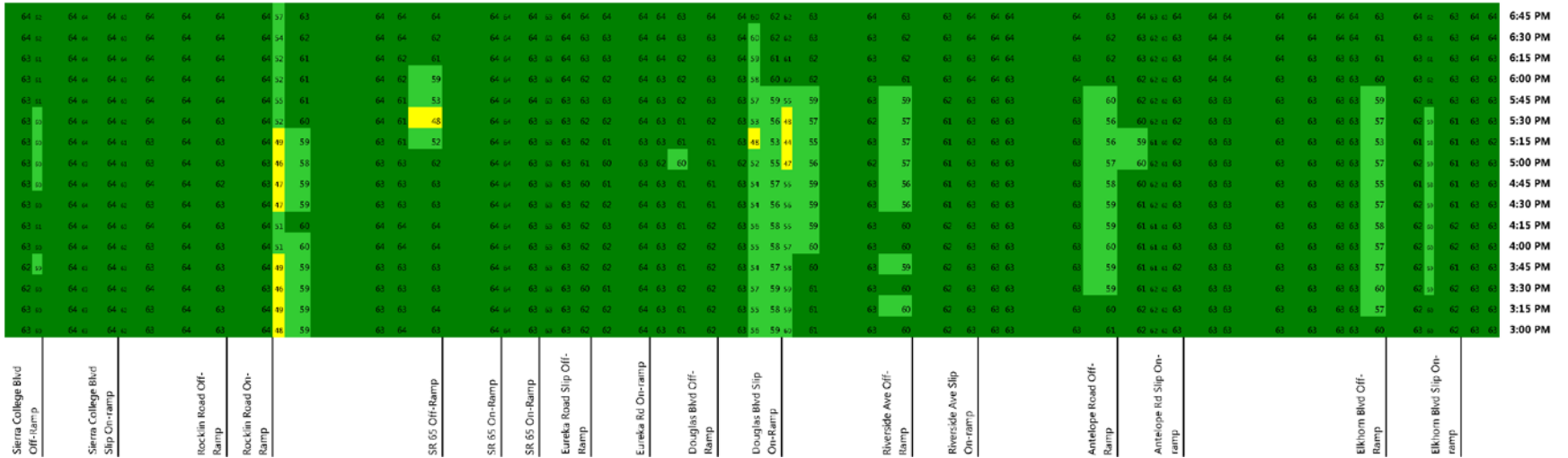
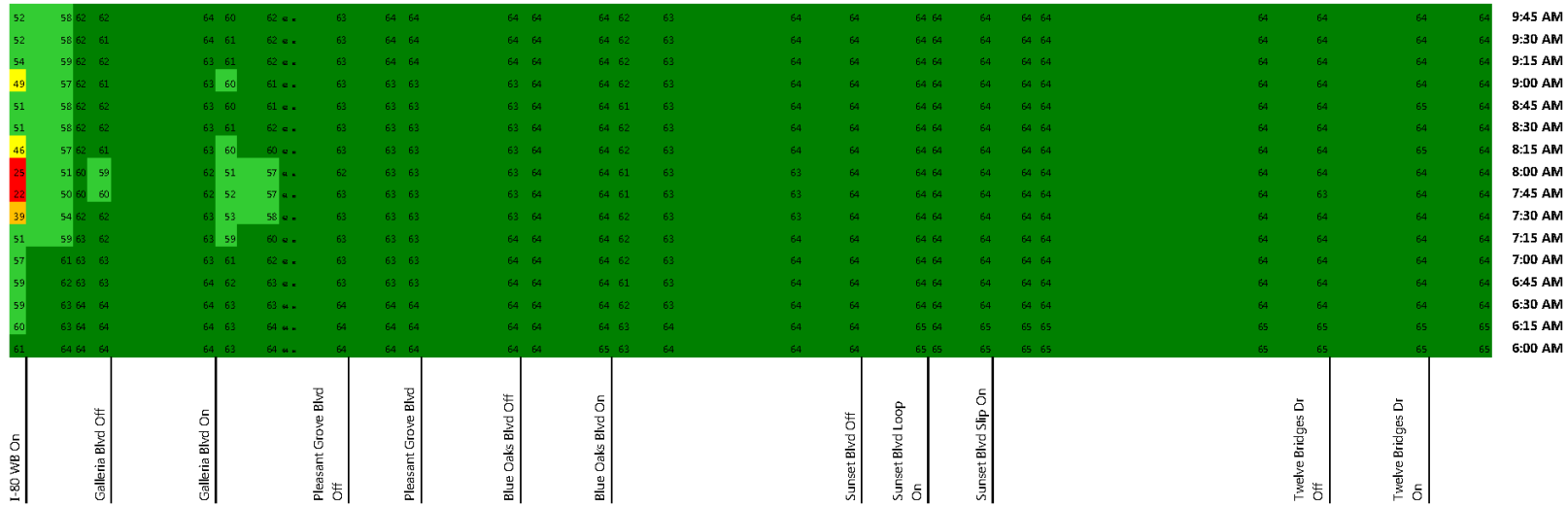


FIGURE 15 – SR 65 NORTHBOUND EXISTING CONDITIONS SPEED CONTOUR MAPS

AM PEAK PERIOD



PM PEAK PERIOD

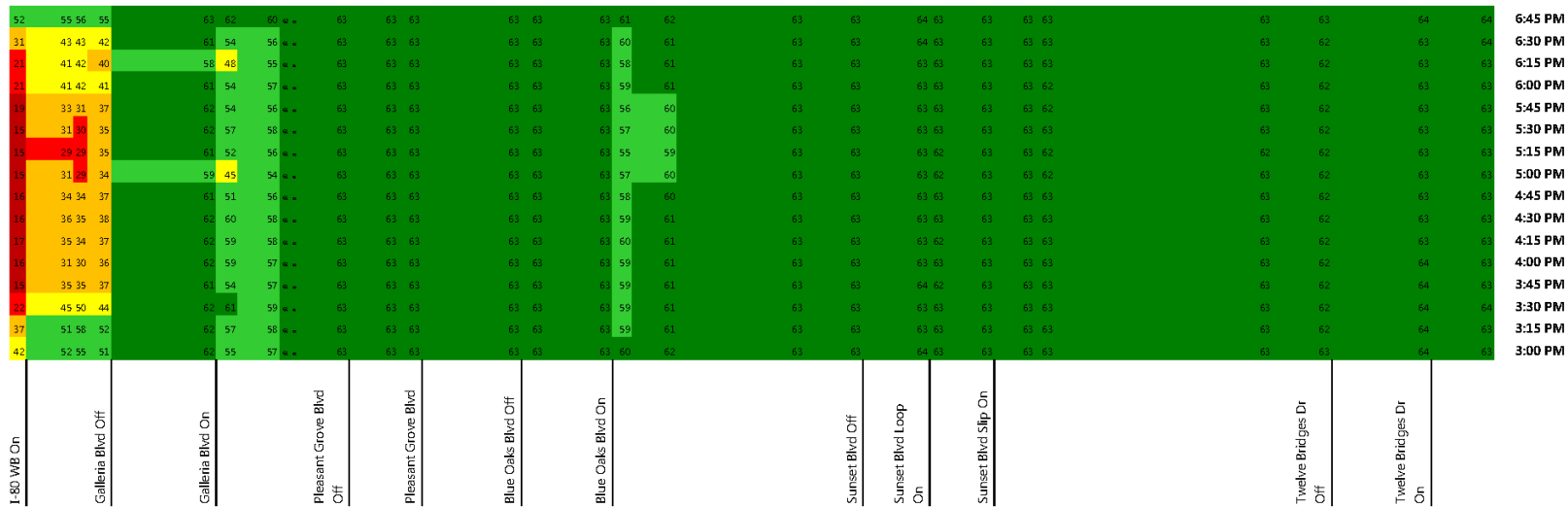
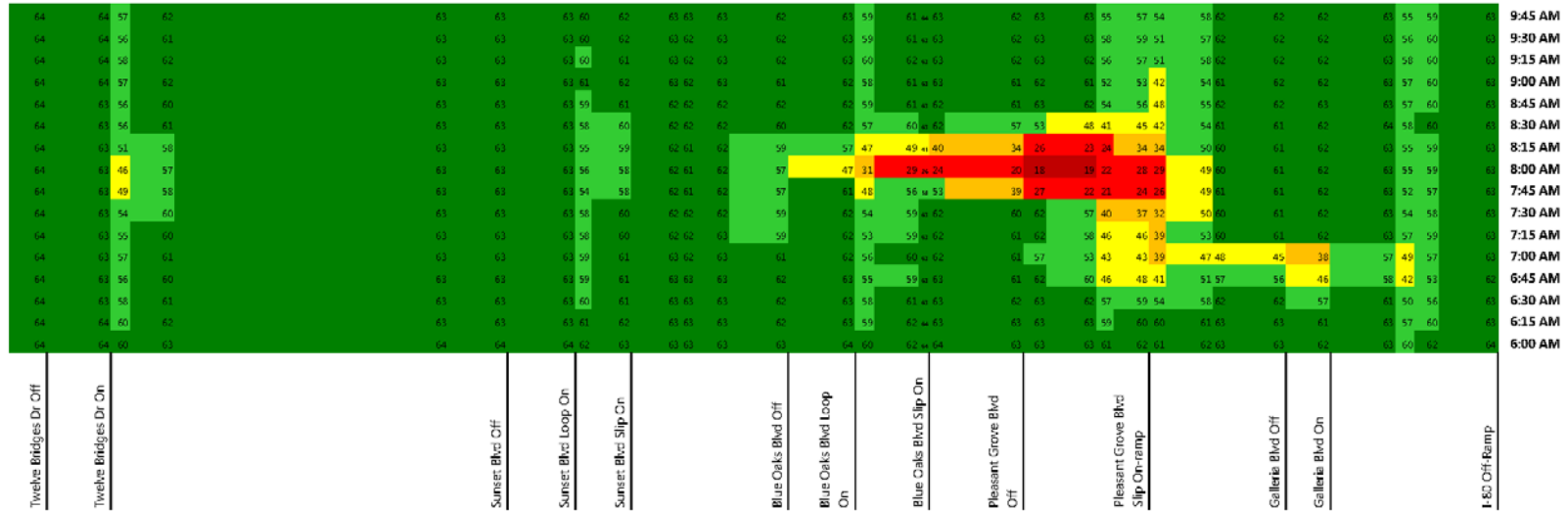
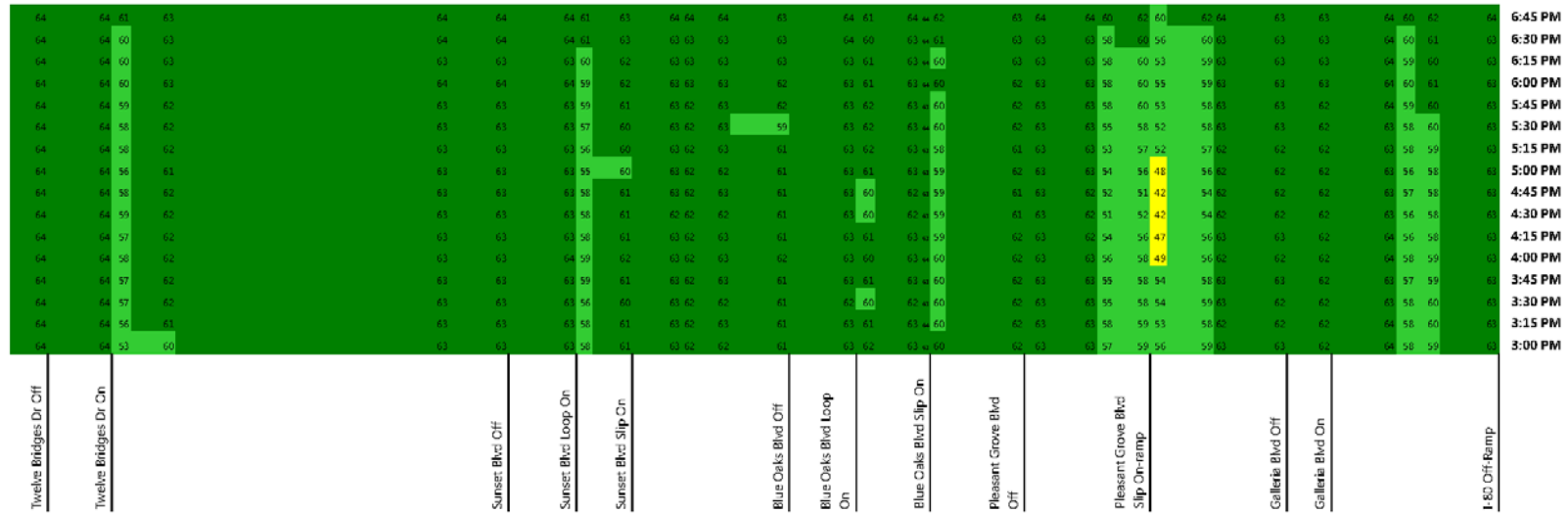


FIGURE 16 – SR 65 SOUTHBOUND EXISTING CONDITIONS SPEED CONTOUR MAPS

AM PEAK PERIOD



PM PEAK PERIOD



During the PM peak hour, the primary bottleneck is northbound SR 65 at the on-ramp from westbound I-80. This bottleneck results in LOS F conditions on eastbound I-80 at the SR 65 off-ramp. LOS E conditions exist from Taylor Road to Eureka Road, with the rightmost lanes mostly congested (queued from the SR 65 off-ramp) while the left lanes operate with higher speeds. The Eureka Road off-ramp has LOS F conditions due to queues spilling back from the ramp terminal intersection. (During summer 2012, queues regularly extended to the mainline occurred due to recreational trips generated by the water park on Taylor Road. After the Eureka Road widening project was completed in 2013, the peak hour off-ramp queues no longer extend to the mainline.) Westbound I-80 has LOS E conditions at the SR 65 off-ramp due to the same bottleneck. LOS D/E conditions occur further north on northbound SR 65 between Stanford Ranch Road and Pleasant Grove Boulevard. If the bottleneck at I-80 were relieved, this downstream will likely become congested.

3.2.2. Arterial Intersection Operations

In general, arterial intersections operate better than freeway locations during the peak hours. Table 8 shows the LOS and average delay at key study intersections under existing (2012) conditions. Based on the evaluation criteria for this study, all of the study intersections operate acceptably. See the Technical Appendix for all study intersection results.

The AM peak hour intersection LOS results indicate all intersections operate at LOS C or better, except for the Roseville Parkway/Sunrise Avenue and Blue Oaks Boulevard/Washington Boulevard intersections which operate at LOS D. The Roseville Parkway/Sunrise Avenue intersection operates with split phasing to accommodate the hospital driveway, which leads to less efficient operations. The Blue Oaks Boulevard intersection (which has a LOS C threshold) experiences high peak period peak direction traffic flows because it serves both inbound (employees) and outbound (residents) commuters for west Roseville.

During the PM peak hour, four intersections operate at LOS D or E:

- Galleria Boulevard/Roseville Parkway
- Roseville Parkway/Sunrise Avenue
- Eureka Road/Taylor Road/I-80 Eastbound Ramps
- Douglas Blvd/Sunrise Avenue
- Rocklin Road/Granite Drive

Like the Blue Oaks Boulevard intersection in the AM peak hour, the Roseville Parkway and Eureka Road corridors serve both inbound (residents and shoppers) and outbound (employees) commuters. Additionally, reduced speeds occur on eastbound Eureka Road approaching the I-80 interchange. A

project that widened eastbound Eureka Road at Taylor Road was completed in 2013 (after the existing conditions analysis). All other intersections operate at LOS C or better during the PM peak hour.

TABLE 8: SELECTED INTERSECTION OPERATIONS RESULTS – EXISTING (2012) CONDITIONS		
Intersection	AM Peak Hour	PM Peak Hour
6. Blue Oaks Blvd / Washington Blvd / SR 65 SB Ramps	<u>D / 43</u>	C / 33
10. Stanford Ranch Rd / Five Star Blvd	B / 19	C / 32
11. Stanford Ranch Rd / SR 65 NB Ramps	A / 9	B / 15
12. Galleria Blvd / SR 65 SB Ramps	B / 13	B / 19
13. Galleria Blvd / Antelope Creek Dr	B / 10	C / 24
14. Galleria Blvd / Roseville Pkwy	C / 30	D / 36
15. Roseville Pkwy / Creekside Ridge Dr	A / 6	B / 17
16. Roseville Pkwy / Taylor Rd	C / 30	C / 28
17. Roseville Pkwy / Sunrise Ave	D / 37	D / 37
18. Atlantic St / Wills Rd	B / 10	B / 12
19. Atlantic St / I-80 WB Ramps	A / 7	B / 11
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	C / 26	E / 61
21. Eureka Rd / Sunrise Ave	C / 24	C / 30
26. Douglas Blvd / Sunrise Ave	C / 26	D / 35
28. Pacific St / Sunset Blvd	B / 18	C / 29
29. Rocklin Rd / Granite Dr	B / 15	D / 37
30. Rocklin Rd / I-80 WB Ramps	C / 21	B / 17
31. Rocklin Rd / I-80 EB Ramps	B / 17	B / 20
32. Rocklin Rd / Aguilar Rd	A / 8	B / 13
Note: Bold and underline font indicate unacceptable operations. The LOS and average delay in seconds per vehicle are reported.		
Source: Fehr & Peers, 2014		

3.3. Traffic Safety

Traffic collision data was compiled from Caltrans' Traffic Accident Surveillance and Analysis System (TASAS) for the mainline freeway sections and ramps adjacent to the I-80/SR 65 interchange. The data shown are for the three-year period between April 1, 2009 and March 31, 2012. Within the study area, 728 collisions occurred on the freeway sections in the three-year period. Table 9 summarizes collisions on by freeway mainline section.

Location/Section	Total Accidents	Total Fatalities	Actual Collision Rate ¹			Average Collision Rate ¹		
			F	F&I	Total	F	F&I	Total
EB I-80 (PM 2.2 to 4.2): Douglas Blvd On to SR 65 Off	256	2	<u>0.012</u>	<u>0.56</u>	<u>1.52</u>	0.004	0.28	0.90
EB I-80 (PM 4.2 to 5.9): SR 65 Off to Rocklin Rd Off	52	0	0.000	0.15	0.48	0.004	0.27	0.87
WB I-80 (PM 4.3 to 5.9): Rocklin Rd On to SR 65 Off	81	1	<u>0.010</u>	<u>0.34</u>	0.81	0.004	0.27	0.87
WB I-80 (PM 2.2 to 4.3): SR 65 Off to Douglas Off	189	1	<u>0.006</u>	<u>0.31</u>	<u>1.08</u>	0.004	0.28	0.90
NB SR 65 (PM R4.9 to 6.9): I-80 On to Pleasant Grove Blvd Off	55	1	<u>0.009</u>	0.15	0.5	0.006	0.33	1.02
SB SR 65 (PM R4.9 to 7.1): Pleasant Grove Blvd WB On to I-80 Off	95	0	0.000	0.29	0.77	0.006	0.34	1.04
Notes: The post mile (PM) limits are provided in the first column. Bold and underline font indicate actual accident rates that are higher than the statewide average for similar facilities. 1. The accident rate is accidents per million vehicle-miles. "F" refers to the fatality rate, and "F&I" refers to the fatality and injury rate. Total number of accidents includes non-injury accidents, which are not listed separately. Source: Caltrans District 3 TASAS Table B, April 1, 2009 to March 31, 2012								

The total collision rates were higher than statewide averages for eastbound and westbound I-80 between Douglas Boulevard and SR 65. This location has the highest volume and experiences the most severe congestion during peak periods. Therefore, drivers in this section are more likely to experience speed differentials and exposure to conflicts. The fatality and injury collision rate for westbound I-80 between Rocklin Road and SR 65 is also greater than the statewide average. This section is the first congested area drivers may experience when approaching the metropolitan Sacramento area from the east, so the potential is high for crashes due to driver inattentiveness.

Table 10 categorizes the collisions by type. The most frequent collision type (62 percent) is a rear end collision, which is typical of congested conditions. The next most frequent collision types are side-swipe

and hit object. The other collision types are collectively less than 10 percent of all collisions. The freeway section with the higher than average collision rates, I-80 between Douglas Boulevard and SR 65, also has the highest number of rear end collisions.

Location	Head On	Side Swipe	Rear End	Broad -side	Hit Object	Over-turn	Auto-Ped	Other
I-80 EB: Douglas Blvd On to SR 65 Off	0	42	175	6	24	3	1	3
I-80 EB: SR 65 Off to Rocklin Rd Off	0	14	19	1	16	0	1	1
WB I-80: Rocklin Rd On to SR 65 Off	0	48	105	2	21	6	1	5
WB I-80: SR 65 Off to Douglas Off	0	8	53	2	11	2	2	1
NB SR 65: I-80 On to Pleasant Grove Blvd Off	0	6	34	1	10	1	1	2
SB SR 65: Pleasant Grove Blvd WB On to I-80 Off	0	13	67	1	14	0	0	0
Total	0	131 (18%)	453 (62%)	13 (2%)	96 (13%)	12 (2%)	6 (1%)	12 (2%)
Source: Caltrans District 3 TASAS - Table B, April 1, 2009 to March 31, 2012								

Of the 728 collisions that occurred on the freeway system in the study area, 20 percent (148) occurred on the ramps at Eureka Road/Atlantic Street, Taylor Road, I-80/SR 65, and Stanford Ranch Road/Galleria Boulevard interchanges. Table 11 shows that three ramps each on eastbound and westbound I-80 have higher than average total collision rates. In the eastbound direction, they are the loop ramps at Eureka Road, Taylor Road, and SR 65. In the westbound direction, the two SR 65 ramps and the Atlantic Street on-ramp have higher than average collision rates. On SR 65, both on-ramps at Stanford Ranch Road/Galleria Boulevard have higher than average accident rates.

TABLE 11: RAMP ACCIDENT HISTORY

Location/Section	Total Accidents	Total Fatalities	Actual Collision Rate ¹			Average Collision Rate ¹		
			F	F&I	Total	F	F&I	Total
EB I-80 Off to Eureka Rd (PM 2.9)	13	0	0.000	0.16	1.01	0.003	0.34	1.01
EB I-80 On from EB Eureka Rd (PM 3.0)	3	0	0.000	<u>0.37</u>	<u>1.10</u>	0.002	0.21	0.73
EB I-80 On from WB Eureka Rd (PM 3.2)	6	0	0.000	<u>0.25</u>	0.51	0.003	0.18	0.57
EB I-80 Off to Taylor Rd (PM 3.6)	7	0	0.000	<u>0.62</u>	<u>1.44</u>	0.003	0.30	1.03
EB I-80 Off to SR 65 (PM 4.2)	31	0	0.000	<u>0.29</u>	<u>0.98</u>	0.004	0.20	0.68
EB I-80 On from SR 65 (PM 4.5)	2	0	0.000	<u>0.17</u>	0.17	0.003	0.14	0.41
WB I-80 Off to SR 65 (PM 4.3)	9	1	<u>0.070</u>	<u>0.42</u>	<u>0.63</u>	0.005	0.13	0.38
WB I-80 On from SR 65 (PM 4.0)	21	0	0.000	<u>0.18</u>	<u>0.75</u>	0.003	0.11	0.32
WB I-80 On from Taylor Rd (PM 3.6)	3	0	0.000	0.00	0.54	0.003	0.18	0.57
WB I-80 Off to WB Atlantic St (PM 3.2)	2	0	0.000	0.23	0.46	0.004	0.24	0.75
WB I-80 Off to EB Atlantic St (PM 3.0)	0	0	0.000	0.00	0.00	0.003	0.30	1.06
WB I-80 On from Atlantic St (PM 2.8)	9	0	0.000	<u>0.32</u>	<u>0.71</u>	0.002	0.22	0.63
NB SR 65 Off to Stanford Ranch Rd (PM R5.7)	2	0	0.000	0.06	0.11	0.002	0.08	0.25
NB SR 65 On from Stanford Ranch Rd (PM R6.2)	22	0	0.000	<u>0.88</u>	<u>2.15</u>	0.002	0.22	0.63
SB SR 65 Off to Galleria Blvd (PM R6.2)	2	0	0.000	0.09	0.18	0.002	0.08	0.25
SB SR 65 On from Galleria Blvd (PM R5.7)	16	0	0.000	<u>0.45</u>	<u>0.90</u>	0.002	0.22	0.63

Notes: The post mile (PM) limits are provided in the first column. Bold and underline font indicate actual accident rates that are higher than the statewide average for similar facilities.

1. The accident rate is accidents per million vehicle-miles. "F" refers to the fatality rate, and "F&I" refers to the fatality and injury rate. Total number of accidents includes non-injury accidents, which are not listed separately.

Source: Caltrans District 3 TASAS Table B, April 1, 2009 to March 31, 2012

Chapter 4. Travel Demand Forecasts

The travel demand forecasts were developed using a validated sub-area model derived from the SACMET regional travel demand forecasting (TDF) model developed by SACOG¹. The approach to developing travel demand forecasts started with the recognition that regional travel demand models do not contain sufficient detail or sensitivity for local applications like developing directional freeway mainline and ramp volume forecasts. Instead, the regional model provides a starting point for creating a more detailed sub-area model along the freeway corridor. Having a valid sub-area model is a critical step in ensuring a high level of confidence in the traffic volume forecasts that will be used to evaluate the effects of improving the I-80/SR 65 interchange.

4.1. Sub-Area Model Development

SACMET is a four-step TDF model. The version used to develop project forecasts was last calibrated and validated in 2008. This model represents the state of the practice for a metropolitan planning organization such as SACOG given the geographic area and population size covered by the model. Two advanced features of the model include a destination choice model for the home-based work purpose and a feedback loop between trip assignment and trip distribution. Issues or limitations of the model include the following.

- No feedback to land use projections – The model’s land use projections are developed independently of specific model runs and are not affected by congestion and accessibility. For corridors where significant roadway capacity expansion will occur (which makes land along those corridors more accessible), the model does not contain sufficient sensitivity to capture the full effects of induced traffic that occurs due to induced growth. This issue is not considered significant for the I-80/SR 65 interchange since the increase in capacity is not commensurate with the increase in land use growth. Therefore, the peak period traffic volume forecasts that are the basis for the operations analysis substantially exceed available capacity.
- No feedback to trip generation – The model is insensitive to congestion effects on trip making behavior since it uses the same fixed trip generation rates in base year and future year models. This limits the model’s sensitivity to congestion effects and likely results in higher traffic volume forecasts than are likely to occur in future years.
- Fixed peak period percentages – The model’s forecasts of peak period traffic volumes are based on fixed percentages that are carried over from the base year model to the future year models. In

¹ The SACMET model used for this project was released in May 2011 and was developed to be consistent with the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy 2035.

reality, peak periods will spread as congestion worsens and the peak period percentages will change. The use of base year peak period percentages for the future year models will likely result in peak period traffic volumes that are higher than the roadway network could operationally support.

For the I-80/SR 65 interchange project, the last two issues were addressed through the integration of the sub-area travel demand forecasts with a meso-scale trip assignment model and a microsimulation traffic operations model (which were built using the VISUM 12.0 and VISSIM 5.4 software, respectively).

Figure 17 displays the entire SACMET model network and highlights the portion that is the study area for the I-80/SR 65 project.

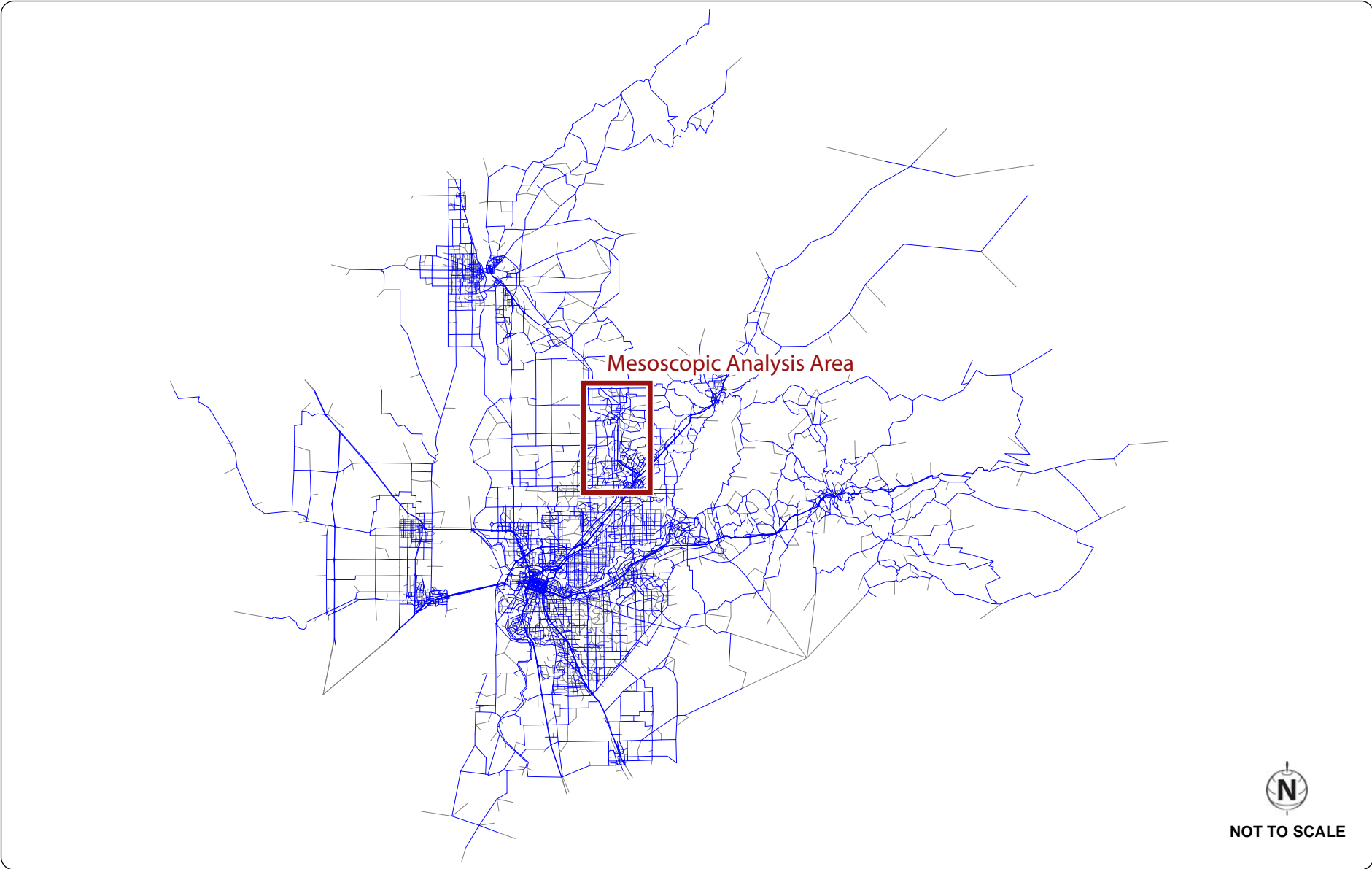
Key modifications to the SACMET model that were made within the sub-area are listed below.

- Updated base year land use estimates within the study area based on field observations, aerial photography, and input from Placer County and the Cities of Rocklin and Roseville.
- Updated base year roadway network to include greater detail and correct inconsistencies between model inputs and field observations.
- Added new traffic analysis zones (TAZs) in the study area to increase the level of detail and improve the loading of traffic from TAZs onto the network.

Figure 8 shows the VISUM mesoscopic model area and the VISSIM microscopic model area. Trip tables from the SACMET model were used to forecast peak period travel demand, and the mesoscopic VISUM model was used to refine the peak period temporal distribution into individual one hour assignments. In the final step, the VISUM trip tables and paths are imported to VISSIM where the final assignment occurs and the end result is a forecast of peak spreading and refined peak period traffic volume flows that are sensitive to the operational capacity constraints of the I-80/SR 65 network.

4.2. Model Validation

Validation compares model estimates of base year conditions to observed traffic counts and sensitivity tests are conducted to ensure the models respond in the correct direction and magnitude when changes to inputs are made. The comparison of model volumes to counts is referred to as static validation and involves statistical tests to measure how well the model volume estimates match the traffic counts. The sensitivity tests are called dynamic validation.



The base year for the SAMET model is 2008 so the static validation for the modified SACMET model and the VISUM model relied on available traffic counts from 2006 to 2009. This was necessary since a complete set of traffic counts was not available for 2008 alone. The static validation results should be viewed within this context because the model volumes are intended to represent 2008 conditions. Specific validation tests and thresholds were obtained from the *2010 California Regional Transportation Plan Guidelines* (California Transportation Commission, 2010). This document includes modeling guidelines for state, regional, and local agency projects.

4.2.1. Static Validation

After the changes noted above were completed, the modified SACMET model was validated within the project study area. Specific criteria have been established as target thresholds for the static tests. The static validation results for both models are compared to the target thresholds in Tables 12 and 13 below. As a regional model, the SACMET model performed well within the small sub-area. It passed all but one of the static tests (although it improved from its original off-the-shelf performance for this test). In general, the model generated volume estimates that closely matched freeway and ramp volumes. Differences tended to be larger on low volume roadways on the edge of the study area.

The VISUM model was developed just for the project study area and includes more network detail and a different approach to estimating and assigning trips. The VISUM model was developed using Airsage cell phone OD data and TomTom GPS speed data. The cell phone OD data were processed through a trip table estimation procedure to match 2008 traffic flows. The GPS speed data was used to set the link free-flow speed. As a result, the VISUM model static validation results in Table 13 show a close match to traffic counts.

4.2.2. Dynamic Validation

The SACMET and VISUM models were tested dynamically by deleting and adding links. Figure 18 displays two of the dynamic tests for illustrative purposes. The first test shows the change in peak hour traffic volumes when one lane is added in each direction on I-80 between Douglas Boulevard and Eureka Road. The second test shows the change in traffic levels when one lane in each direction is deleted from Roseville Parkway at the I-80 overcrossing.

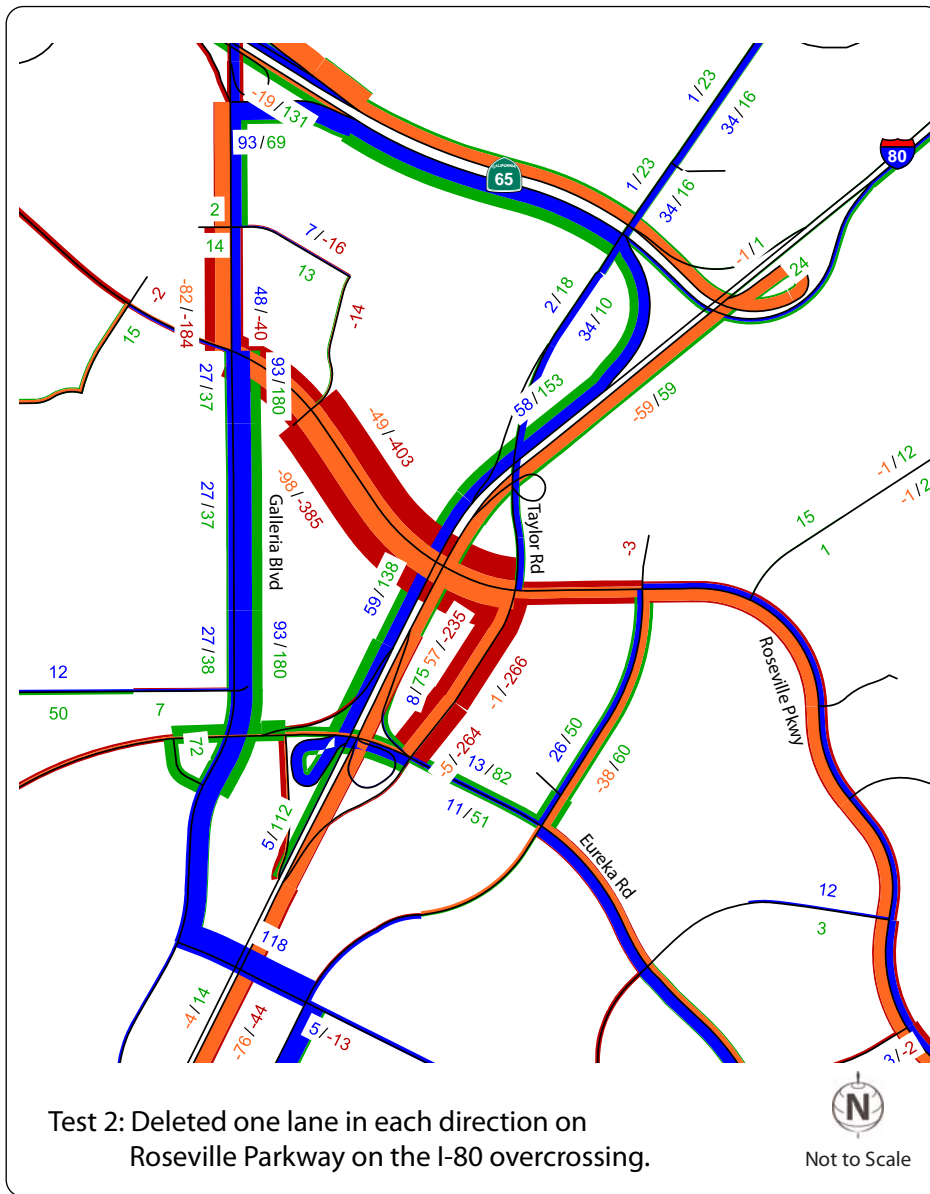
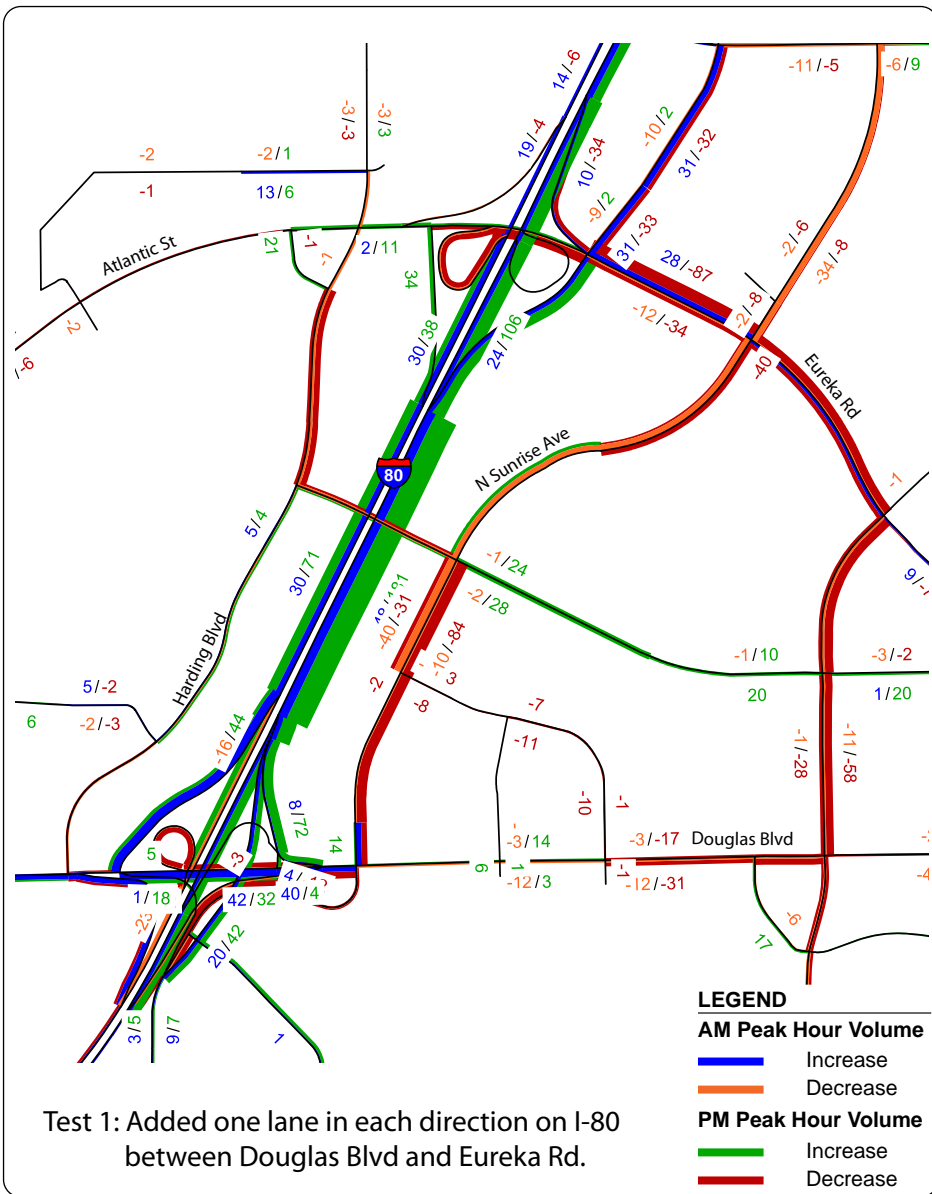
In the first test, the model increased the I-80 volume as a result of adding a lane by shifting volume from the parallel roadways: Harding Boulevard, Sunrise Avenue, and Rocky Ridge Drive. In the second test, traffic volume on Roseville Parkway dropped with the reduction of a lane and volume was shifted to the parallel SR 65 and Atlantic Street/Eureka Road. Both models responded in the correct direction and magnitude when making changes to network inputs. The SACMET model also demonstrated appropriate responses in changes to land use inputs during the static validation process.

TABLE 12: SACMET MODEL VALIDATION RESULTS

Measure	AM Peak Hour	PM Peak Hour	AM Peak Period	PM Peak Period	Threshold ¹
Model/Count Ratio	0.98	1.01	1.05	0.97	
Percent Within Caltrans Maximum Deviation	71%	69%	77%	70%	> 75%
Percent Root Mean Square Error	30%	31%	28%	28%	< 40%
Correlation Coefficient	0.94	0.93	0.96	0.94	> 0.88
Note: ¹ 2010 California Regional Transportation Plan Guidelines, California Transportation Commission, 2010					
Source: Fehr & Peers, 2014					

TABLE 13: VISUM MODEL VALIDATION RESULTS

Measure	AM Peak Hour	PM Peak Hour	AM Peak Period	PM Peak Period	Threshold ¹
Model/Count Ratio	1.01	1.01	1.01	1.01	
Percent Within Caltrans Maximum Deviation	100%	100%	100%	100%	> 75%
Percent Root Mean Square Error	11%	17%	16%	17%	< 40%
Correlation Coefficient	1.00	1.00	1.00	1.00	> 0.88
Note: ¹ 2010 California Regional Transportation Plan Guidelines, California Transportation Commission, 2010					
Source: Fehr & Peers, 2014					



4.3. Future Year Forecasts

Traffic forecasts for design and construction year analysis were developed for the following project alternatives (see Figures 2 through 7).

1. Taylor Road Full Access Interchange
2. Collector-Distributor System Ramps
3. Taylor Road Interchange Eliminated
4. TSM
5. No Build

Traffic forecasts were developed for one additional alternative: Taylor Road Full Access Interchange with Antelope Creek Drive Connection. In this alternative, Antelope Creek Drive is extended east across the railroad tracks to Taylor Road. Since this alternative was dropped from consideration, these forecasts are presented in the Technical Appendix.

4.3.1. Design Year Forecasts

From a macro perspective, the proposed project alternatives – modification at one interchange – would not change regional travel demand. A sensitivity test of the SACMET model showed almost no change in travel demand with a change in capacity of the congested freeway connector ramps. Instead, the most significant effects on future traffic volumes will occur in terms of trip routing within the meso-scale study area due to travel time differences caused by the alternatives. Therefore, the PDT agreed to use the same set of trip tables for all project alternatives, which means that volumes at the sub-area boundaries are the same across all alternatives.

The volume forecast process began with isolating the incremental peak period volume growth (2008 to 2035) between traffic analysis zones (TAZs) in the sub-area using the modified SACMET model (macro level). This incremental growth was then added to the base year VISUM trip table (meso level) that was derived from the Airsage cell phone data. The incremental SACMET growth was inspected to verify that the changes in origin-destination trips were commensurate with the location of socioeconomic growth. Individual origin-destination pair volumes were not allowed to decrease between base and cumulative years.

In the next step, the four-hour peak period trip tables were divided into hourly trip tables by mode: SOV, HOV, and truck. The conversion from peak period to hourly trip tables used the existing ratio of hourly traffic volume to peak period volume. The mode share for HOVs was based on the relative peak period mode share in the 2035 SACMET model. For the entire meso study area, the overall forecast HOV shares are 18 and 19 percent during the AM and PM peak periods, respectively. The truck share is assumed to

increase from 2.7 and 1.4 percent under existing conditions to 3.0 and 2.0 percent under the design year for the AM and PM peak periods, respectively.

Some adjustments were made to the HOV shares for select locations based on previous comments from Caltrans about HOV forecasts being lower than observed conditions on I-80. Table 14 shows the AM and PM peak hour HOV percentages for the I-80 western gateway from the 2035 SACMET model, the 2012 traffic counts, and the proposed 2040 forecast values. The 2008 and 2035 SACMET model forecasts show similar values of 11 to 13 percent at this gateway. These values are lower than the traffic counts that were collected in 2012. The proposed 2040 HOV percentages use the 2012 traffic count percentages for the off-peak directions. In the peak direction, a five percentage point increase was assumed to compensate for the difference between model estimates and counts. Additionally, traffic congestion is expected to be more severe in the design year, which would encourage the formation of carpools.

Direction	2035 SACMET		2012 Counts		2040 Forecast	
	AM	PM	AM	PM	AM	PM
Eastbound	11%	13%	15%	17%	15%	22%
Westbound ¹	13%	13%	14%	18%	19%	18%

Note: 1. The count location was at the Riverside Ave/Auburn Blvd overcrossing, but the westbound study area gateway is between Elkhorn Blvd and Madison Ave.

Source: Fehr & Peers, 2014

The five percentage point increase was also validated based on a June 2012 sampling of traffic volumes at the I-80/Douglas Boulevard, I-80/Eureka Road, and SR 65/Galleria Boulevard on-ramps, which found HOV percentages ranging from 9 to 25 percent for the AM peak hour and 14 to 36 percent for the PM peak hour. The AM and PM peak hour averages of 16 and 24 percent from these samples are generally similar to the 2035 SACMET forecasts of 18 and 19 percent, respectively. However, peak direction HOV percentages were some of the largest values observed. The adjustments noted in Table 13 result in HOV volume forecasts that are at or near the HOV lane operating capacity under design year conditions, so they were considered reasonable for purposes of this study.

The future year VISUM trip tables were then assigned to each project alternative network. These networks included all the planned transportation improvements shown in Figures 6 and 7 plus unique features of each alternative. The preliminary forecasts from this step were reviewed and adjusted for anomalies such as unexpected decreases in traffic volumes when compared to existing conditions. The expected decreases that occurred are noted below.

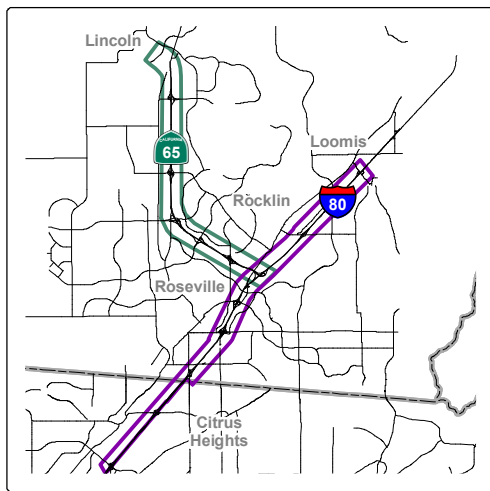
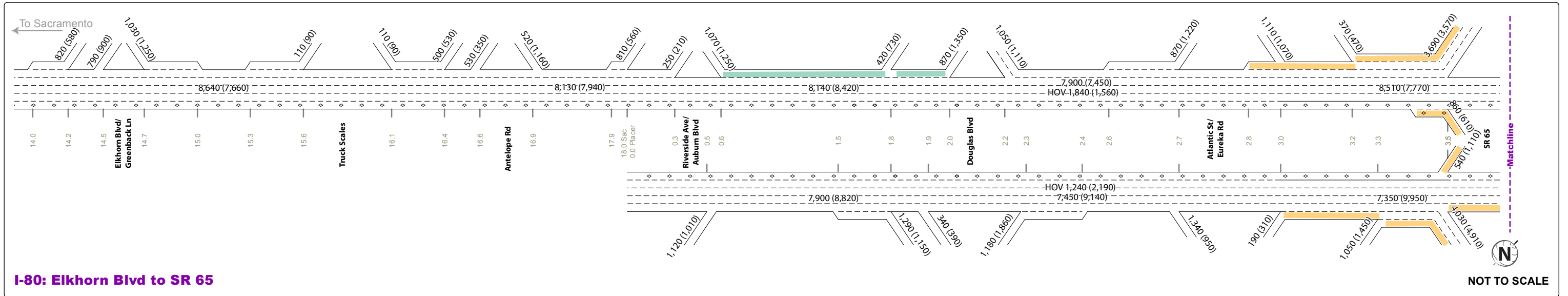
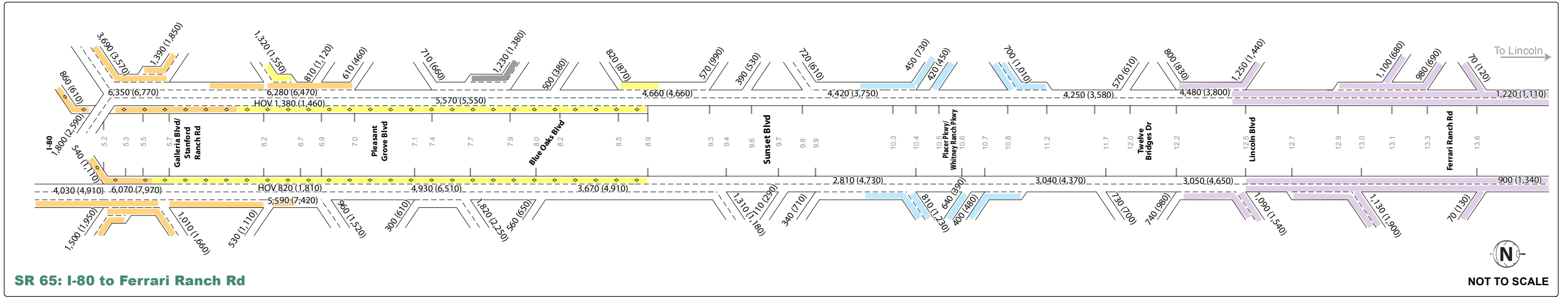
- Riverside Avenue slip on-ramp to westbound I-80 – This ramp shows a decrease over existing volumes. This decrease is allowed since the cumulative roadway network includes several projects

that increase parallel capacity between west Roseville and Sacramento County (widening Baseline Road/Riego Road between SR 99 and Foothills Boulevard, widening Watt Avenue, etc.). These capacity enhancements redistribute some existing long-distance trips from Placer County to Sacramento County to alternative routes.

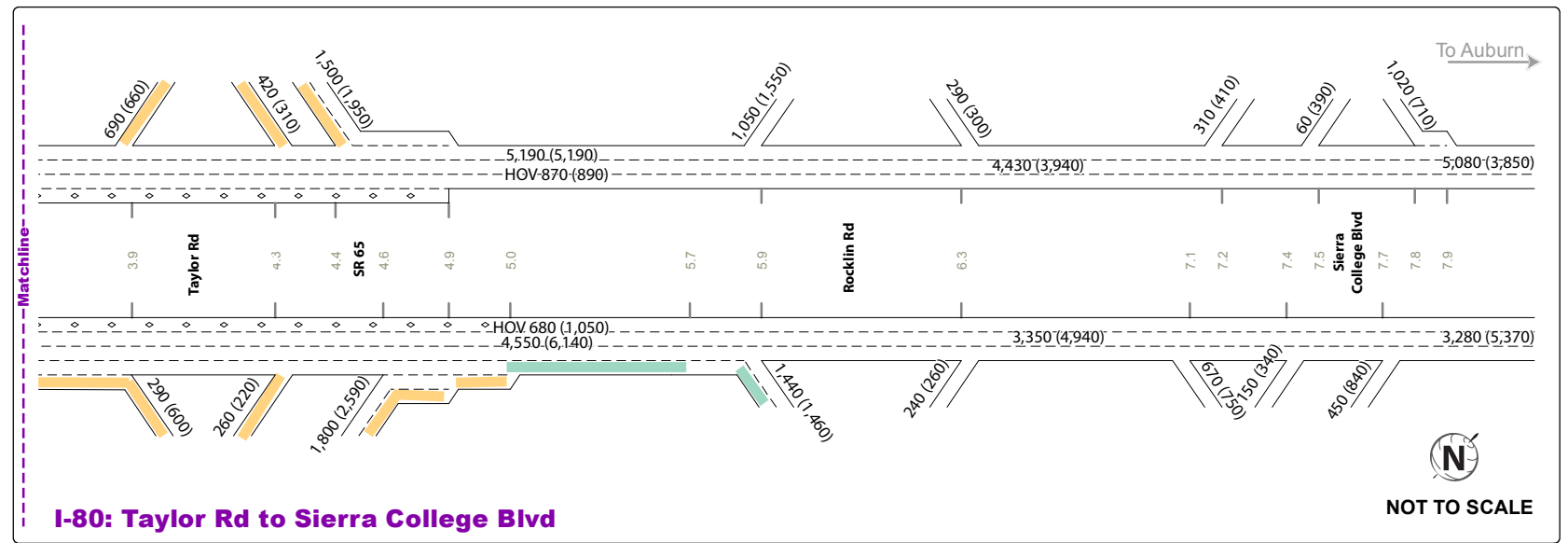
- Sunset Boulevard loop on-ramp to southbound SR 65 – The construction of the SR 65/Whitney Ranch Parkway/Placer Parkway interchange provides an alternate route so that the demand at SR 65/Sunset Boulevard is lower.
- Taylor Road off-ramp from eastbound I-80 for the Taylor Road Full Access Interchange and Collector-Distributor System Ramps Alternatives – With the widening of the eastbound to northbound freeway connector, traffic destined to Rocklin can use SR 65 to Stanford Ranch Road rather than the more indirect route of Taylor Road and Pacific Street to Sunset Boulevard.

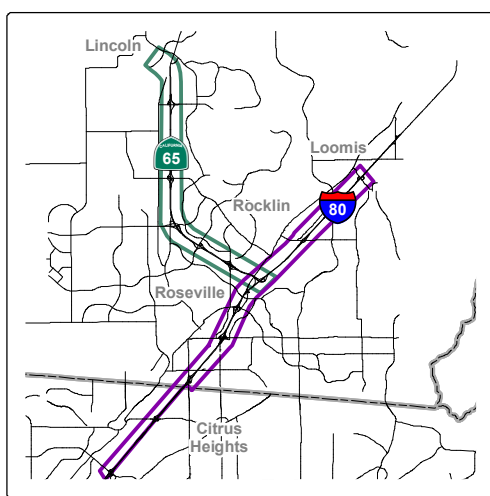
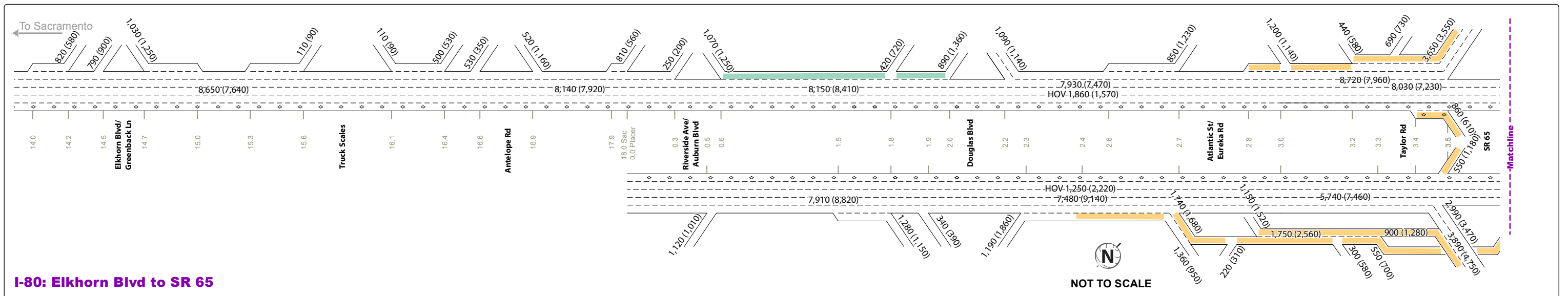
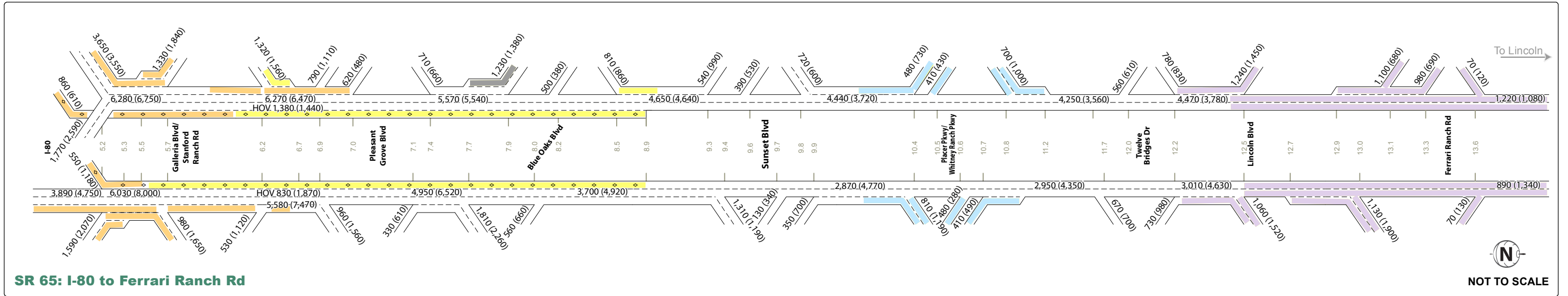
The final trip tables and the associated travel paths from the VISUM assignment were transferred to VISSIM for final assignment and analysis. Figures 19 through 23 display the specific freeway lane configurations associated with each alternative, along with the AM and PM peak hour traffic volume forecasts. These volumes represent traffic demand that may not be fully accommodated during the peak hour, which is determined as part of the VISSIM analysis.

The traffic forecasts for the study intersections are provided in the Technical Appendix.

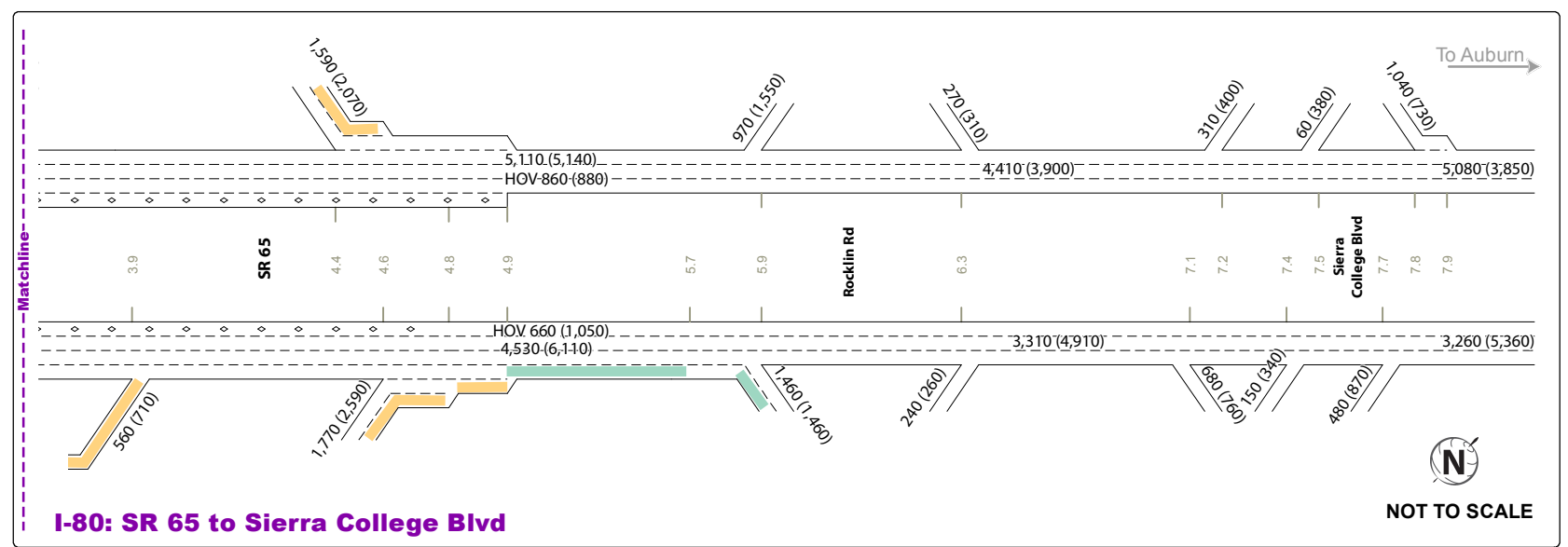


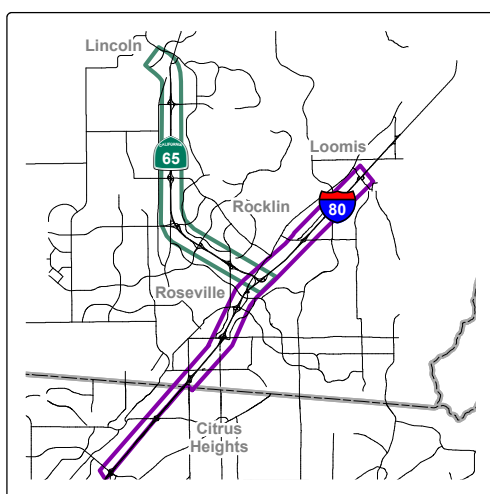
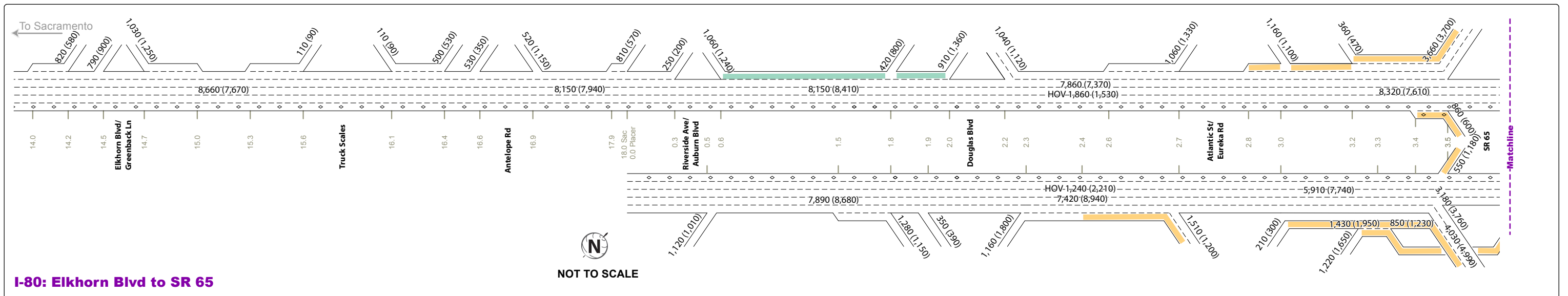
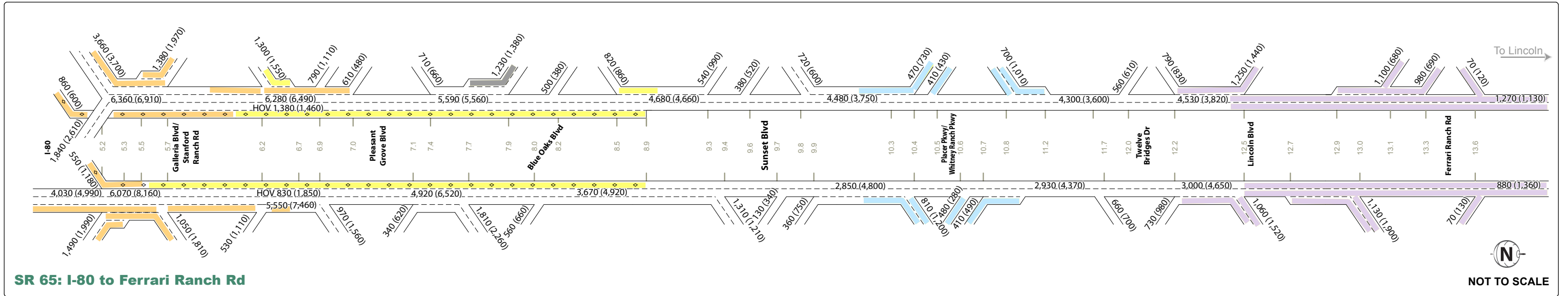
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2040 Conditions
 - 10.1 Postmile
 - Alternative 1
 - Separate Planned Projects**
 - SR-65 Capacity and Operational Improvements
 - Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening



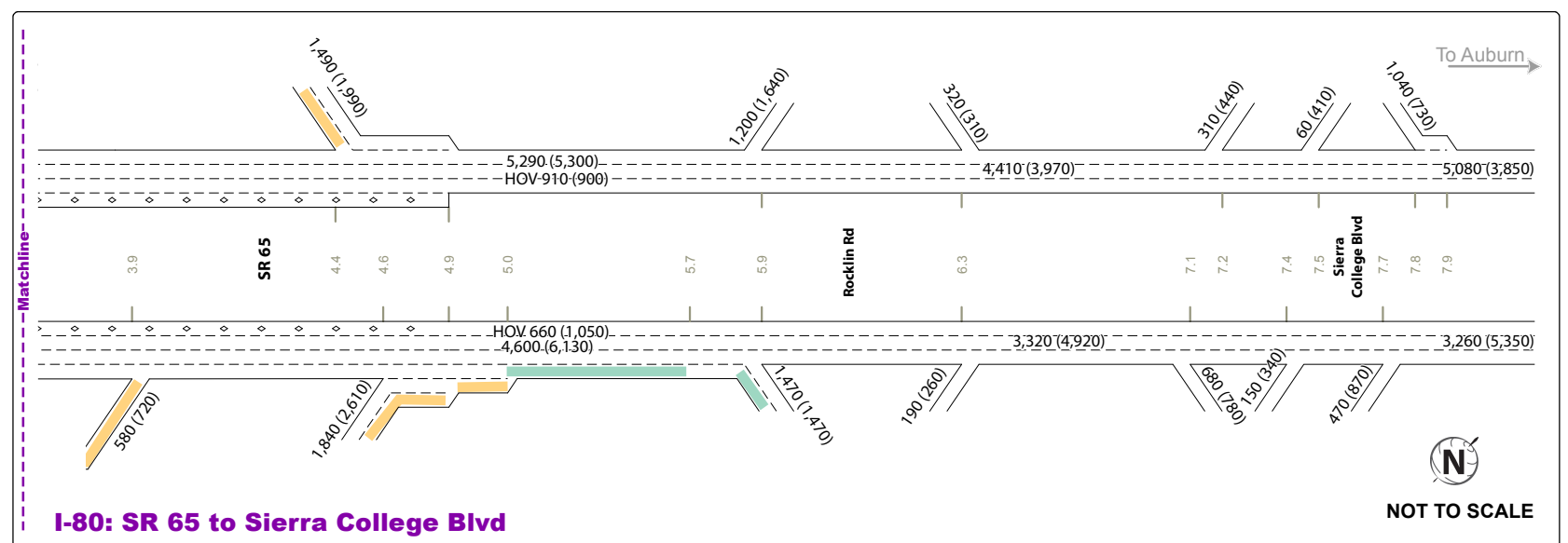


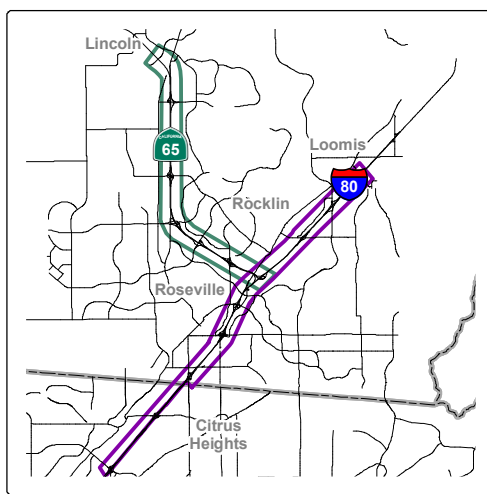
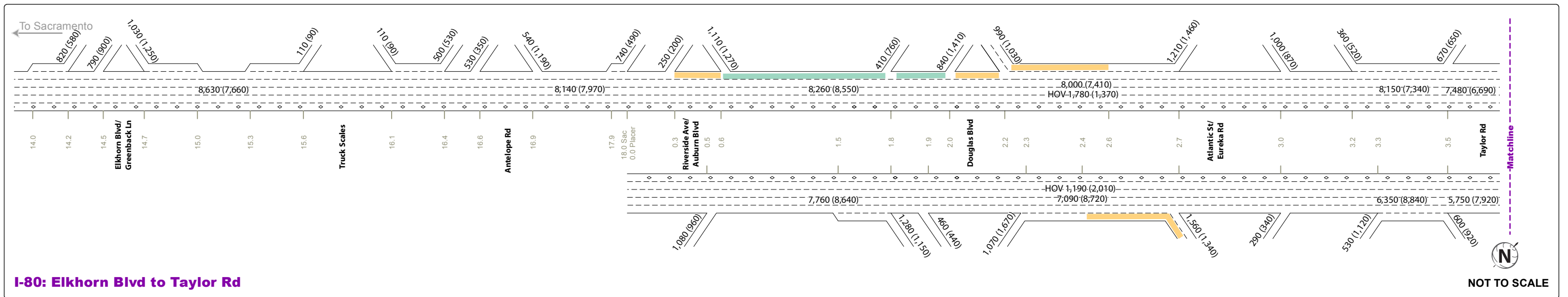
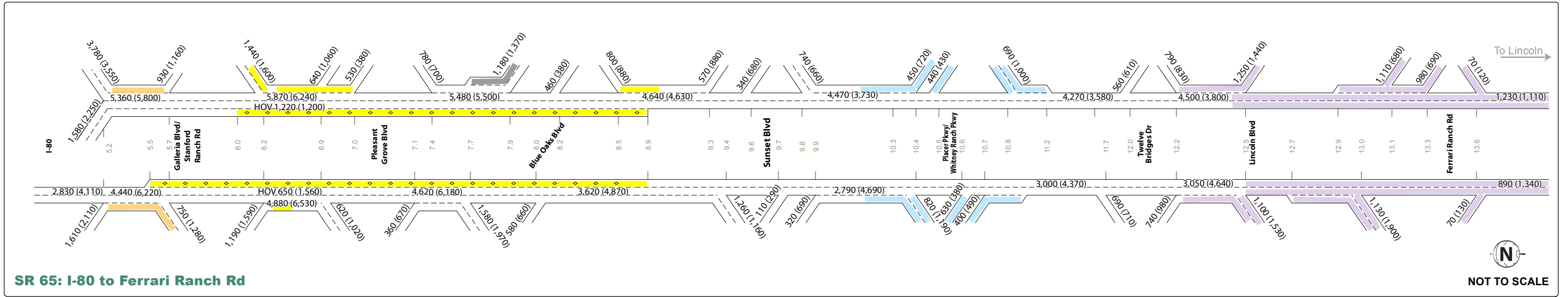
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2040 Conditions
 - 10.1 Postmile
 - Alternative 2
 - Separate Planned Projects**
 - SR-65 Capacity and Operational Improvements
 - Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening



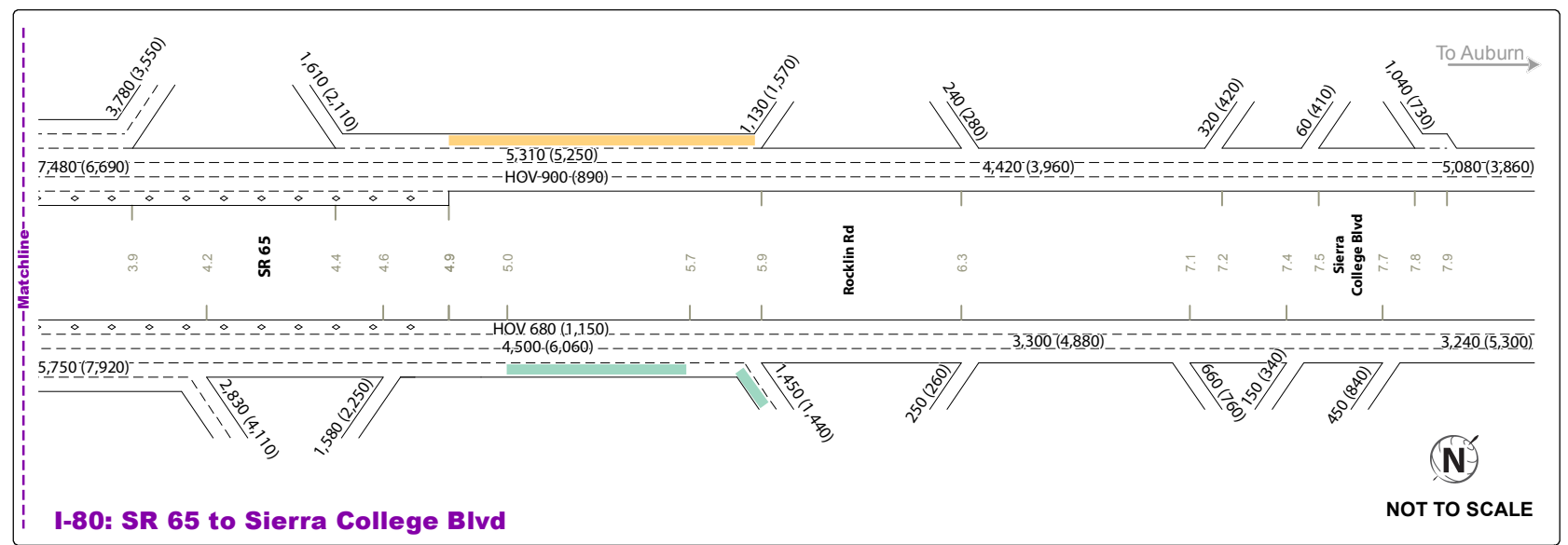


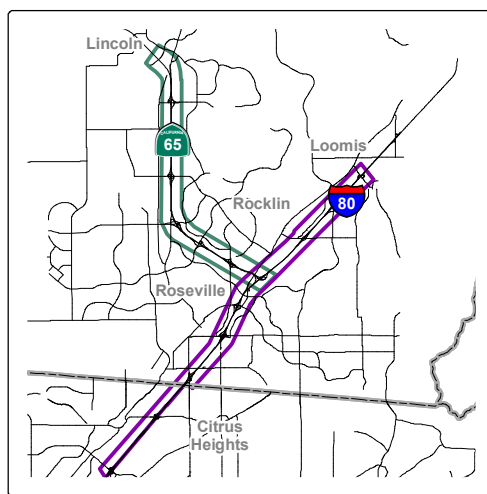
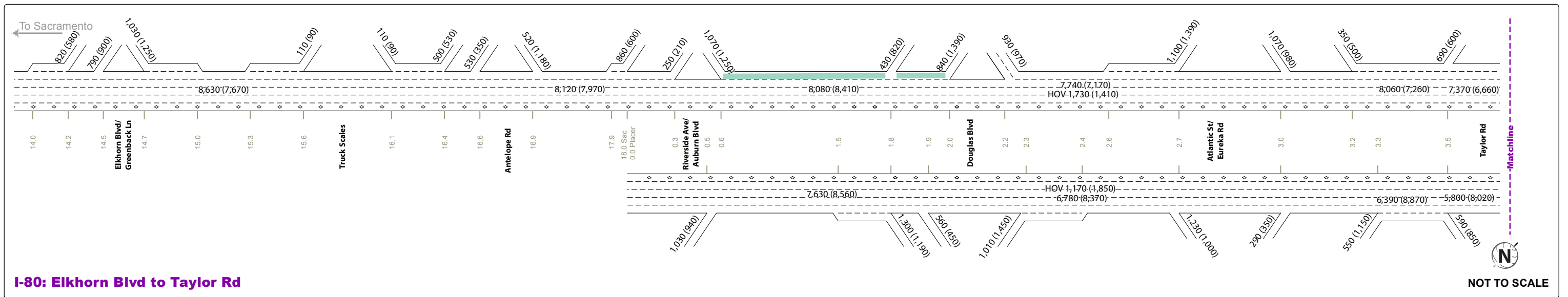
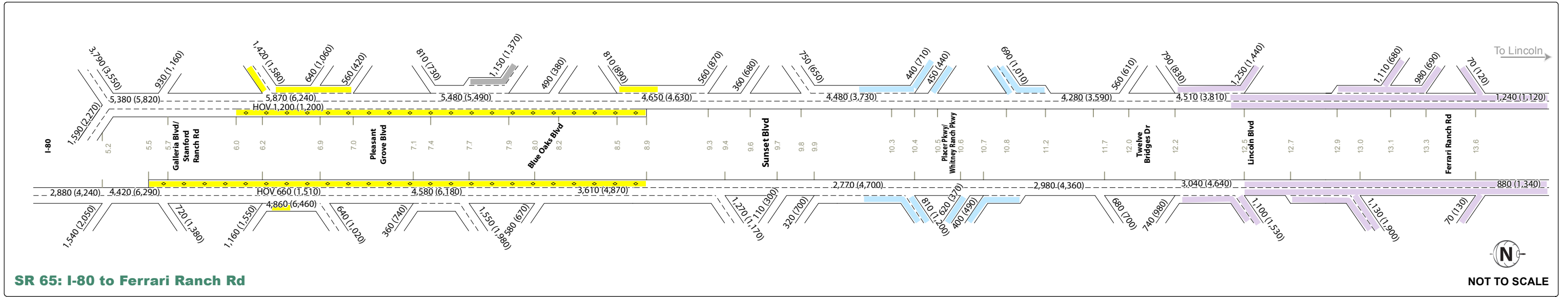
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2040 Conditions
 - 10.1 Postmile
 - Alternative 3
 - Separate Planned Projects**
 - SR-65 Capacity and Operational Improvements
 - Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening



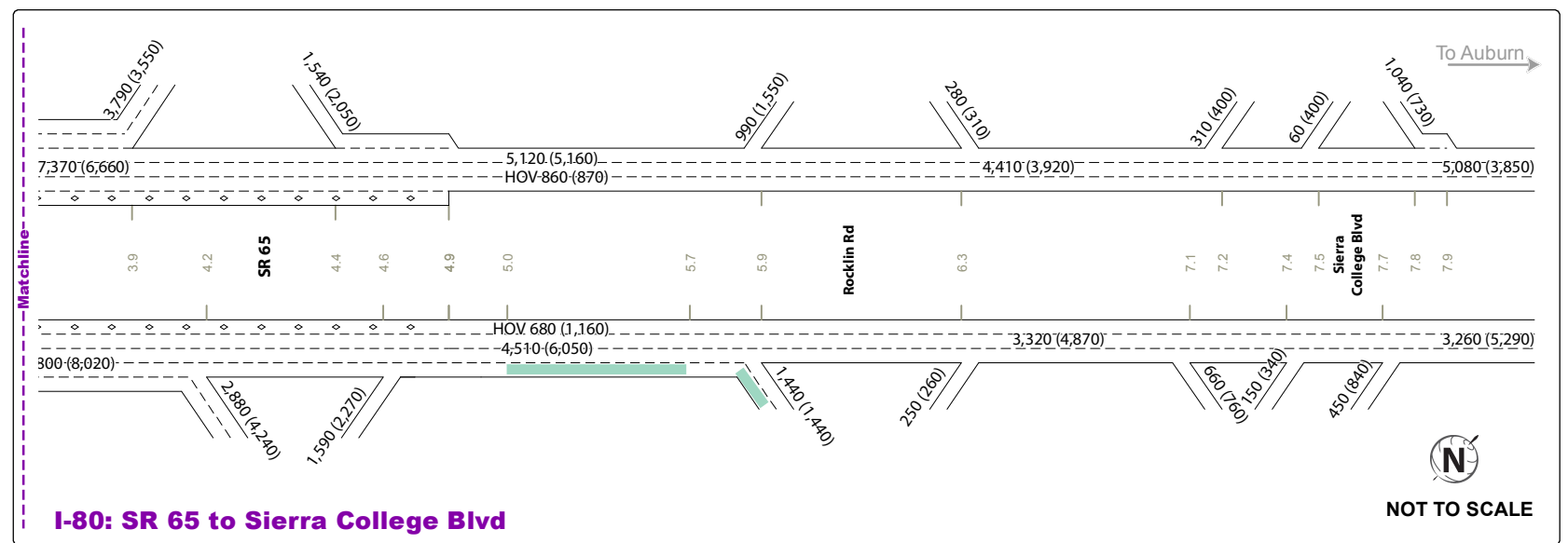


- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2040 Conditions
 - 10.1 Postmile
 - Alternative 4
 - Separate Planned Projects**
 - SR-65 Capacity and Operational Improvements
 - Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening





- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2040 Conditions
 - 10.1 Postmile
 - Separate Planned Projects**
 - SR-65 Capacity and Operational Improvements
 - Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening



Figures 24 through 27 show design year volume comparison plots between project alternatives. The orange and red colors indicate a volume decrease for the AM and PM peak hours, respectively. The blue and green colors indicate a volume increase for the AM and PM peak hours, respectively. For these bandwidth plots, the freeway HOV lane links have been turned off so that the changes to the regular mainline lanes can be shown.

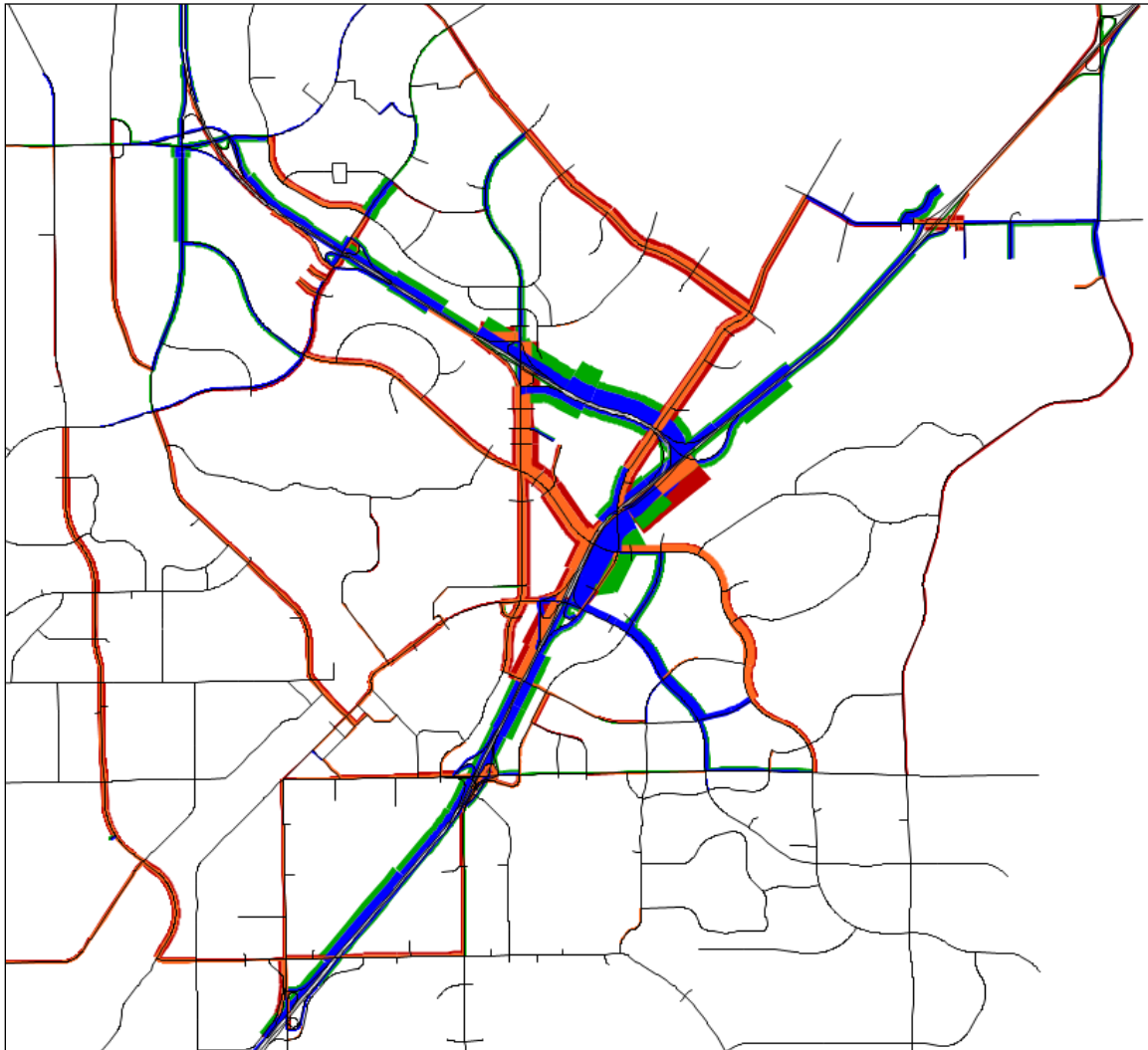


Figure 24 – Volume Comparison of Alternatives 3 and 5

Figure 24 shows a comparison of Alternative 3 (Taylor Road Interchange Eliminated) and 5 (No Build). With the additional capacity at the I-80/SR 65 interchange, volumes are higher from Douglas Boulevard on I-80 to Blue Oaks Boulevard on SR 65 under the No Taylor alternative. Volume increases also occur on arterials that access the north and south ends of this freeway segment: Eureka Road east of I-80, Stanford Ranch Road north of SR 65, and Pleasant Grove Boulevard and Blue Oaks Boulevard west of SR 65. Routes parallel to the freeway segment show decreases: Foothill Boulevard, Washington Boulevard, Roseville Parkway, and Galleria Boulevard/Harding Boulevard. Removing the I-80/Taylor Road

interchange shifts traffic from Taylor Road and Sunset Boulevard to SR 65 and Stanford Ranch Road. The differences between the No Build alternative and the other freeway reconstruction alternatives (Alternatives 1 and 2) are similar.

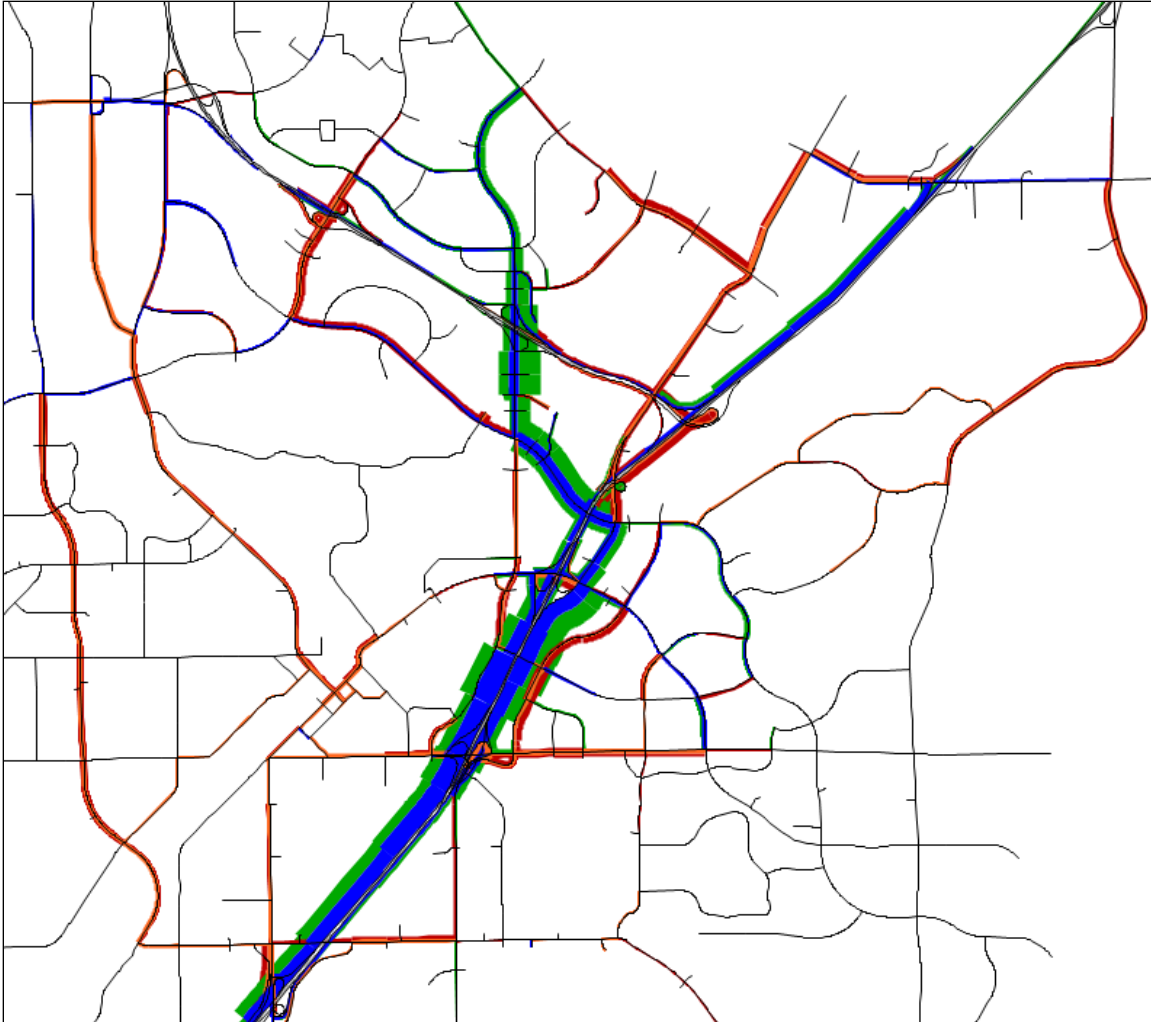


Figure 25 – Volume Comparison of Alternatives 4 and 5

Figure 25 compares the TSM and No Build alternatives. Volume increases are shown for the locations with additional lanes: westbound I-80 at Douglas Boulevard and between SR 65 and Rocklin Road. The signal coordination improvements along Galleria Boulevard and Roseville Parkway are expected to provide higher volumes, too. Volume decreases would occur on the parallel routes at the auxiliary lane locations: Douglas Blvd, Riverside Avenue, Sunrise Avenue, and Cirby Way to the south and Taylor Road and Sierra College Boulevard to the north. Despite the addition of auxiliary lanes, the traffic demand volume for SR 65 between I-80 and Galleria Boulevard is not forecasted to change much. While the auxiliary lanes would provide more capacity, the I-80 ramps to and from the west would remain over capacity, which would constrain the demand volume.

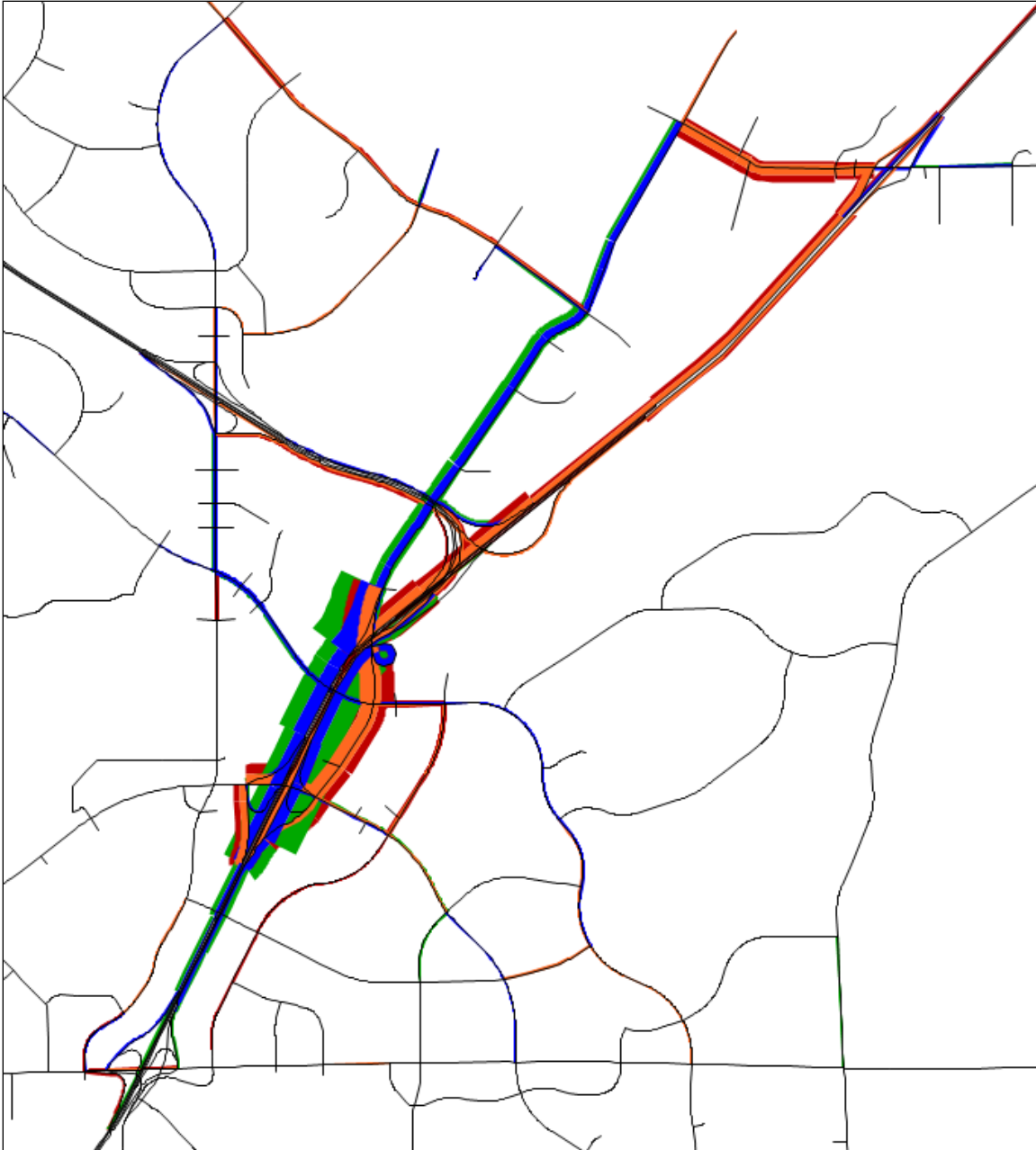


Figure 26 – Volume Comparison of Alternatives 2 and 3

Figure 26 shows the volume differences between Alternatives 2 (Collector-Distributor System Ramps) and 3 (Taylor Road Interchange Eliminated). Although both alternatives would expand the I-80/SR 65 interchange, the first alternative maintains the existing Taylor Road connections. As a result, traffic volume would mostly shift from the Eureka Road interchange to the new Taylor Road interchange. The Rocklin Road interchange would see some diversion, but the change at the SR 65/Galleria Boulevard interchange would be small. As noted above, the increase in capacity at the freeway-to-freeway interchange would shift volume to the Galleria Boulevard interchange without regard to whether an interchange is provided at Taylor Road.

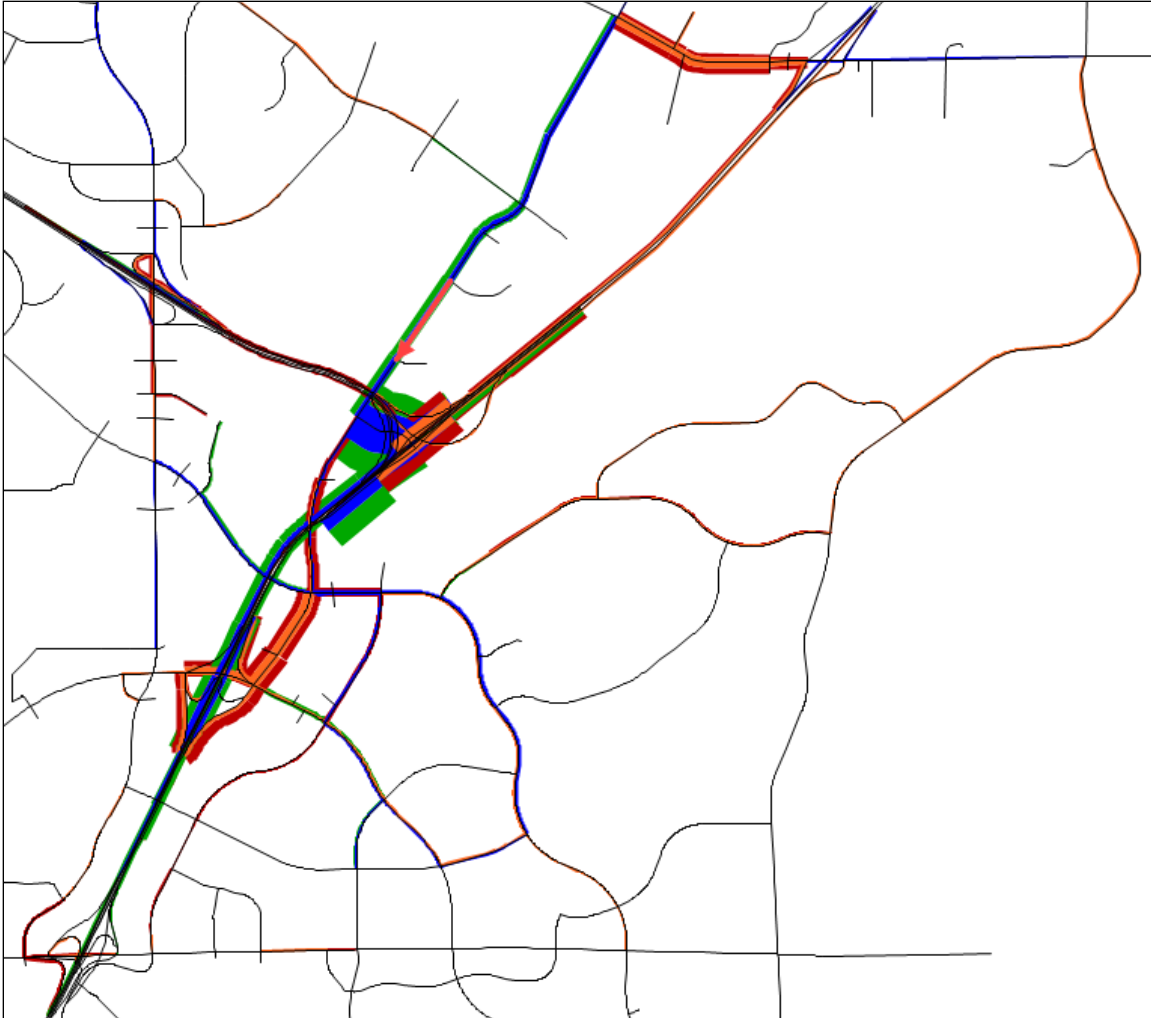


Figure 27 – Volume Comparison of Alternatives 1 and 3

Figure 27 shows the volume differences between Alternatives 1 (Taylor Road Full Access Interchange) and 3 (Taylor Road Interchange Eliminated). Compared to the alternative without a Taylor Road interchange, the proposed interchange inside the I-80/SR-65 interchange would shift volume away from the Eureka Road/Atlantic Street interchange ramps, Taylor Road, and Rocklin Road. Volumes would increase on I-80 between the Eureka Road/Atlantic Street and Taylor Road interchanges and on Taylor Road/Pacific Street between the new interchange and Rocklin Road. The changes to volumes on SR 65 would be minor.

4.3.2. HOV Volume Forecasts

The VISUM model includes HOV lanes as separate roadway links to account for the additional HOV-only capacity. Due to the close-spacing of the ramps, access to the HOV direct connectors at the I-80/SR 65 interchange is restricted in the model to traffic west of Eureka Road/Atlantic Street and north of Stanford Ranch Road/Galleria Boulevard. The resulting HOV lane projections for the project alternatives are listed in Table 15.

Location	Alternative 1		Alternative 2		Alternative 3		Alternative 4		Alternative 5	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
EB I-80: Douglas Blvd to Eureka Rd	1,070	1,650	1,080	1,540	1,070	1,480	1,040	1,460	1,030	1,470
WB I-80: Atlantic St to Douglas Blvd	1,570	1,310	1,580	1,320	1,570	1,300	1,320	1,230	1,530	1,280
EB I-80 to NB SR 65	540	1,110	550	1,180	550	1,180	n/a	n/a	n/a	n/a
SB SR 65 to WB I-80	860	610	860	610	860	600	n/a	n/a	n/a	n/a
NB SR 65: Stanford Ranch Rd to Pleasant Grove Blvd	720	1,590	720	1,610	710	1,590	570	1,460	590	1,410
SB SR 65: Pleasant Grove Blvd to Galleria Blvd	1,230	1,200	1,230	1,200	1,230	1,200	1,100	1,090	1,080	1,080
Source: Fehr & Peers, 2014										

Under No Build (Alternative 5), HOVs will use the regular direct connector ramps to travel between the HOV lanes on I-80 and SR 65. Because the ramps will be over capacity, the demand will be constrained. In particular, the AM peak hour HOV lane volume on northbound SR 65 would be low. With demand constrained at the I-80 interchange, northbound SR 65 would be relatively free from congestion, so the HOV lane would not provide a travel time advantage.

With the addition of the HOV direct connector ramps, the mainline HOV lane volume would increase. The HOV direct connector peak hour volume is projected to range from 540 to 1,180 vehicles per hour depending on the direction and peak hour. With the HOVs from the westbound to northbound connector added in, the HOV lane volume on northbound SR 65 would be similar to the eastbound I-80 volume. HOV lane volumes would be similar across the alternatives that reconstruct the I-80/SR-65 Interchange (Alternatives 1, 2, and 3).

4.3.3. Meso-Scale Network Performance for Design Year

In addition to generating traffic volume forecasts for input to the VISSIM microsimulation traffic operations model, the VISUM model was used to produce the same meso-scale network performance measures reported for existing conditions. Figures 28 through 32 compare VMT, VHT, VHD, freeway VHD, and project-area freeway VHD, respectively, across the forecasting alternatives for design year conditions during the AM, the PM, and both the AM and PM peak periods. The build alternatives increase VMT during the AM peak period and decrease VMT during the PM peak period (VMT is reported by 5-mph speed bin in the appendix). The results generally show that the build alternatives improve network efficiency by lowering VHT and VHD compared to the No Build Alternative. Although Alternative 1 (Taylor Road Full Access Interchange) has the largest reductions in VHD, Alternative 2 (Collector-Distributor System Ramps) provides the best results for VMT, VHT, and freeway VHD. Figure 32 shows that the build alternatives would reduce freeway delay by about 25 percent in the project area bounded by Douglas Boulevard, Rocklin Road, and Stanford Ranch Road/Galleria Boulevard.

4.3.4. Construction Year Forecasts

The construction year (2020) forecasts shown in Figures 33 through 37 were developed by interpolating between the hourly matrices for the baseline (2012) traffic volume estimates and the design year (2040) forecasts. Using VISUM, the resulting matrices were assigned to the roadway network that corresponds to the planned projects expected to be completed by 2020 (as shown in Figure 6). Due to these changes, construction year demand volumes at any particular location may not be the exact linearly interpolated value between the existing and design year volumes.

This process presumes a linear growth relationship and captures some of the influence of project alternatives on trip assignment. One of the potential limitations of this approach is that recent growth has not kept pace with the projected linear growth rate. The sluggish economic recovery from the 2008/09 recession may result in actual construction year volumes that are lower than the projections, but this outcome is acceptable for the purpose of designing and evaluating project alternatives.

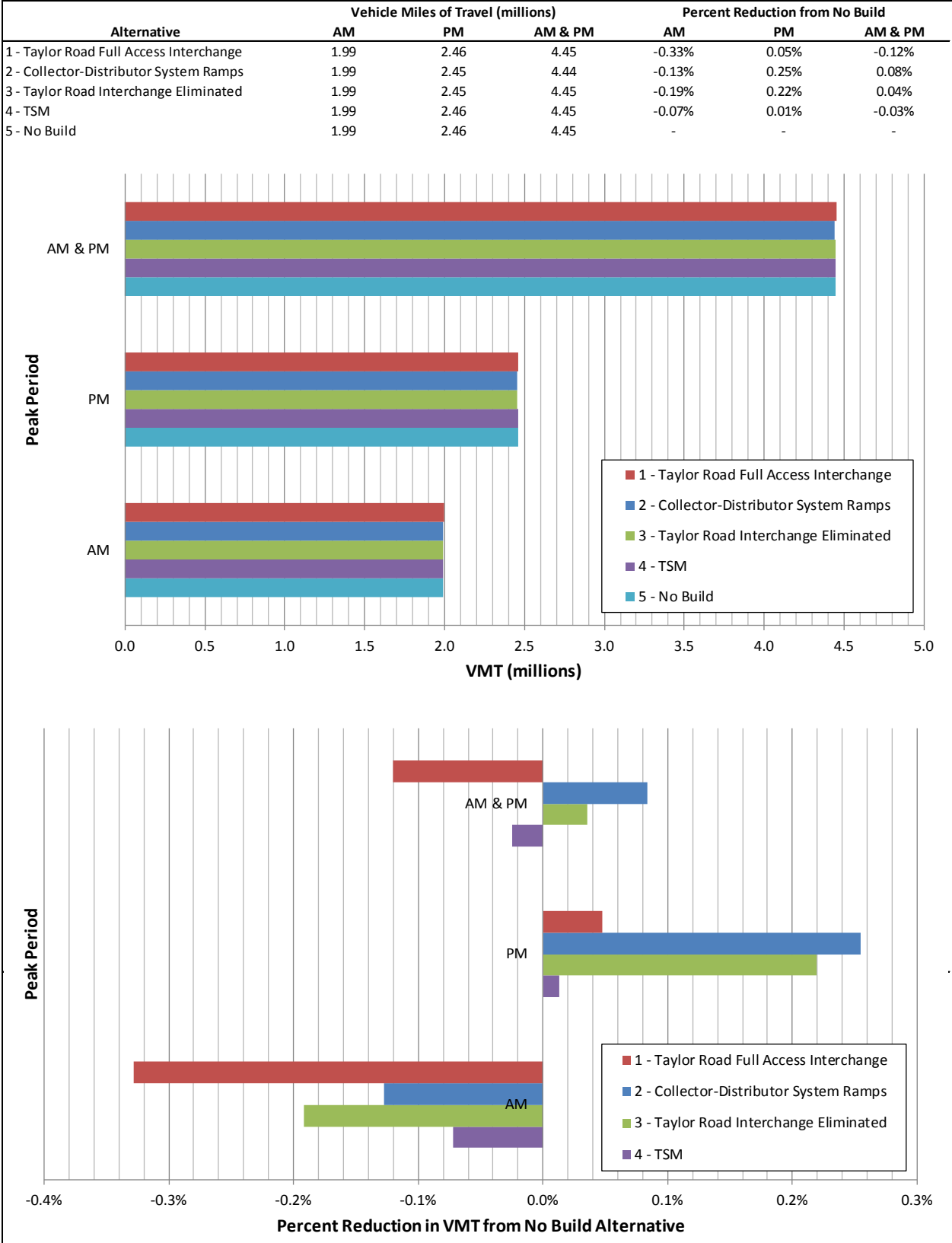


Figure 28 – Design Year Meso-Scale VMT Comparison

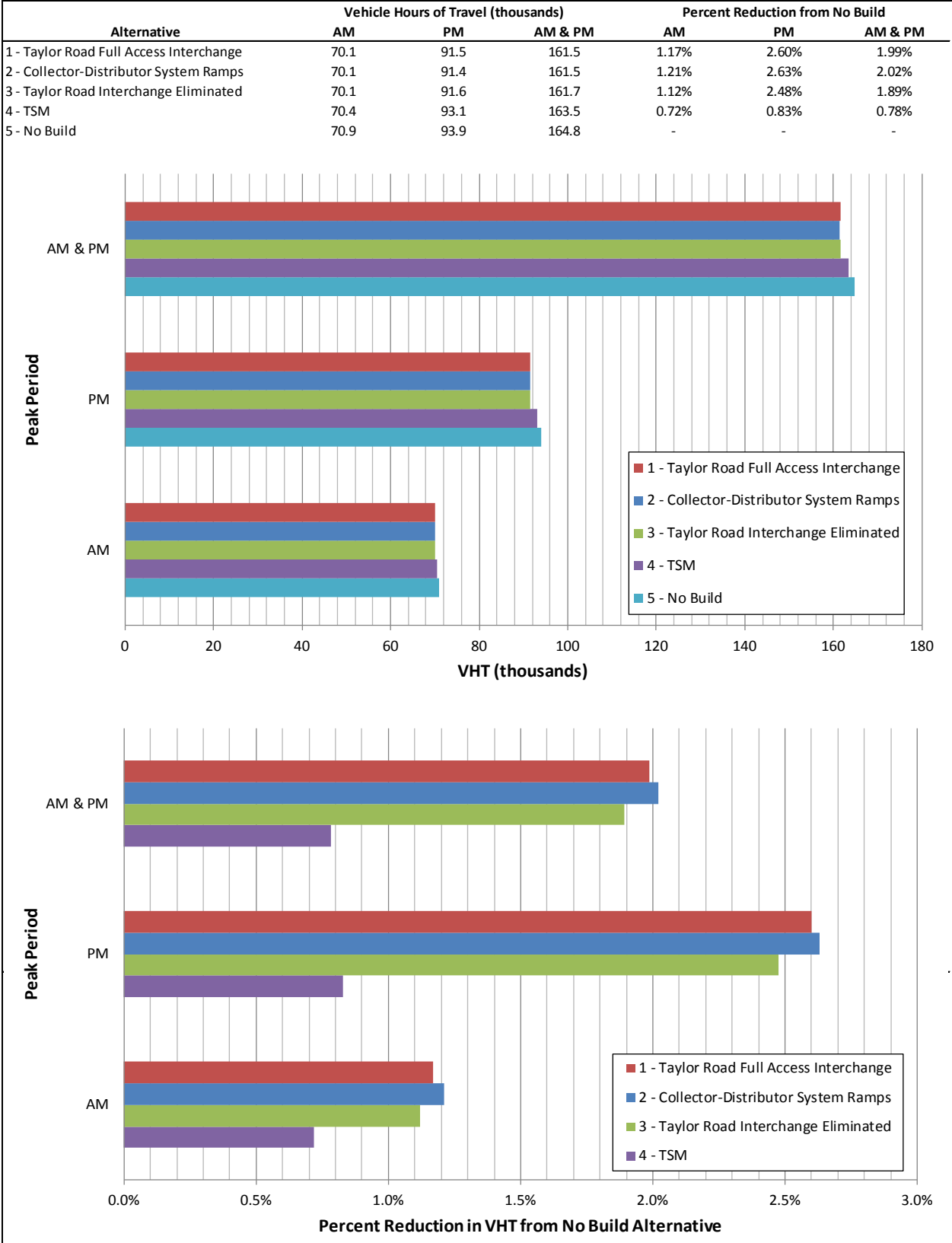


Figure 29 – Design Year Meso-Scale VHT Comparison

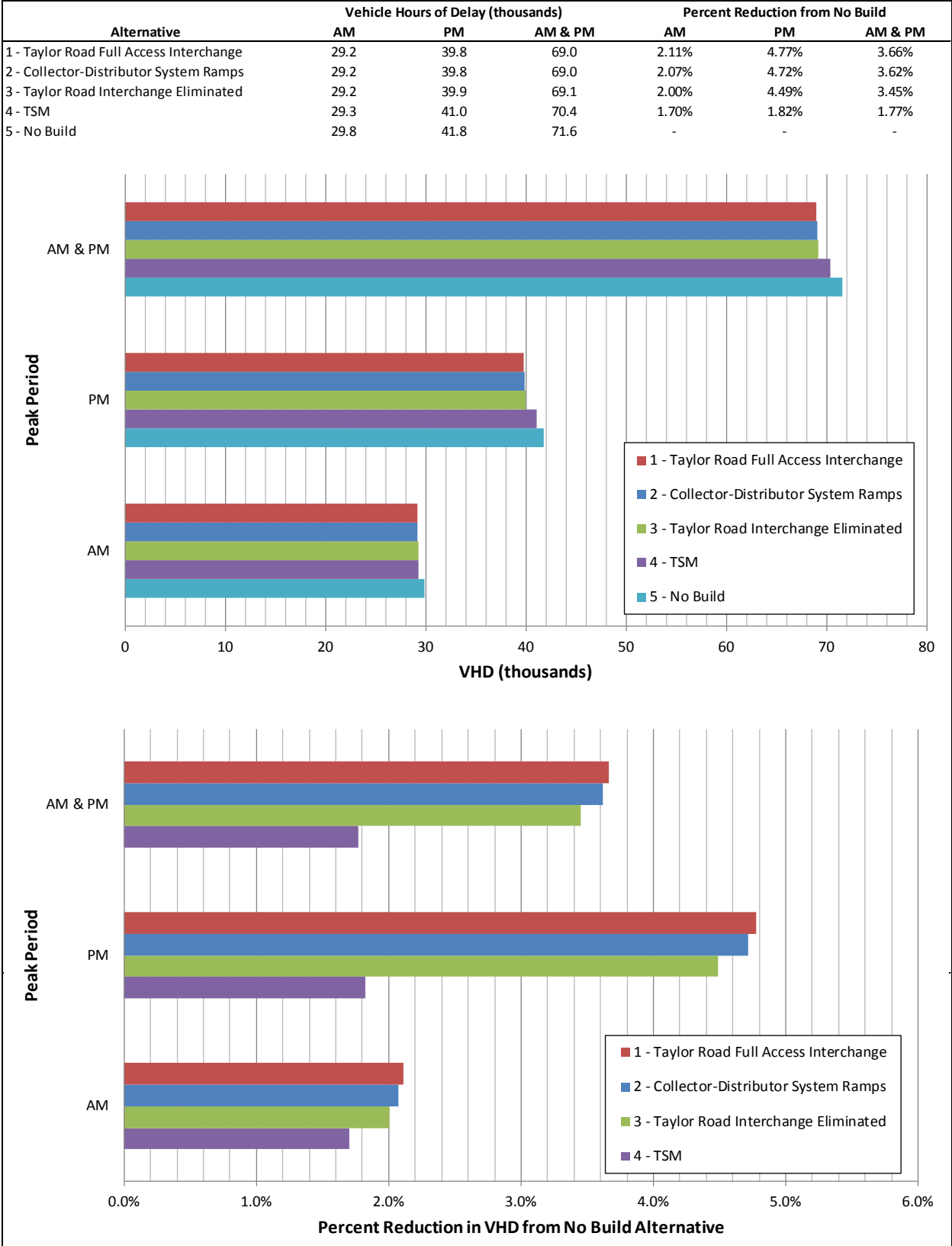
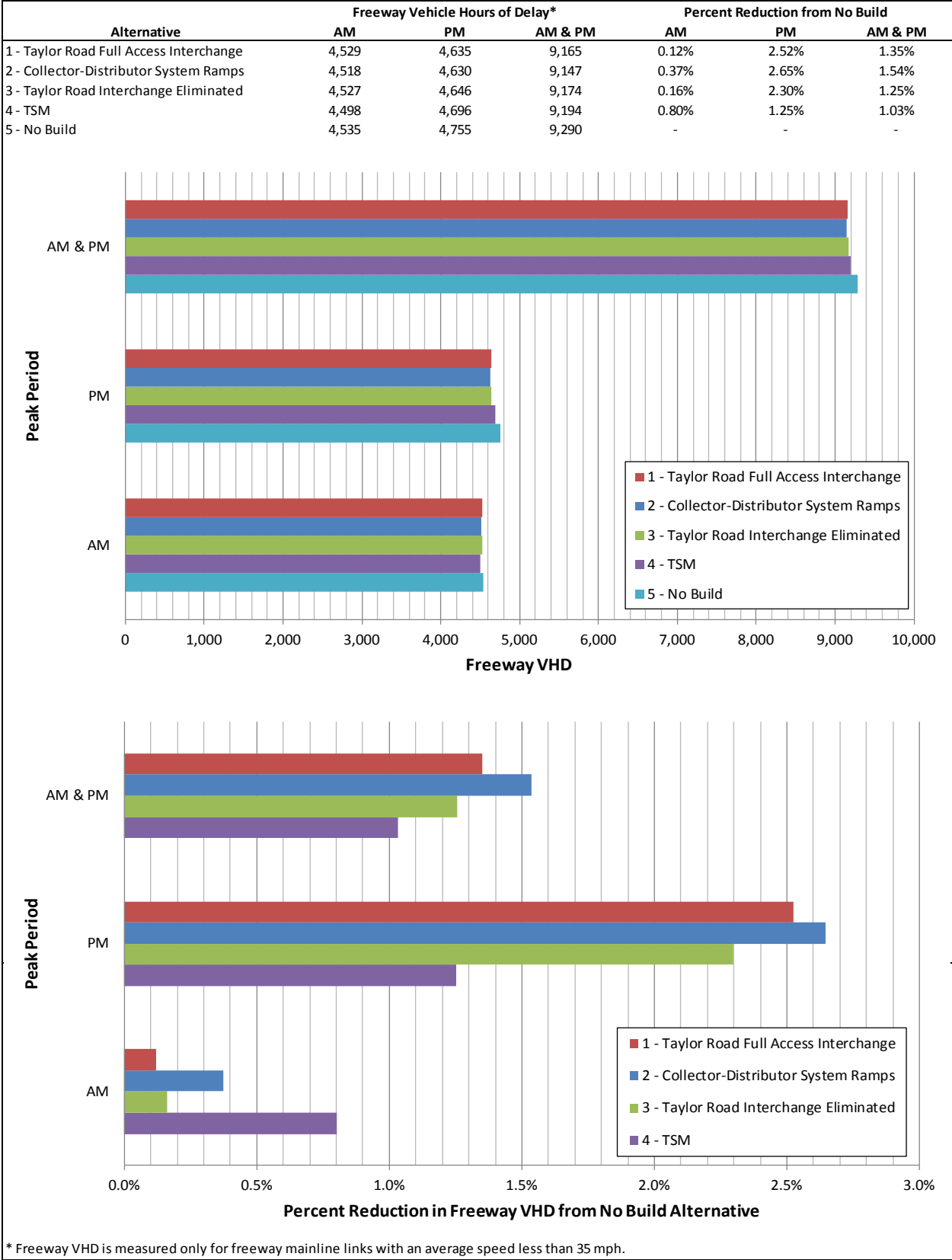


Figure 30 – Design Year Meso-Scale VHD Comparison



* Freeway VHD is measured only for freeway mainline links with an average speed less than 35 mph.

Figure 31 – Design Year Meso-Scale Freeway VHD Comparison

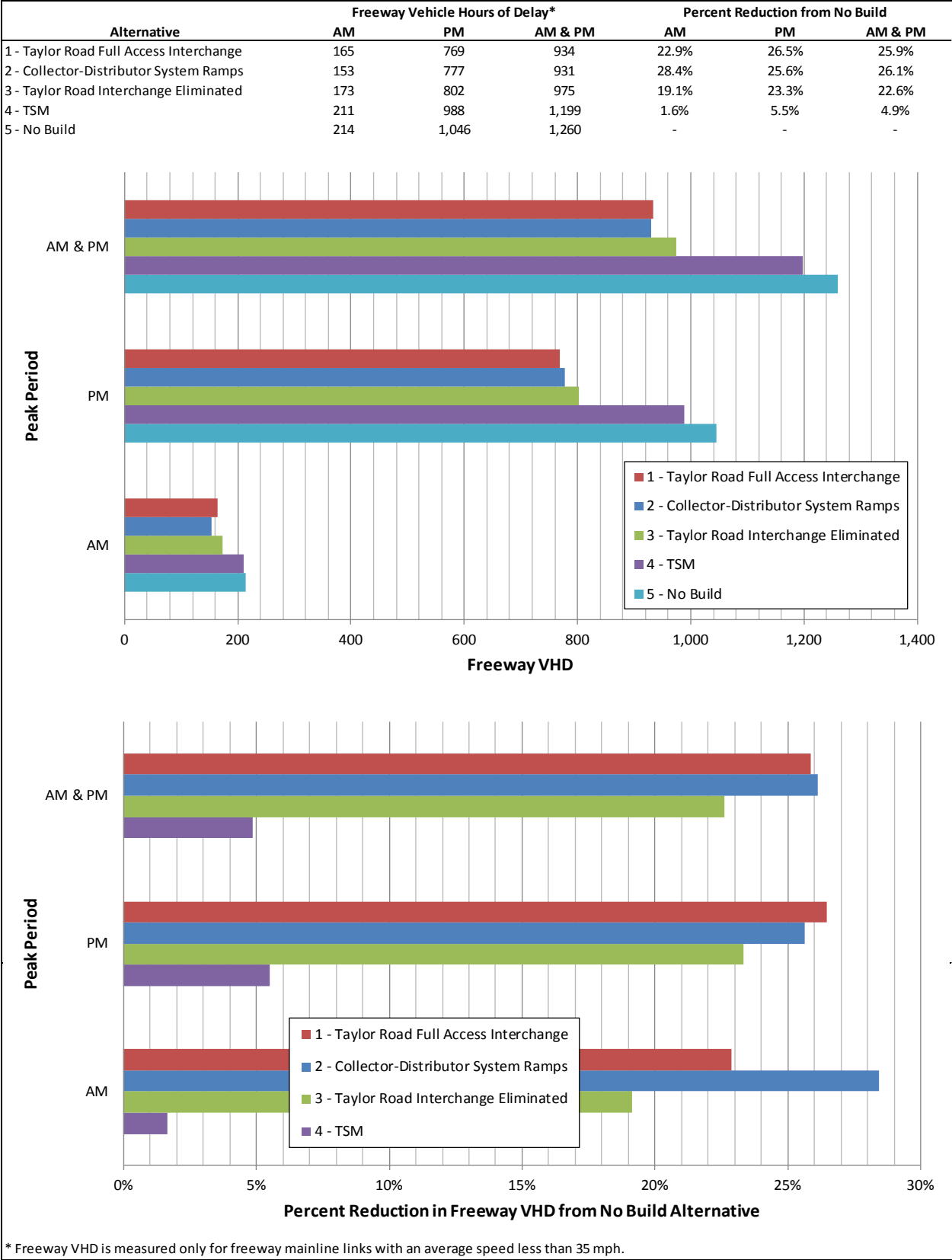
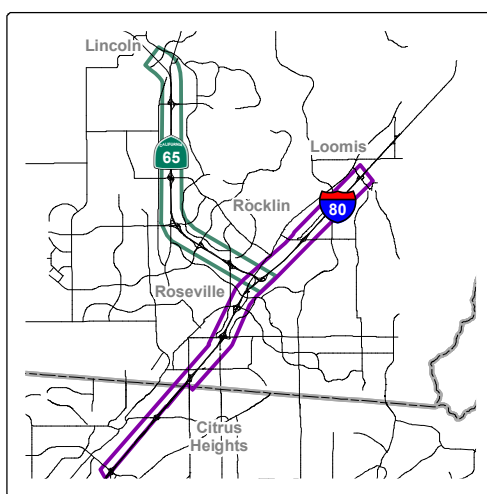
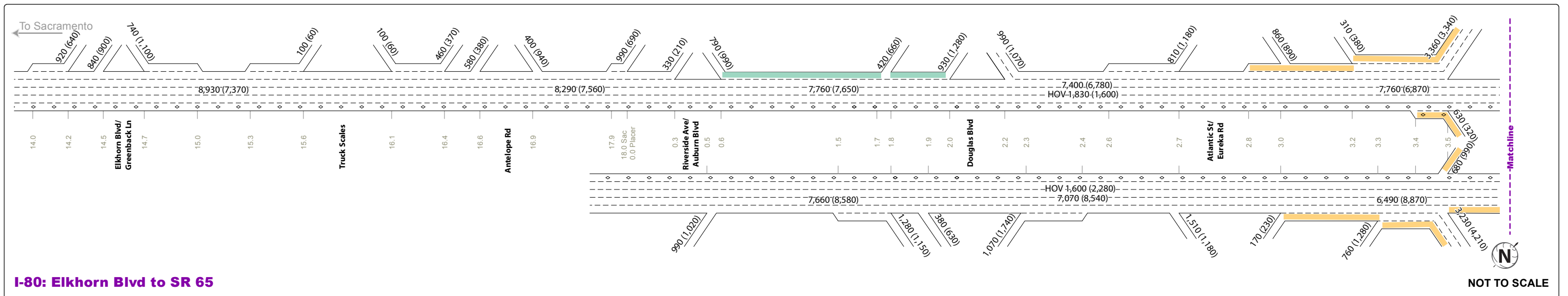
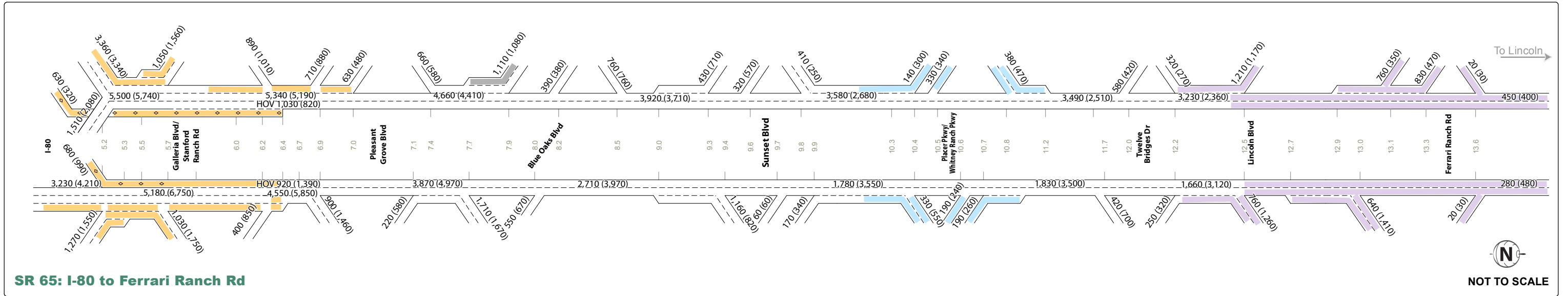
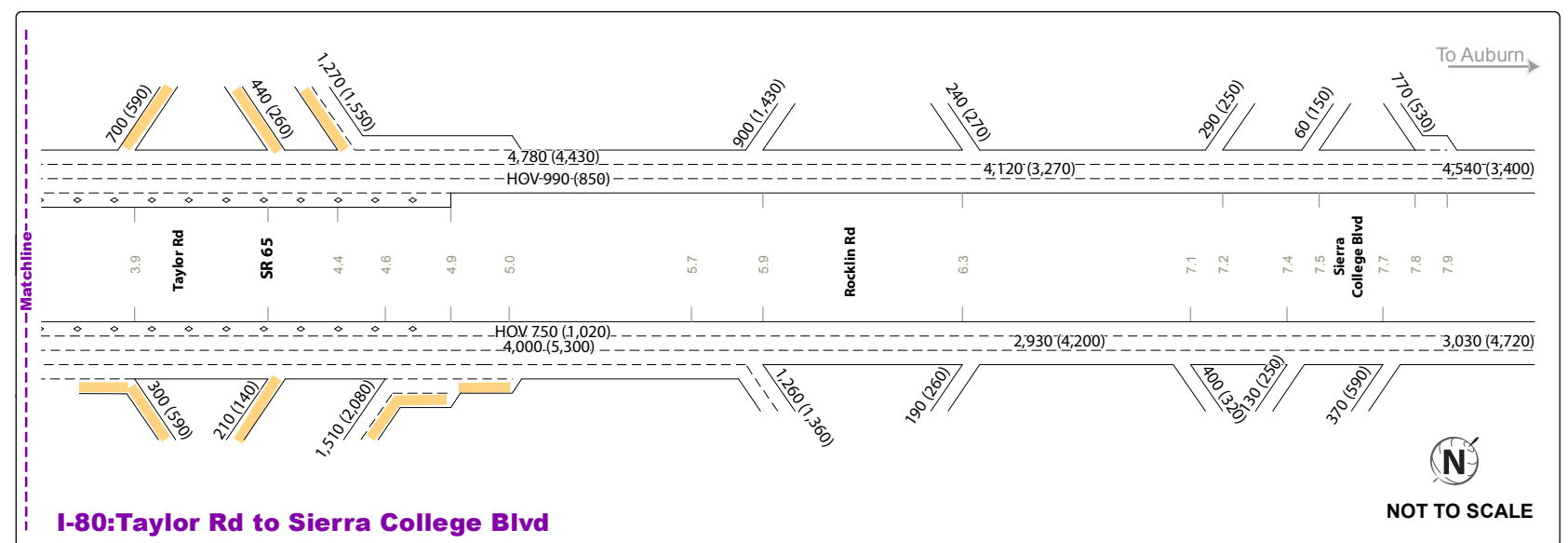
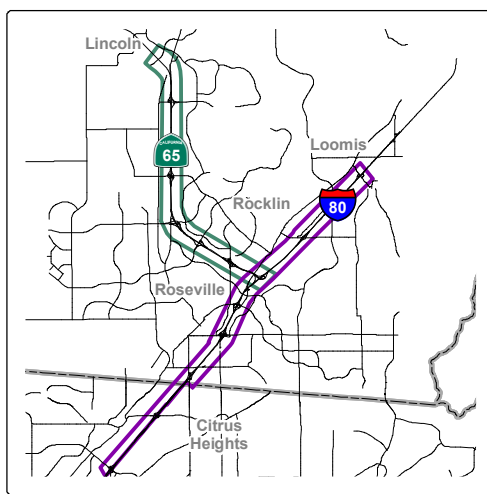
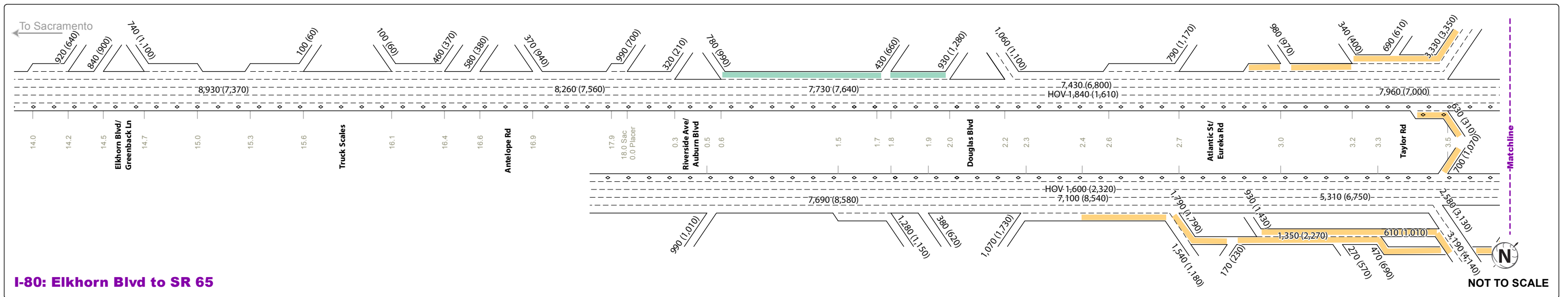
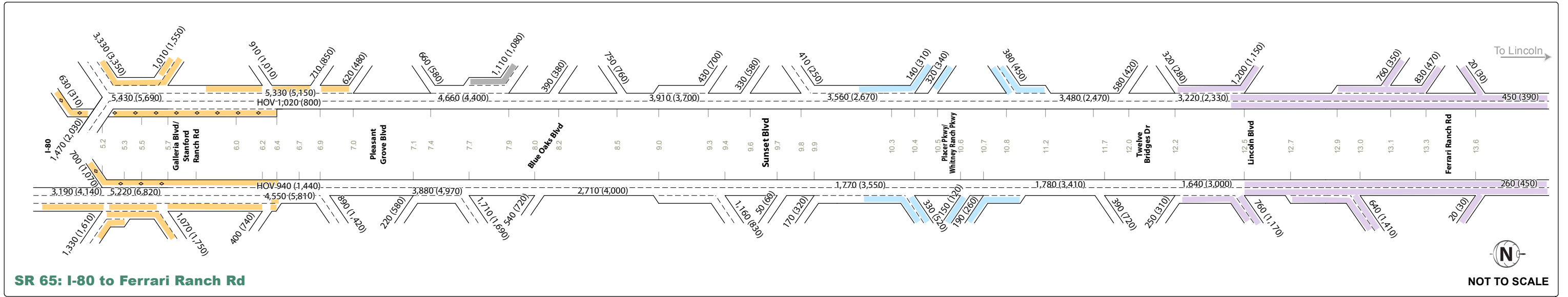


Figure 32 – Design Year Meso-Scale Project-Area Freeway VHD Comparison

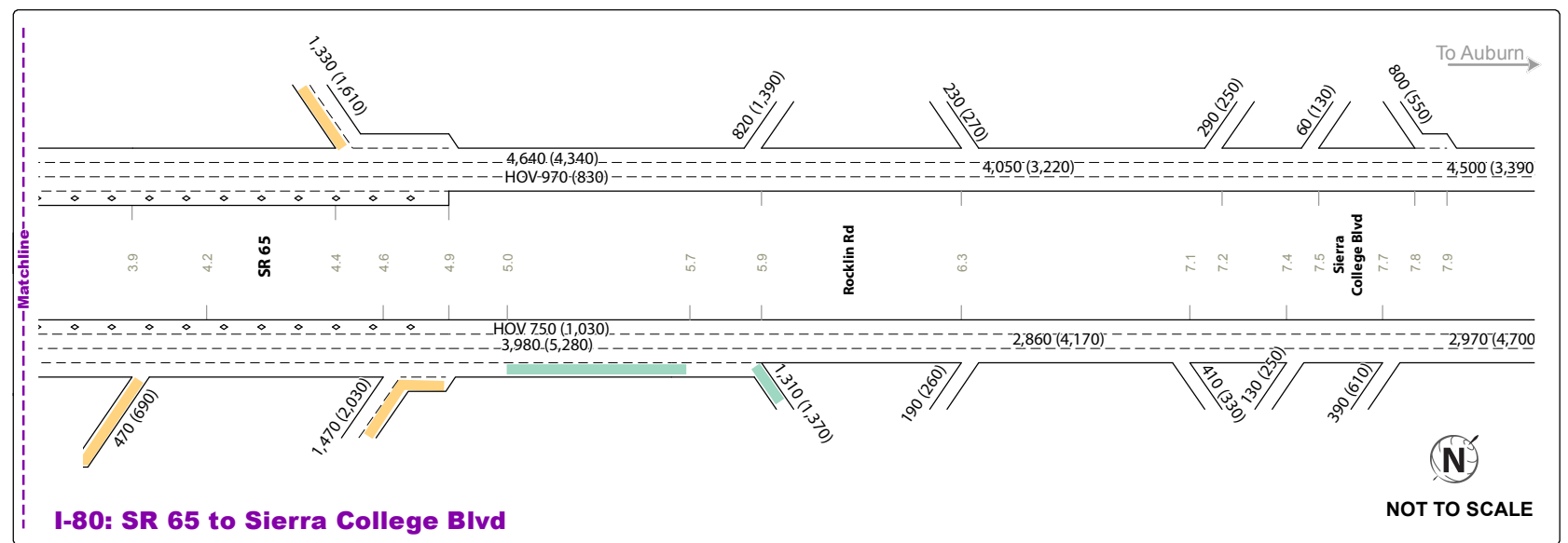


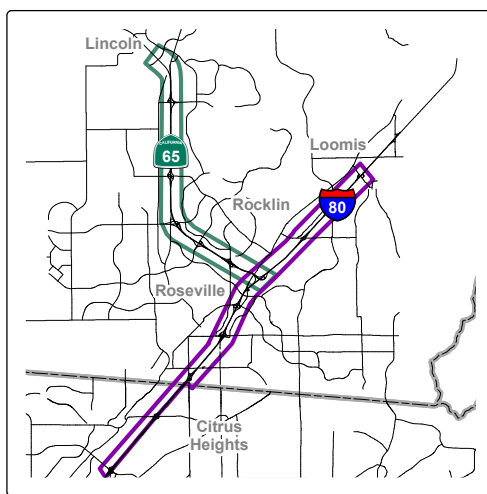
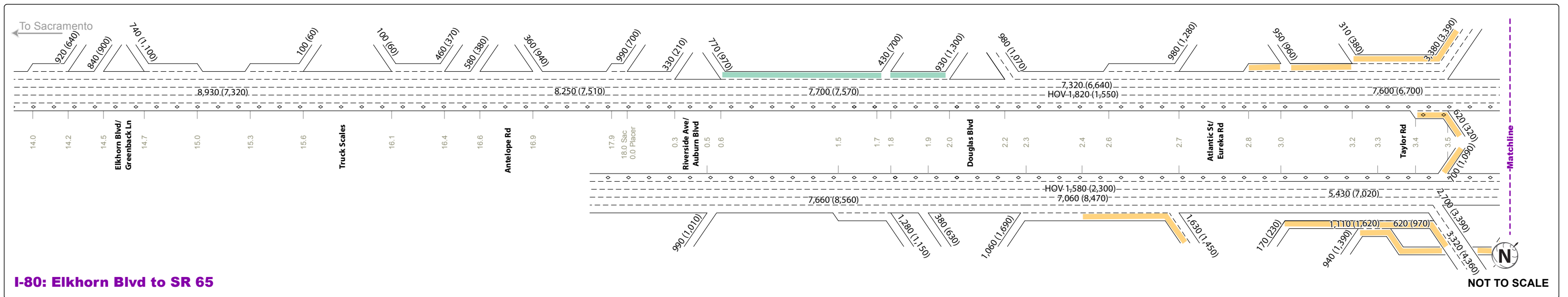
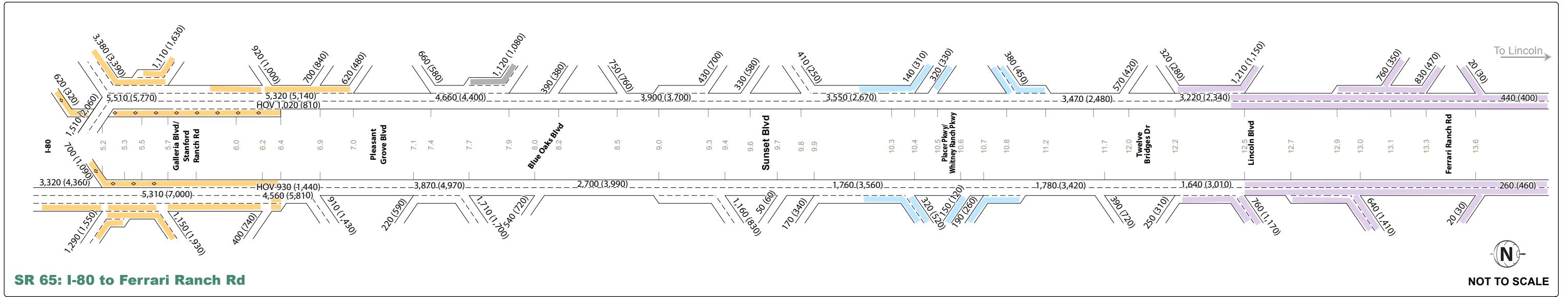
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2020 Conditions
 - 10.1 Postmile
 - Alternative 1
- Separate Planned Projects**
- Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening



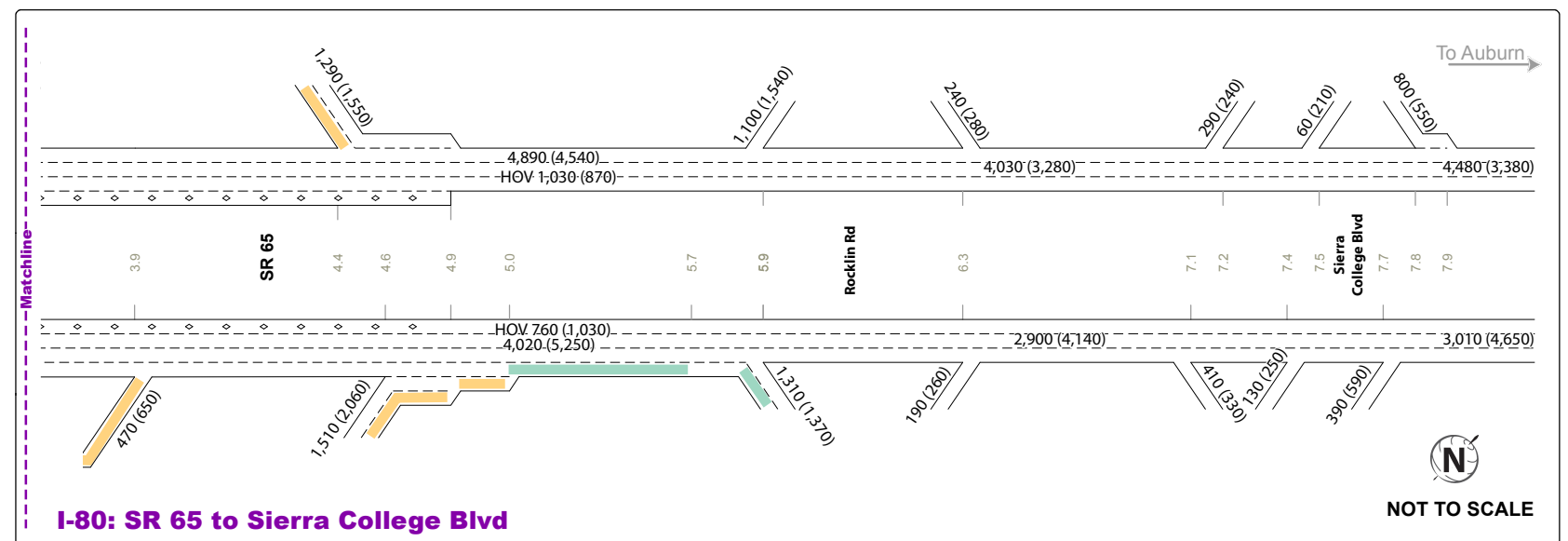


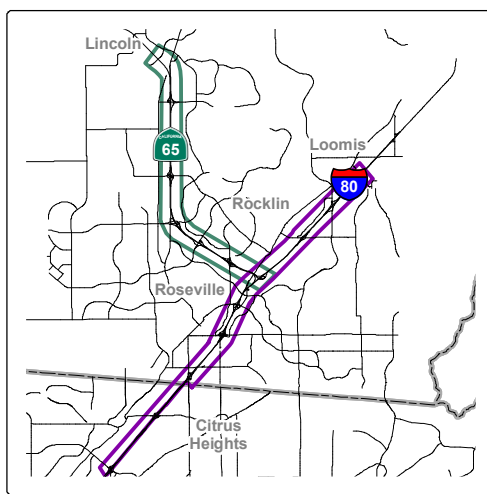
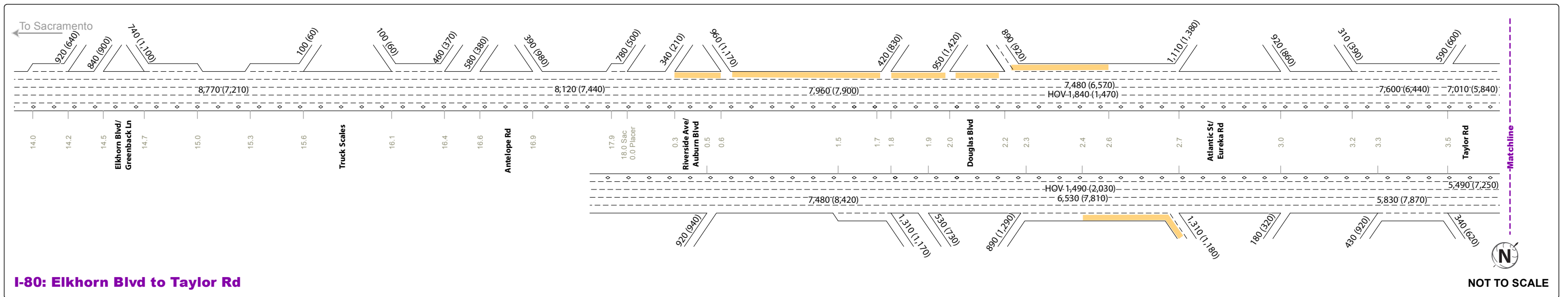
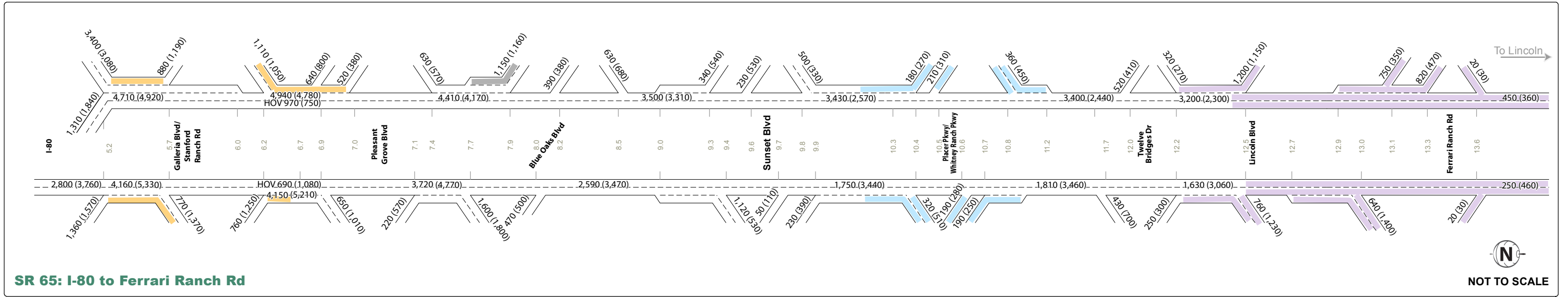
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2020 Conditions
 - 10.1 Postmile
 - Alternative 2
- Separate Planned Projects**
- Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening



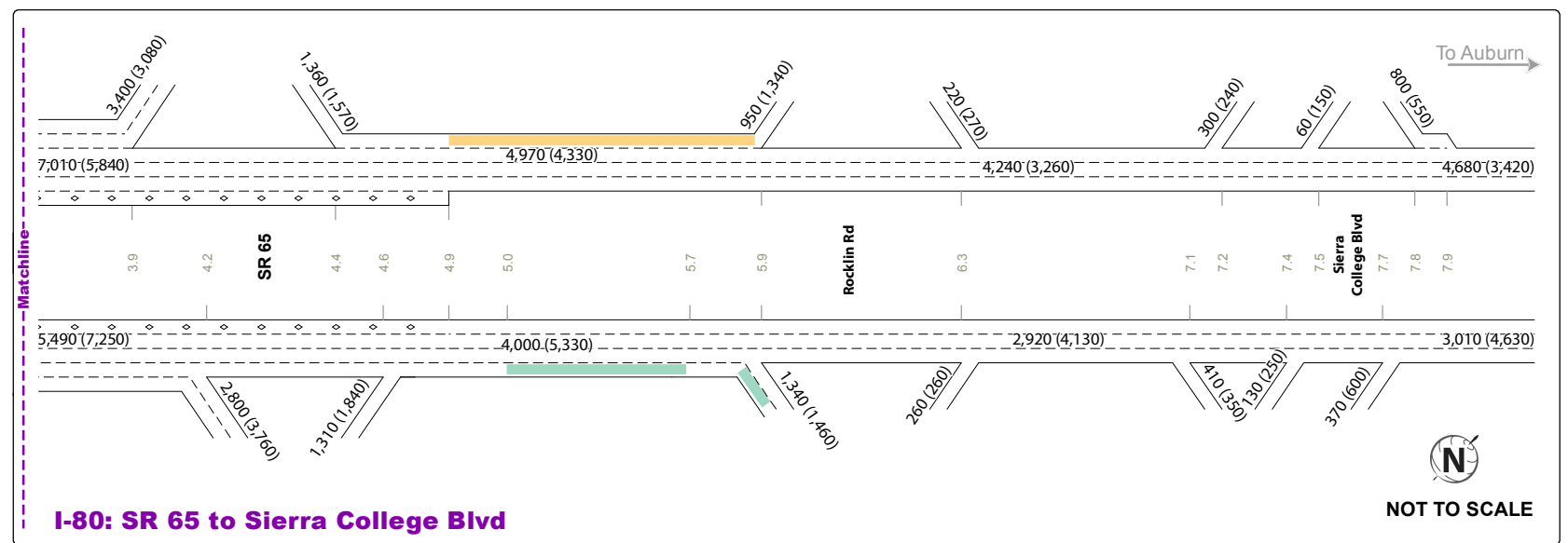


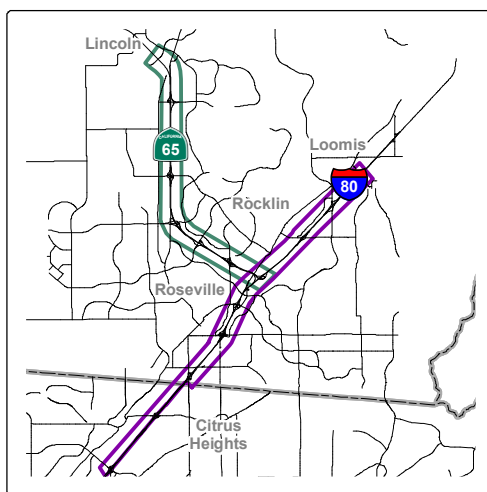
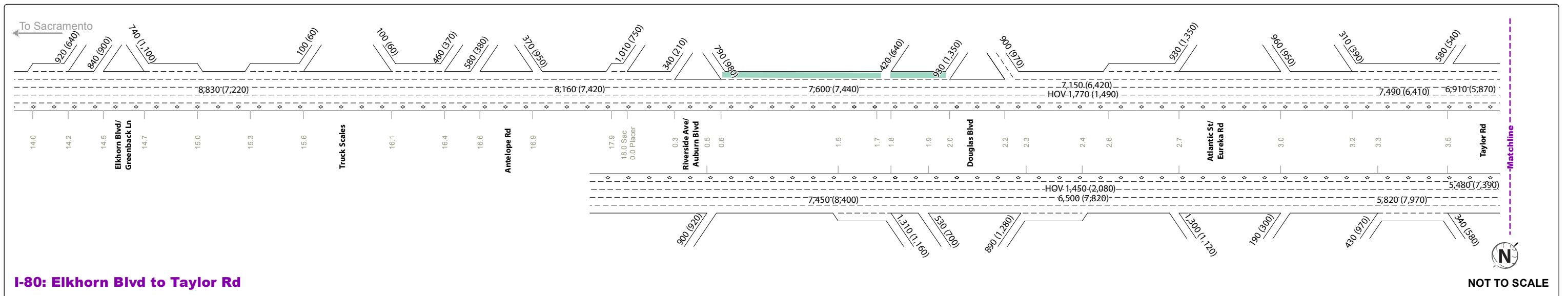
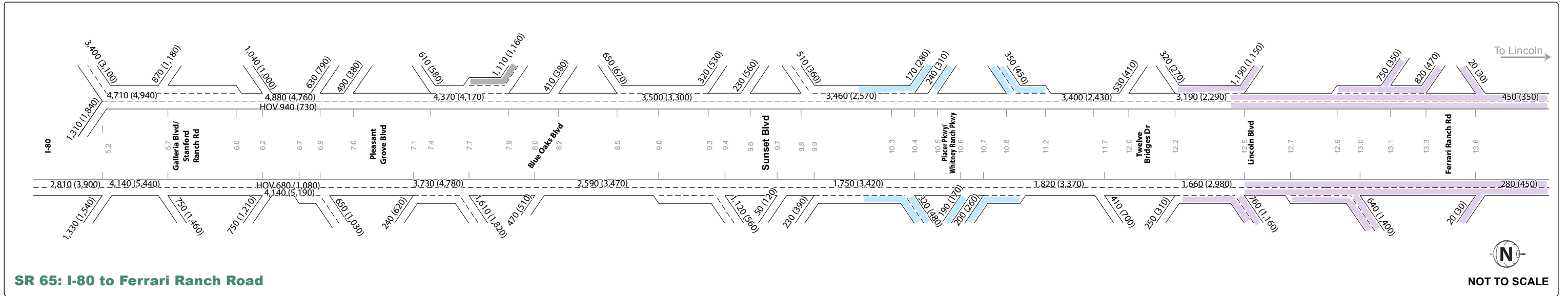
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2020 Conditions
 - 10.1 Postmile
 - Alternative 3
- Separate Planned Projects**
- Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening



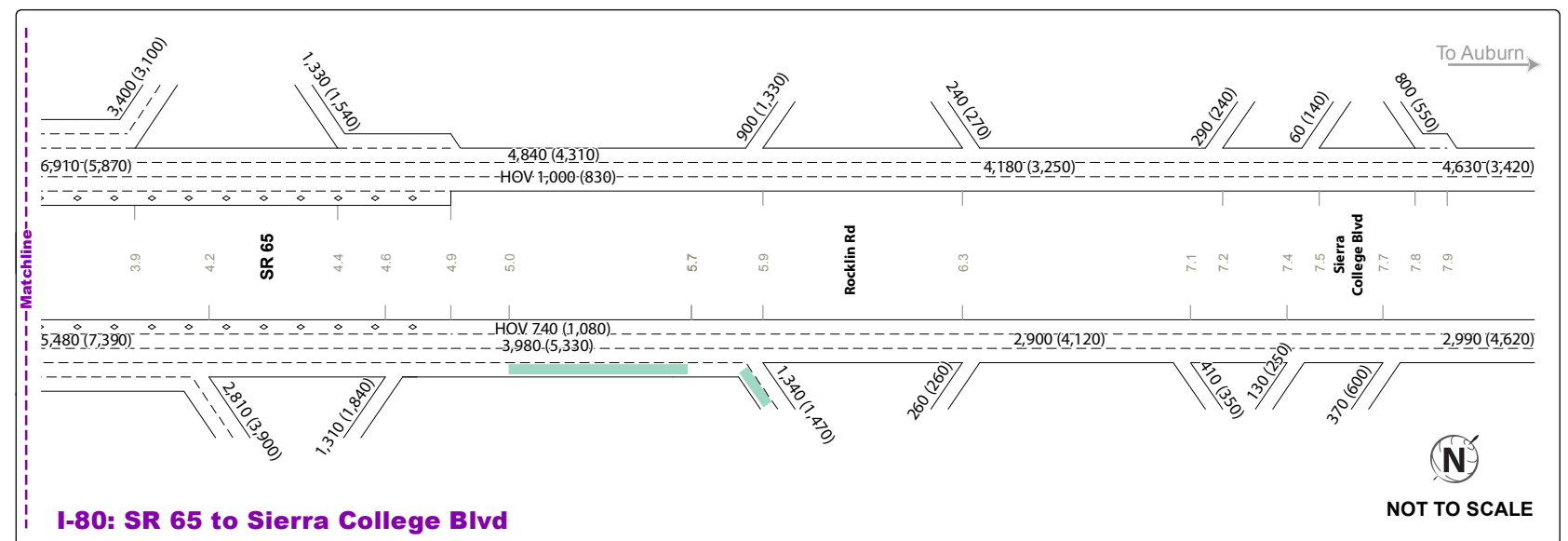


- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2020 Conditions
 - 10.1 Postmile
 - Alternative 4
- Separate Planned Projects**
- Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening





- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - HOV AM (PM) Peak Hour HOV Volume for 2020 Conditions
 - 10.1 Postmile
 - Separate Planned Projects**
 - Placer Parkway/Whitney Ranch Parkway Interchange
 - Lincoln Bypass
 - I-80 Auxiliary Lanes
 - Blue Oaks Boulevard Widening



4.3.5. Meso-Scale Network Performance for Construction Year

In addition to generating traffic volume forecasts for input to the VISSIM microsimulation traffic operations model, the VISUM model was used to produce the same meso-scale network performance measures reported for existing conditions. Figures 38 through 42 compare VMT, VHT, VHD, freeway VHD, and project-area freeway VHD, respectively, across the forecasting alternatives for construction year conditions (VMT by 5-mph speed bin is reported in the appendix). The results generally show that the build alternatives all improve network efficiency by lowering VHT and VHD compared to No Build. Alternative 2 (Collector-Distributor System Ramps) performs the best and is the only build alternative with a lower VMT than Alternative 5 (No Build). Freeway VHD only declines under the TSM Alternative. This occurs because sufficient mainline capacity is not being added in the other build alternatives in the construction year, which reduces the effectiveness of the I-80/SR 65 interchange improvements. Without additional mainline capacity in locations such as westbound I-80 at Douglas Boulevard and northbound SR 65, the interchange improvements simply shift bottlenecks.

4.3.6. Induced Travel

The phenomenon where additional capacity leads to additional demand for travel is known as “induced travel.” Induced travel occurs when the cost of travel is reduced (i.e., travel time reduction due to additional capacity) causing an increase in demand (more travelers using the improved facility). The reduction in travel time causes various responses by travelers, including diversion from other routes, changes in destinations, changes in mode, departure time shifts, and possibly the creation of new trips all together. As described previously, the SACMET and VISUM models have limitations, but they do account for most of the factors that influence induced travel (e.g., changes in route, mode, and destination). The main factors they do not fully account for is the potential generation of new trips and long-term induced land use growth.

Since the SACMET trip generation model was calibrated to 2008 base year conditions when vehicle trip making in the region was not constrained by congestion, pricing, or some other means, the model represents a full level of travel demand being generated by households and employment. This means that new trips being created as a result of a network change are very unlikely because there is no constraint preventing these trips from occurring.

Long-term induced land use growth is the one factor that may not be fully represented because there is no direct feedback process to the land use growth forecasts. However, as part of this project, land use growth was assessed by the PDT. The PDT increased the growth of households and employment in the study area recognizing this area has been planned for additional growth and the transportation improvements associated with this project are intended to help accommodate that growth.

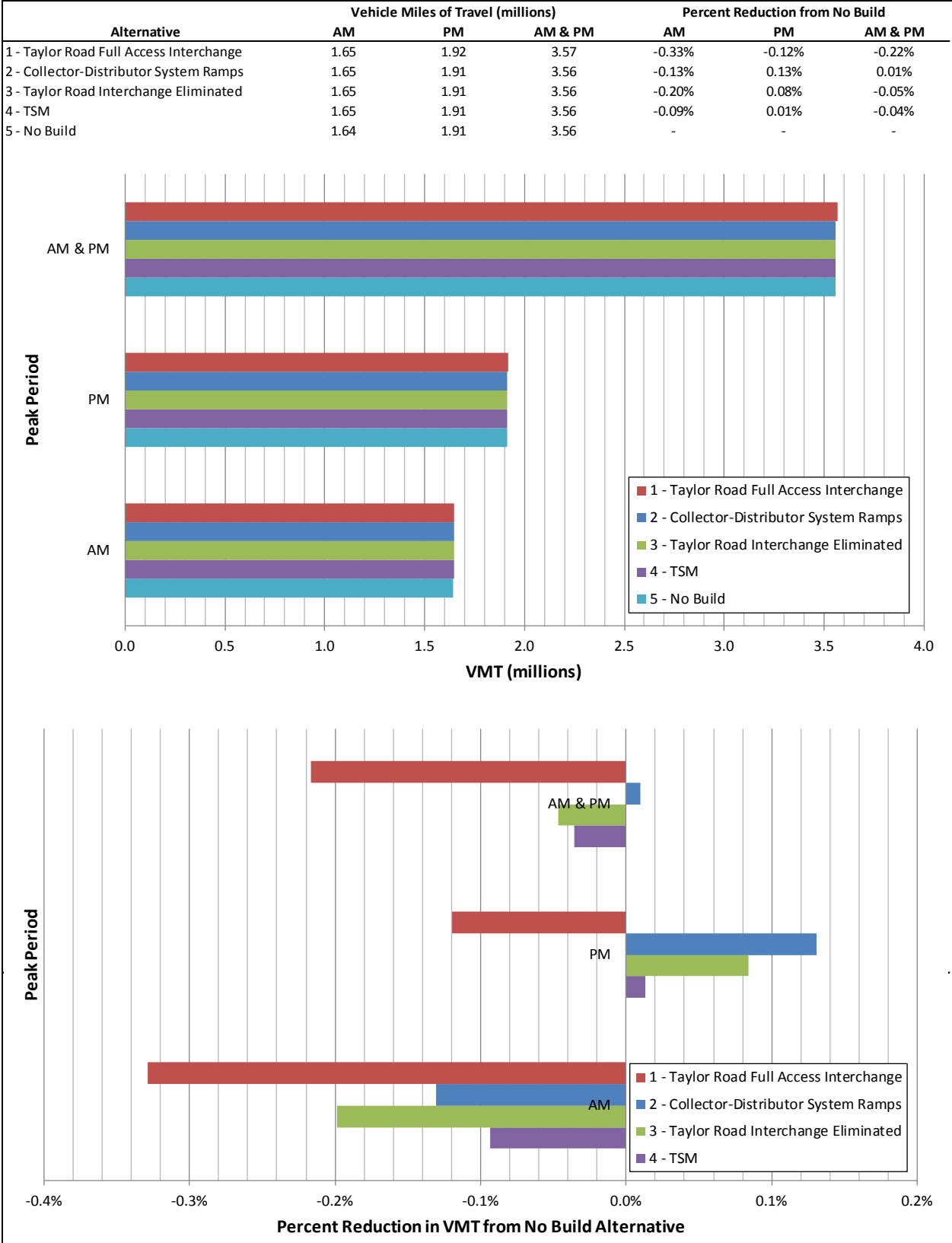


Figure 38 – Construction Year Meso-Scale VMT Comparison

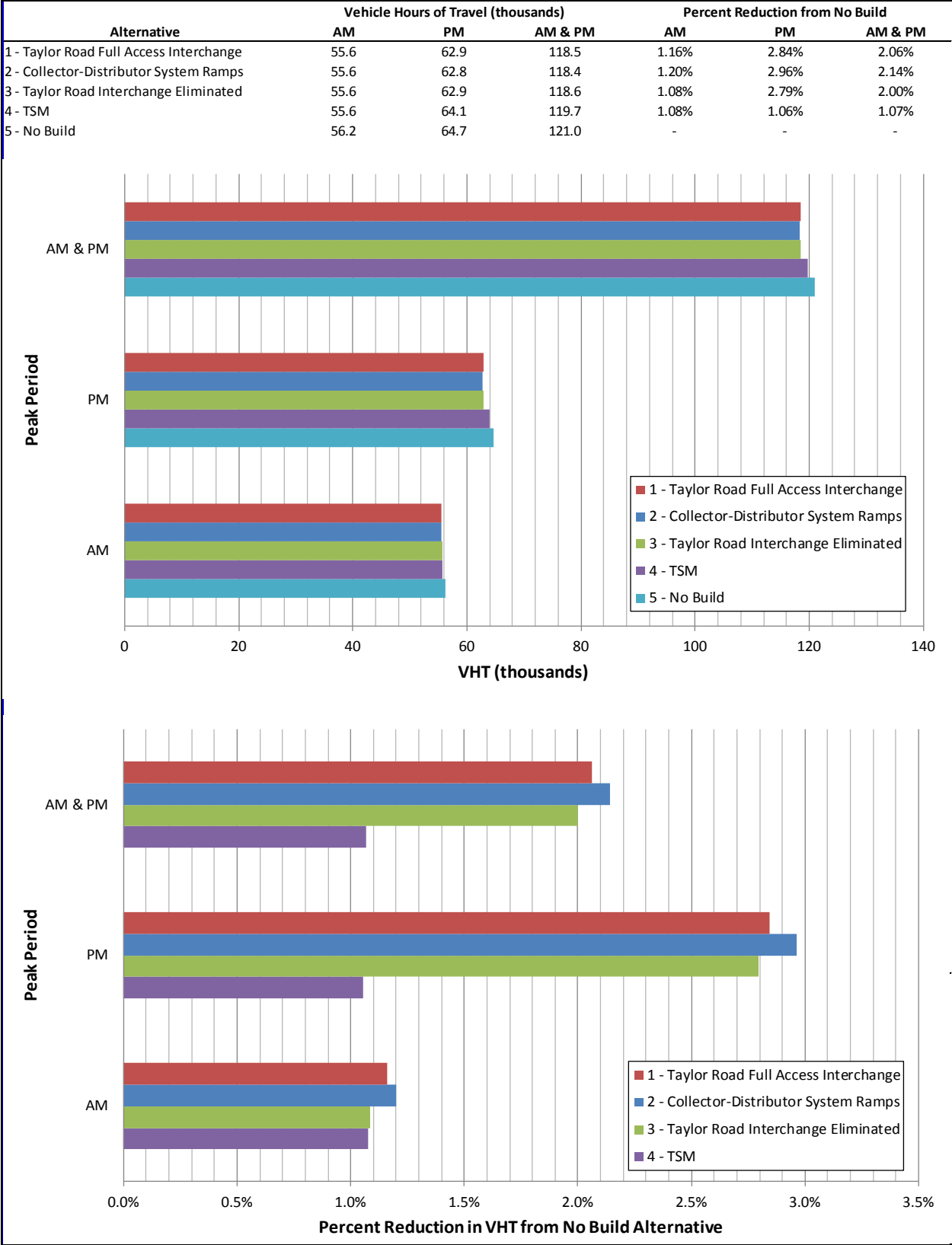


Figure 39 – Construction Year Meso-Scale VHT Comparison

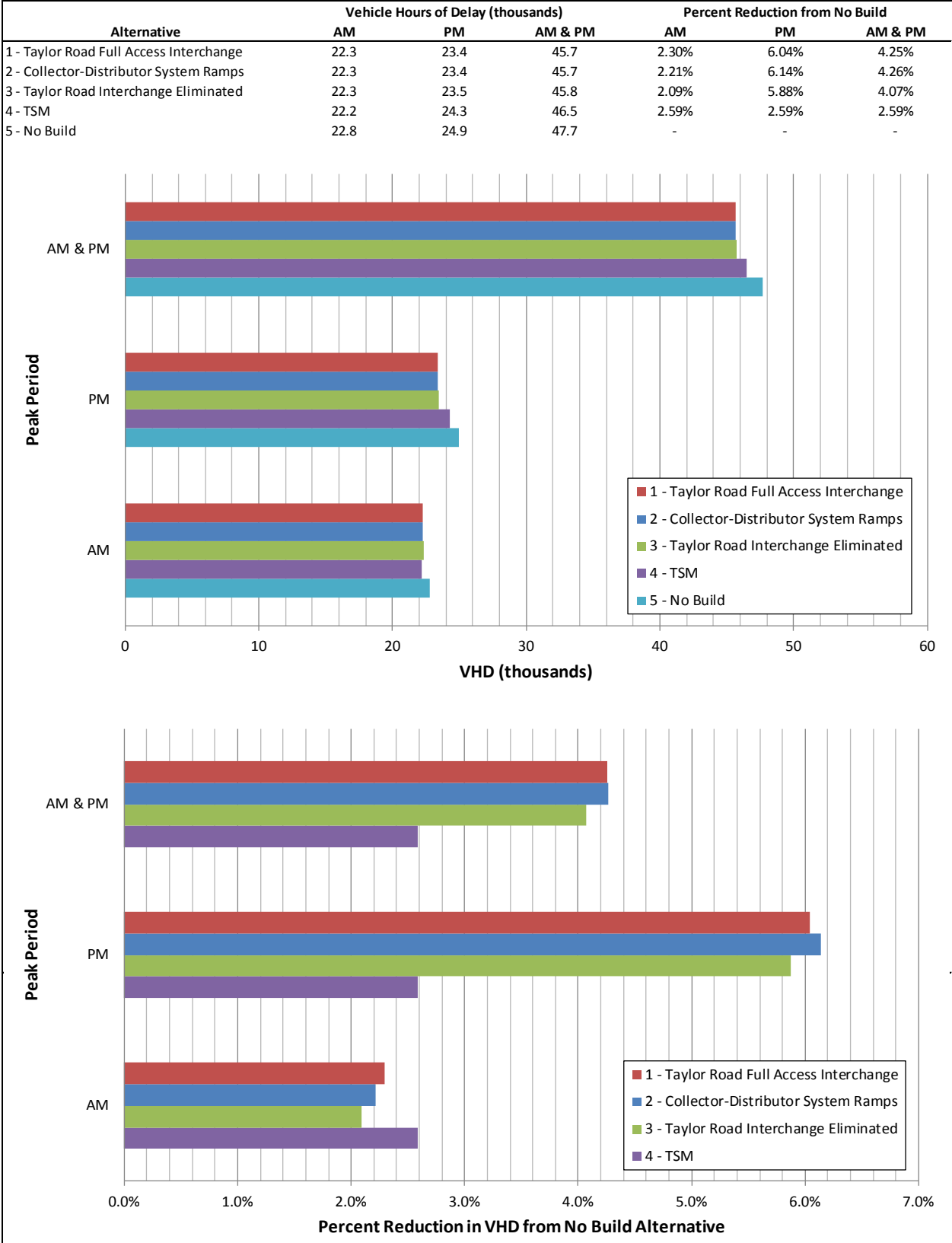
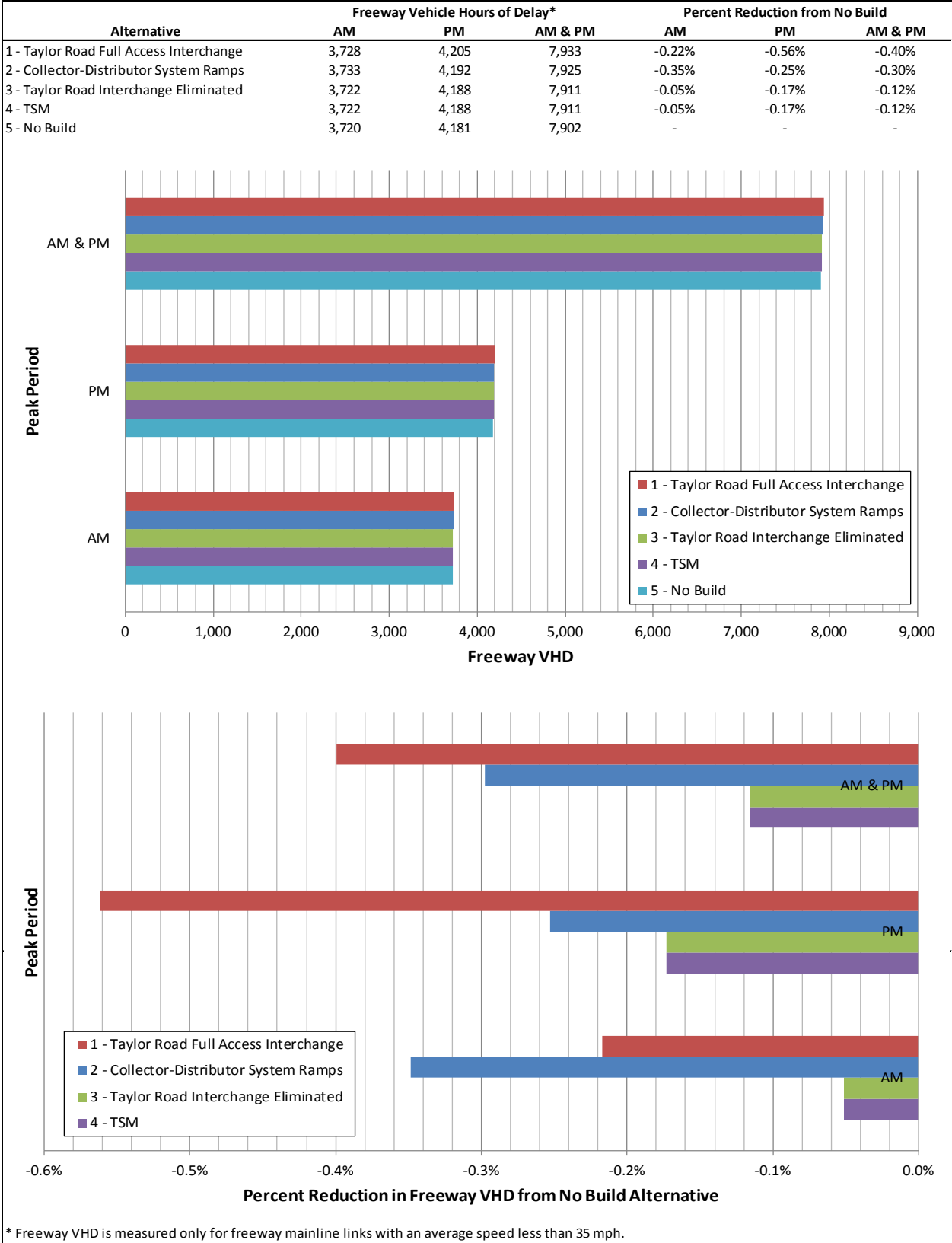


Figure 40 – Construction Year Meso-Scale VHD Comparison



* Freeway VHD is measured only for freeway mainline links with an average speed less than 35 mph.

Figure 41 – Construction Year Meso-Scale Freeway VHD Comparison

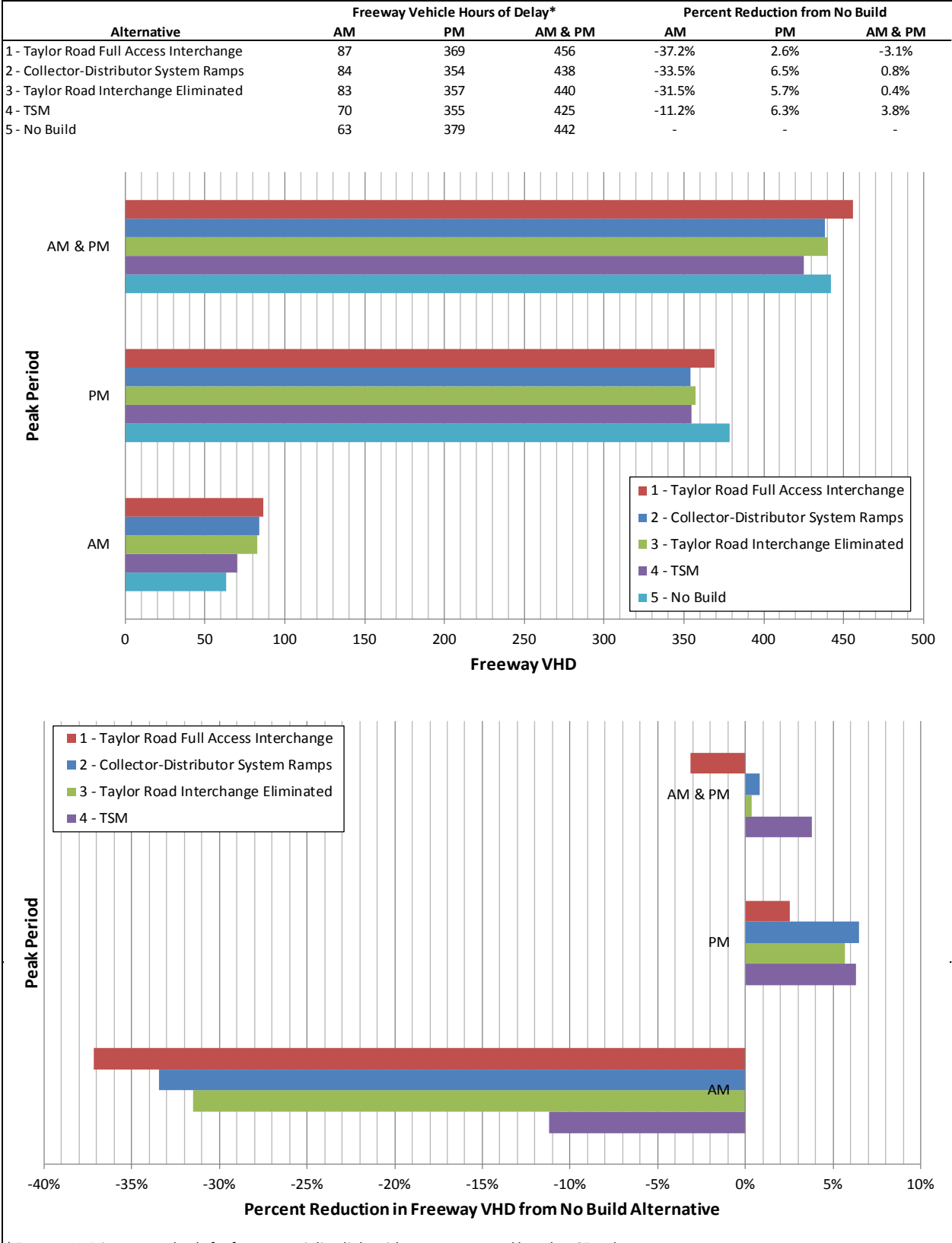


Figure 42 – Construction Year Meso-Scale Project-Area Freeway VHD Comparison

4.3.7. Daily Forecasts

Using the SACMET model files that were the starting point for the peak period forecasts, daily forecasts were prepared for the no build and build alternatives under design year conditions. As described above, separate models for each build alternative were not prepared since the alternatives have similar capacity at the aggregate level. Table 16 provides the daily mainline volume on I-80 and SR 65 in the project area.

Freeway	Segment	Existing Conditions		Design Year No Build		Design Year Build	
		Total	Trucks	Total	Trucks	Total	Trucks
I-80	Douglas Blvd to Eureka Rd	155,000	9,000	197,400	14,200	204,200	14,300
	Eureka Rd to Taylor Rd	158,700	9,600	203,800	14,400	217,800	14,400
	Taylor Rd to SR 65	150,000	8,700	194,200	13,900	213,000	14,300
	SR 65 to Rocklin Rd	109,600	6,400	139,500	9,900	137,300	9,700
SR 65	I-80 to Galleria Blvd	106,100	3,500	151,500	6,000	155,600	6,000
	Galleria Blvd to Pleasant Grove Blvd	104,400	3,500	159,100	6,600	154,800	6,300
Notes: The existing conditions total volume data is from 2009 as reported in the PeMS database. The existing truck volumes for I-80 are estimated from the truck percentage reported in the Caltrans Annual Average Daily Truck Traffic publication. The SR 65 existing truck volumes are estimated from the base year SACMET model. Source: Fehr & Peers, 2014							

Chapter 5. Traffic Operations Analysis

This section summarizes the traffic operations analysis results based on the VISSIM microsimulation traffic operations model (refer to Figure 8 for the VISSIM network limits). This analysis provides more detailed insights about peak period and peak hour traffic operations under each alternative. Technical calculations supporting the results can be found in the separately bound Technical Appendix. Design year analysis results are presented first followed by the construction year. All analysis was conducted with the same methodology described in Chapter 2. Further, the evaluation criteria from Chapter 2 were used to identify locations with deficient operations. For these locations, improvements are proposed that may be considered as project refinements or mitigation.

The project alternatives were analyzed previously using marginally different traffic forecasts and network assumptions. In that analysis, Alternative 4 (TSM) and Alternative 5 (No Build) performed significantly worse than the other alternatives and did not meet the project purpose and need. As a result, the traffic operations analysis for these alternatives was not updated. The Alternative 4 and 5 forecasts and Alternative 4 analysis results from the previous version are provided in the Technical Appendix. The analysis results presented here for Alternatives 1, 2, and 3 use the traffic demand forecasts presented in the previous chapter. For comparison, the Alternative 5 analysis results using the previous forecasts and network assumptions are provided below. The previous forecasts did not include the westbound I-80 auxiliary lane between Douglas Boulevard and Riverside Avenue. The Vissim network changes from the previous analysis are listed below.

- Widening of the eastbound approach to the Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps intersection
- Conversion of the I-80/Rocklin Road Interchange improvement project from the roundabout to the signal alternative
- Widening of the eastbound I-80 Rocklin Road off-ramp to two lanes
- Shortening the southbound auxiliary lane between Placer Parkway and Sunset Boulevard from the loop on-ramp to the slip on-ramp

5.1. Design Year Conditions

Overall network performance statistics for AM and PM peak period operations are summarized for each alternative in Tables 17 and 18 below, respectively.

**TABLE 17: COMPARISON OF OVERALL NETWORK PERFORMANCE –
DESIGN YEAR AM PEAK PERIOD**

Performance Measure	Existing Conditions	Design Year Conditions				
		Alternative 1	Alternative 2	Alternative 3	Alternative 5	
Volume Served (% of total demand)	143,450 (100%)	207,230 (99%)	206,770 (99%)	206,770 (99%)	200,650 (95%)	
VMT	645,270	920,910	921,610	915,790	831,280	
PMT	786,260	1,106,120	1,110,890	1,100,400	1,004,060	
VHT	13,760	21,450	21,190	21,450	26,470	
VHD (% of VHT)	2,670 (19%)	5,560 (26%)	5,310 (25%)	5,660 (26%)	12,040 (46%)	
Average Delay per Vehicle (min)	1.12	1.61	1.54	1.64	3.60	
PHD	3,240	6,360	6,080	6,520	13,880	
Average Speed	46.9	42.9	43.5	42.7	31.4	
Average Speed for HOVs	47.0	46.8	47.5	46.1	36.2	
Travel Time: Blue Oaks Blvd to Antelope Rd	SOV	9:44	14:59	14:31	14:09	9:29
	HOV	9:27	8:45	8:43	8:44	8:31
Notes: PMT = person miles of travel, PHD = person hours of delay						
Source: Fehr & Peers, 2014						

Reviewing the results in Tables 17 and 18 should consider the following information.

- Overall, the build alternatives improve overall network performance compared to no build conditions.
- The three build alternatives serve nearly all of the peak period demand volume, but Alternative 5 (No Build) does not. The performance metrics do not fully account for vehicles that could not enter the network during the peak periods.
- Alternative 2 (Collector-Distributor System Ramps) has slightly lower delay and higher average speed during the AM peak period than the other two build alternatives. Compared to Alternative 1 (Taylor Road Full Access Interchange), Alternative 2 has fewer freeway ramps, which minimizes freeway congestion. Although Alternative 3 (Taylor Road Interchange Eliminated) has even fewer ramps, the local system is more congested offsetting the benefit to the freeway network.
- The PM peak period results reveal that Alternative 1 serves the most vehicles while having the lowest delay for vehicles and persons, as well as the lowest travel times for SOVs and HOVs. In this case, the additional ramps to and from the east at Taylor Road reduce the demand for the

ramps to and from the east at Eureka Road/Atlantic Street and, consequently, the weaving volume between Eureka Road/Atlantic Street and SR 65.

**TABLE 18: COMPARISON OF OVERALL NETWORK PERFORMANCE –
DESIGN YEAR PM PEAK PERIOD**

Performance Measure	Existing Conditions	Design Year Conditions				
		Alternative 1	Alternative 2	Alternative 3	Alternative 5	
Volume Served (% of total demand)	198,170 (101%)	300,410 (100%)	300,020 (100%)	300,690 (100%)	259,410 (86%)	
VMT	730,100	1,114,000	1,109,610	1,110,480	863,410	
PMT	880,180	1,355,200	1,349,510	1,352,230	1,071,230	
VHT	16,850	29,970	30,790	30,680	43,430	
VHD (% of VHT)	3,950 (23%)	10,300 (34%)	11,210 (36%)	11,080 (36%)	28,070 (65%)	
Average Delay per Vehicle (min)	1.20	2.06	2.24	2.21	6.49	
PHD	4,670	12,020	13,020	12,900	32,910	
Average Speed	43.3	37.2	36.0	36.2	19.9	
Average Speed for HOVs	44.7	40.8	40.1	40.1	24.7	
Travel Time: Auburn Blvd to Blue Oaks Blvd	SOV	9:16	7:52	9:38	9:07	45:38
	HOV	9:11	6:28	6:30	6:29	15:38
Notes: PMT = person miles of travel, PHD = person hours of delay						
Source: Fehr & Peers, 2014						

- The AM peak-hour SOV travel time from Blue Oaks Boulevard to Antelope Road for the build alternatives (1, 2, and 3) is worse under design year conditions than existing conditions. Even with a future project to provide an auxiliary lane from Douglas Boulevard to Riverside Avenue, this location is predicted to be a bottleneck. (Alternative 5 shows a better travel time for SOVs primarily due to different forecasts as noted above.)
- The PM peak-hour SOV travel time from Auburn Boulevard to Blue Oaks Boulevard for the build alternatives is similar or better under design year than existing conditions. The improvement is due to auxiliary lane and HOV lane improvements that are common to all alternatives.
- AM and PM HOV travel times are better than existing conditions for all build alternatives.

Specific details about design year freeway and arterial intersection operations are discussed in more detail in the following sections.

5.1.1. Freeway Operations

Detailed freeway operations analysis was completed for the peak hour (7:30 to 8:30 AM and 4:30 to 5:30 PM) of the four hour AM and PM peak periods. The AM and PM peak-hour served volume are listed in Figure 43. The AM and PM peak hour results for select locations are reported in Tables 19 and 20, respectively. The full set of results is available in the Technical Appendix. Figures 44 through 51 display the average speed in the mixed-flow lanes throughout the network during the peak periods for each alternative.

Eastbound I-80

The freeway operations results indicate the No Build alternative would result in LOS F operations on I-80 in the eastbound direction between the beginning of the analysis area at Auburn Blvd and the SR 65 off-ramp during the AM and PM peak periods. The speed for vehicles in the mixed flow lanes would be less than 10 mph for most of this section, and about 60 percent of the demand would be served in the PM peak hour. All of the build alternatives provide significant congestion relief in both the AM and PM peak periods; therefore, no deficiencies occur on eastbound I-80. Most segments would operate with LOS D or better conditions. Under all build alternatives, LOS E would occur between Auburn Boulevard and Douglas Boulevard during both peak hours. Unlike the LOS D conditions under the other two build alternatives, Alternative 1 (Taylor Road Full Access Interchange) would have LOS E between Douglas Boulevard and Eureka Road since no auxiliary lane would be constructed. During the PM peak hour, Alternative 3 (Taylor Road Interchange Eliminated) would have minor slowing (less than 30 minutes) due to congestion from the SR 65 northbound connector ramp.

Westbound I-80

During the AM peak period, congestion would occur between SR 65 and Douglas Boulevard and between the truck scales and Elkhorn Boulevard. The build alternatives would have LOS F from the SR 65 to Atlantic Street weaving section to the eastbound Douglas Boulevard on-ramp. In contrast, the Alternative 5 (No Build) would have LOS F only at the eastbound Atlantic Street off-ramp. The difference is caused in part by different forecast assumptions (as discussed above) and in part by upstream congestion on southbound SR 65 between Pleasant Grove Boulevard and Galleria Boulevard. The proposed project (Alternatives 1, 2, and 3) would result in impacts at the following locations on westbound I-80 in the AM peak hour.

- From the SR 65 to Atlantic Street weave section to the eastbound Douglas Boulevard on-ramp
- Truck Scales off-ramp to on-ramp (Alternative 1 only)
- From the Truck Scales on-ramp to the eastbound Elkhorn Boulevard on-ramp

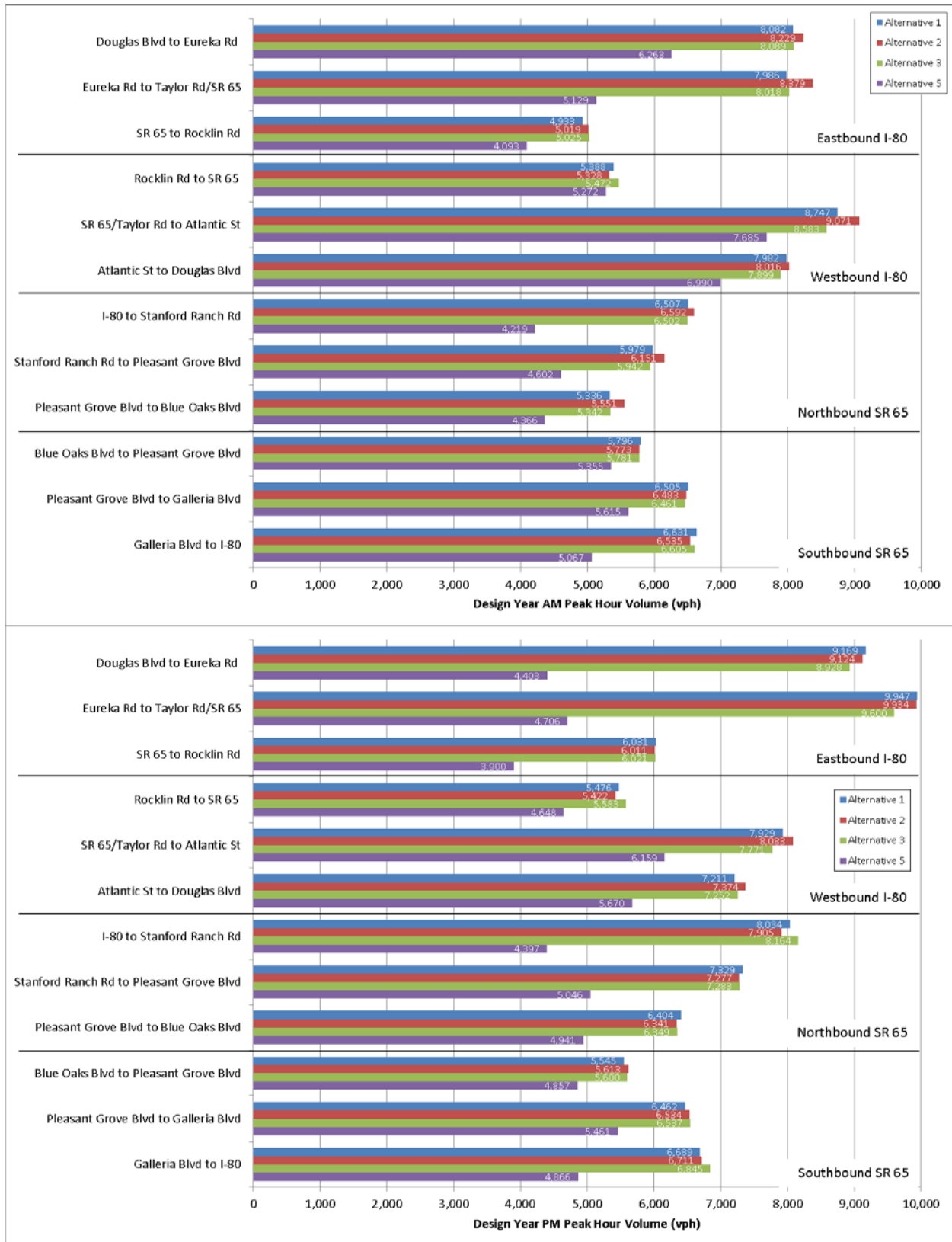


Figure 43 – Freeway Served Volume for Design Year Conditions

TABLE 19: SELECTED FREEWAY OPERATIONS RESULTS – DESIGN YEAR AM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	Alternative 1	Alternative 2	Alternative 3	Alternative 5
EB I-80	Auburn Blvd On-ramp	Merge	D / 33	E / 36	D / 33	<u>F / 55</u>
	Auburn Blvd to Douglas Blvd	Basic	E / 40	E / 37	E / 39	<u>F / 78</u>
	Douglas Blvd EB Off-ramp	Diverge	D / 31	D / 29	D / 33	<u>F / 71</u>
	Douglas Blvd WB Off-ramp	Diverge	C / 26	C / 26	E / 36	<u>F / 127</u>
	Douglas Blvd On-ramp	Merge	D / 35	C / 26	C / 26	<u>F / 153</u>
	Eureka Rd Off-ramp	Diverge	E / 37			<u>F / 114</u>
	Eureka Rd to SR 65	Weave	C / 23	D / 30	D / 31	<u>F / 131</u>
	Taylor Rd Off-ramp	Diverge	B / 16	-	-	
	SR 65 Off-ramp	Diverge	-	C / 25	C / 25	<u>F / 86</u>
	SR 65 On-ramp	Merge	D / 30	D / 30	D / 30	B / 20
WB I-80	Rocklin Rd to HOV Lane Start	Basic	D / 32	D / 31	D / 32	D / 29
	SR 65 Off-ramp	Diverge	C / 24	C / 22	C / 23	C / 27
	SR 65 to Atlantic St	Weave	<u>F / 90</u>	<u>F / 83</u>	<u>F / 78</u>	C / 27
	Atlantic St EB Off-ramp	Diverge	<u>F / 112</u>	<u>F / 107</u>	<u>F / 111</u>	<u>F / 53</u>
	Atlantic St On-ramp	Merge	<u>F / 75</u>	<u>F / 73</u>	<u>F / 77</u>	C / 28
	Douglas Blvd Off-ramp	Diverge	<u>F / 63</u>	<u>F / 60</u>	<u>F / 63</u>	C / 21
	Douglas Blvd WB On-ramp	Merge	<u>F / 113</u>	<u>F / 113</u>	<u>F / 112</u>	C / 25
	Douglas Blvd EB On-ramp	Merge	<u>F / 77</u>	<u>F / 76</u>	<u>F / 76</u>	C / 23
	Truck Scales to Elkhorn Blvd	Basic	<u>F / 56</u>	<u>F / 57</u>	<u>F / 55</u>	E / 39
	Elkhorn Blvd WB On-ramp	Merge	<u>F / 72</u>	<u>F / 55</u>	<u>F / 80</u>	C / 28
	Elkhorn Blvd EB On-ramp	Merge	<u>F / 67</u>	<u>F / 61</u>	<u>F / 71</u>	E / 39

TABLE 19: SELECTED FREEWAY OPERATIONS RESULTS – DESIGN YEAR AM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	Alternative 1	Alternative 2	Alternative 3	Alternative 5
NB SR 65	I-80 to Stanford Ranch Rd	Weave	C / 27	C / 26	C / 26	<u>F / 57</u>
	Stanford Ranch Rd On-ramp	Merge	<u>F / 61</u>	<u>F / 57</u>	<u>F / 61</u>	D / 30
	Pleasant Grove Blvd Off-ramp	Diverge	E / 40	E / 39	E / 40	
	Whitney Ranch Pkwy WB On-ramp	Merge	C / 26	D / 30	C / 25	C / 24
	Twelve Bridges Dr Off-ramp	Diverge	D / 30	D / 33	D / 28	C / 26
SB SR 65	Ferrari Ranch Rd EB On-ramp	Merge	<u>F / 133</u>	<u>F / 97</u>	<u>F / 104</u>	C / 24
	Lincoln Blvd to Twelve Bridges Dr	Weave	<u>F / 87</u>	<u>F / 87</u>	<u>F / 87</u>	E / 37
	Twelve Bridges Dr On-ramp	Merge	<u>F / 73</u>	<u>F / 74</u>	<u>F / 73</u>	<u>F / 61</u>
	Placer Pkwy WB On-ramp	Merge	<u>F / 54</u>	E / 42	E / 43	C / 28
	Sunset Blvd WB On-ramp	Merge	E / 36	E / 37	E / 36	E / 43
	Blue Oaks Blvd WB On-ramp	Merge	E / 43	E / 37	E / 36	D / 34
	Pleasant Grove Blvd EB On-ramp	Merge	E / 38	E / 36	D / 34	E / 44
	Galleria Blvd Off-ramp	Diverge	D / 29	D / 29	D / 29	<u>F / 55</u>
	Galleria Blvd to I-80	Weave	C / 26	C / 26	C / 28	<u>F / 77</u>

Notes: Bold and underline font indicate LOS F conditions. Shaded cells indicate a project impact. The level of service and average density for the study segment are reported.
¹The facility type reported is for Alternative 1. The other results are contained in the Technical Appendix.
Source: Fehr & Peers, 2014

TABLE 20: SELECTED FREEWAY OPERATIONS RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	Alternative 1	Alternative 2	Alternative 3	Alternative 5
EB I-80	Auburn Blvd On-ramp	Merge	C / 28	D / 29	E / 36	<u>F / 164</u>
	Auburn Blvd to Douglas Blvd	Basic	D / 33	D / 33	E / 37	<u>F / 154</u>
	Douglas Blvd EB Off-ramp	Diverge	E / 37	D / 30	E / 37	<u>F / 107</u>
	Douglas Blvd WB Off-ramp	Diverge	D / 30	C / 27	E / 39	<u>F / 180</u>
	Douglas Blvd On-ramp	Merge	E / 35	C / 27	C / 26	<u>F / 181</u>
	Eureka Rd Off-ramp	Diverge	E / 38			<u>F / 149</u>
	Eureka Rd to SR 65	Weave	C / 27	D / 32	D / 33	<u>F / 142</u>
	Taylor Rd Off-ramp	Diverge	B / 17	-	-	
	SR 65 Off-ramp	Diverge	-	C / 25	C / 28	<u>F / 65</u>
	SR 65 On-ramp	Merge	D / 33	D / 32	D / 33	C / 21
WB I-80	Rocklin Rd to HOV Lane Start	Basic	E / 36	E / 37	E / 40	<u>F / 113</u>
	SR 65 Off-ramp	Diverge	C / 23	C / 21	C / 22	<u>F / 114</u>
	SR 65 to Atlantic St	Weave	E / 39	C / 24	D / 28	E / 41
	Atlantic St EB Off-ramp	Diverge	<u>F / 91</u>	<u>F / 51</u>	E / 39	<u>F / 61</u>
	Atlantic St On-ramp	Merge	<u>F / 84</u>	<u>F / 79</u>	<u>F / 61</u>	<u>F / 100</u>
	Douglas Blvd Off-ramp	Diverge	<u>F / 77</u>	<u>F / 71</u>	<u>F / 70</u>	<u>F / 108</u>
	Douglas Blvd WB On-ramp	Merge	<u>F / 114</u>	<u>F / 111</u>	<u>F / 114</u>	C / 20
	Douglas Blvd EB On-ramp	Merge	<u>F / 74</u>	<u>F / 75</u>	<u>F / 73</u>	B / 15
	Truck Scales to Elkhorn Blvd	Basic	D / 29	D / 29	D / 29	C / 21
	Elkhorn Blvd WB On-ramp	Merge	C / 26	C / 26	C / 26	B / 18
	Elkhorn Blvd EB On-ramp	Merge	D / 29	D / 28	D / 28	C / 22

TABLE 20: SELECTED FREEWAY OPERATIONS RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS

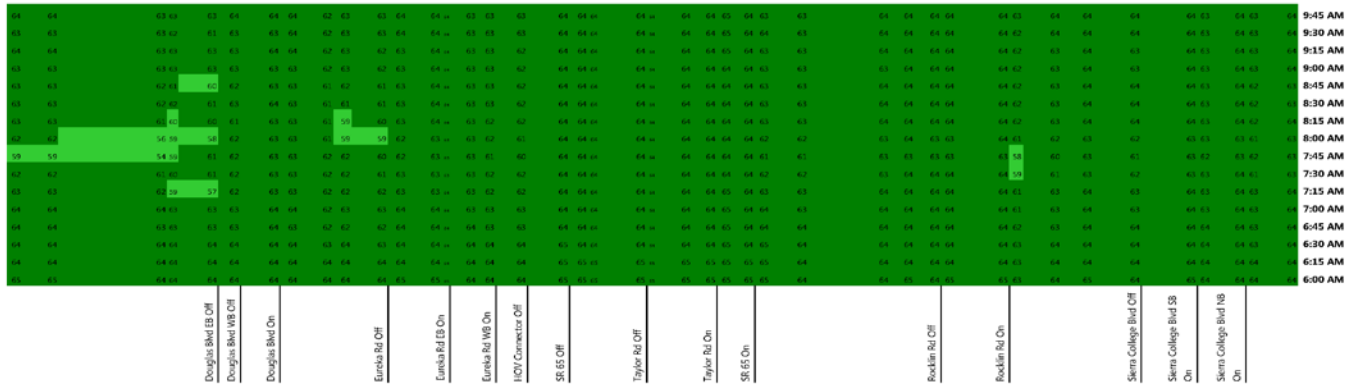
Freeway	Location	Type ¹	Alternative 1	Alternative 2	Alternative 3	Alternative 5
NB SR 65	I-80 to Stanford Ranch Rd	Weave	E / 44	<u>F / 71</u>	<u>F / 65</u>	<u>F / 84</u>
	Stanford Ranch Rd On-ramp	Merge	<u>F / 73</u>	<u>F / 75</u>	<u>F / 72</u>	D / 30
	Pleasant Grove Blvd Off-ramp	Diverge	D / 33	D / 34	D / 34	
	Whitney Ranch Pkwy WB On-ramp	Merge	E / 37	E / 35	E / 41	D / 29
	Twelve Bridges Dr Off-ramp	Diverge	E / 37	E / 37	E / 38	D / 30
SB SR 65	Ferrari Ranch Rd EB On-ramp	Merge	B / 13	B / 13	B / 13	B / 16
	Lincoln Blvd to Twelve Bridges Dr	Weave	C / 22	C / 22	C / 23	C / 21
	Twelve Bridges Dr On-ramp	Merge	C / 27	C / 28	C / 28	C / 25
	Placer Pkwy WB On-ramp	Merge	C / 24	C / 24	C / 24	B / 18
	Sunset Blvd WB On-ramp	Merge	D / 29	D / 29	D / 29	D / 32
	Blue Oaks Blvd WB On-ramp	Merge	D / 32	D / 33	D / 32	C / 28
	Pleasant Grove Blvd EB On-ramp	Merge	D / 30	D / 32	D / 32	D / 29
	Galleria Blvd Off-ramp	Diverge	D / 29	D / 30	D / 30	D / 33
	Galleria Blvd to I-80	Weave	C / 25	C / 25	C / 26	E / 39

Notes: Bold and underline font indicate LOS F conditions. Shaded cells indicate a project impact. The level of service and average density for the study segment are reported.
¹The facility type reported is for Alternative 1. The other results are contained in the Technical Appendix.

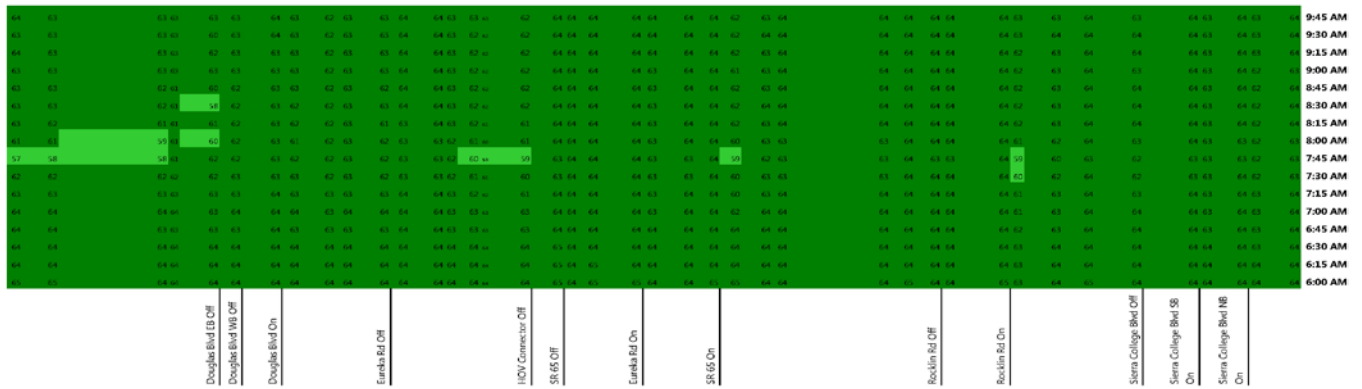
Source: Fehr & Peers, 2014

FIGURE 44 – EASTBOUND I-80 DESIGN YEAR AM PEAK PERIOD SPEED CONTOUR MAP

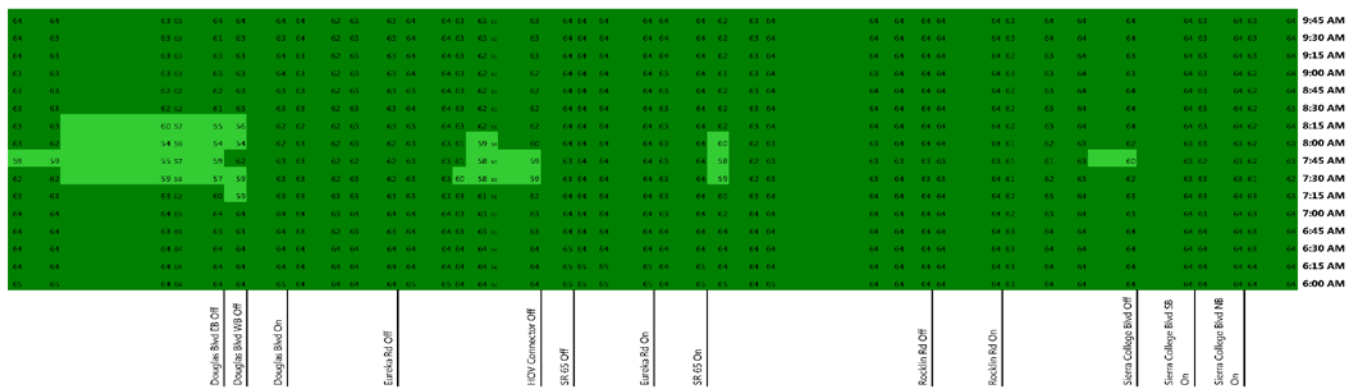
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

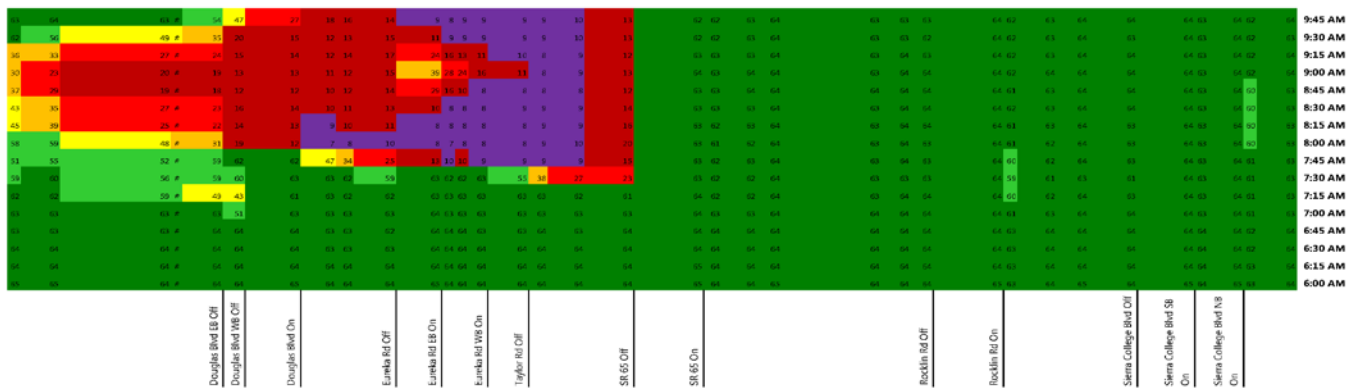
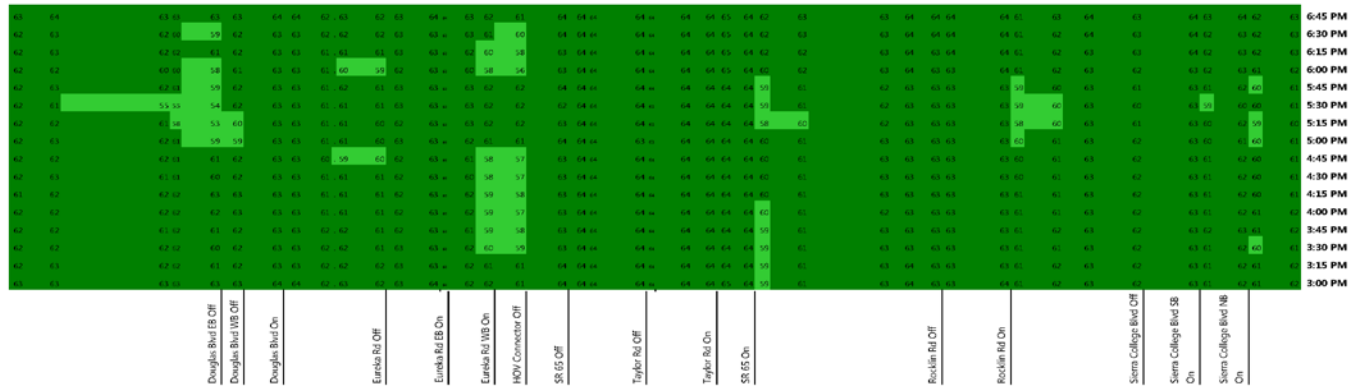
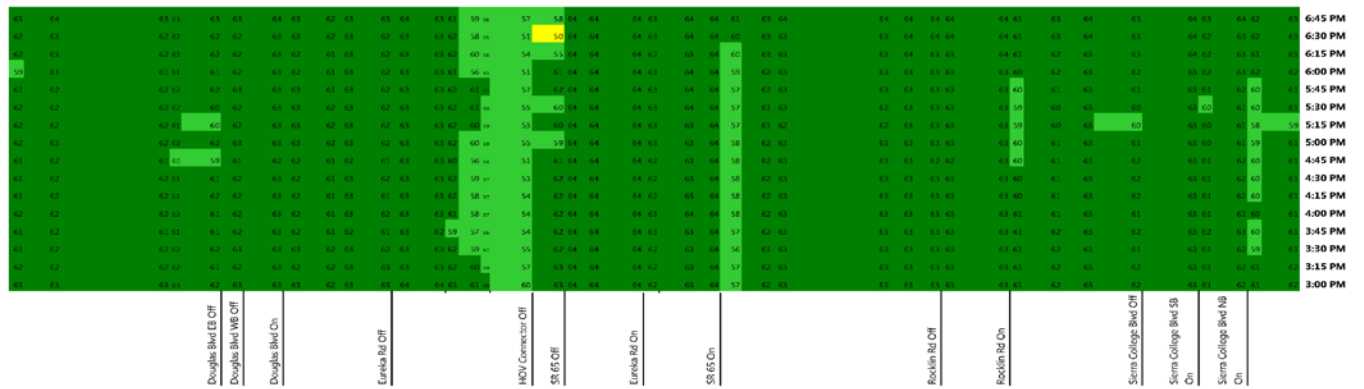


FIGURE 45 – EASTBOUND I-80 DESIGN YEAR PM PEAK PERIOD SPEED CONTOUR MAP

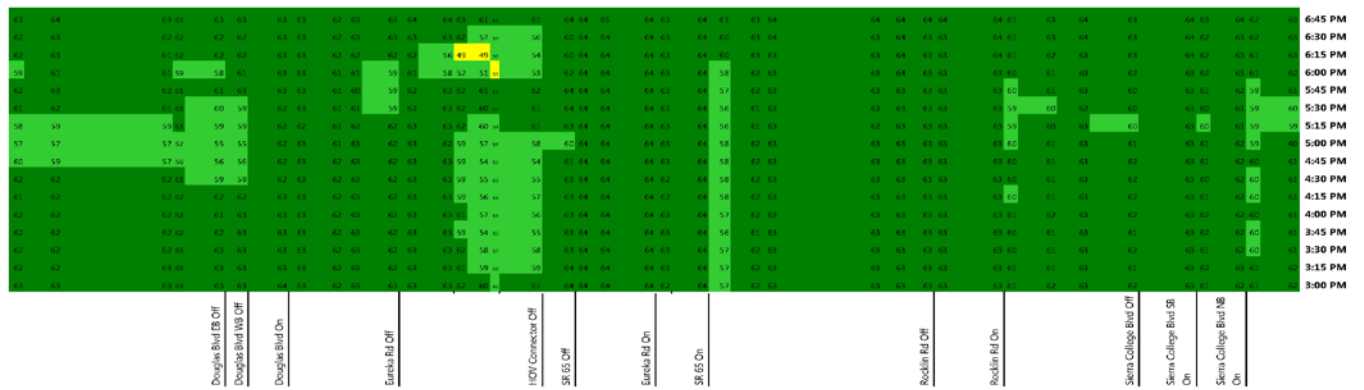
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

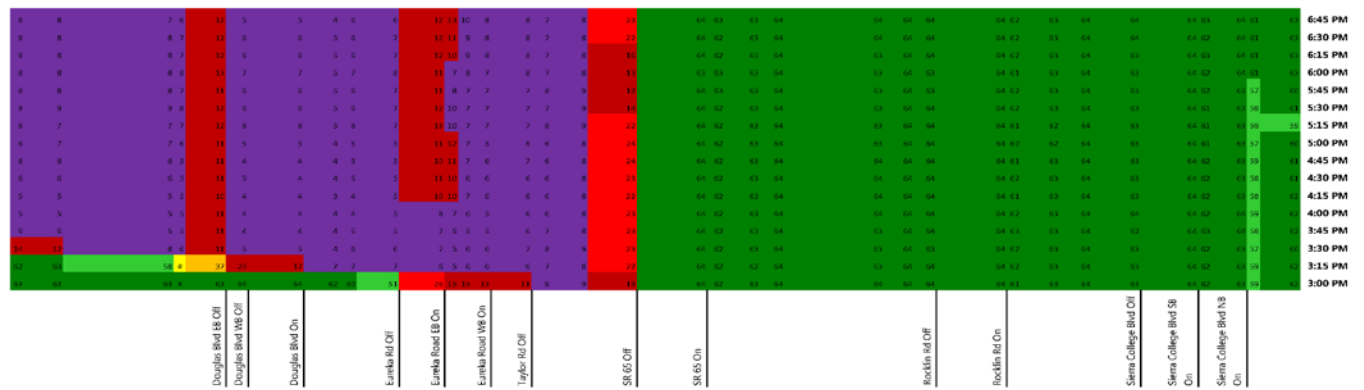
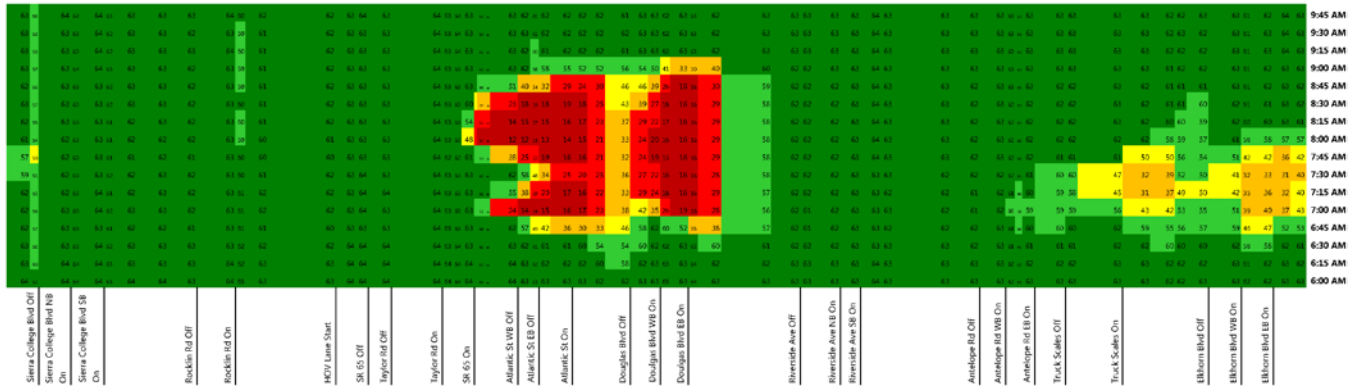
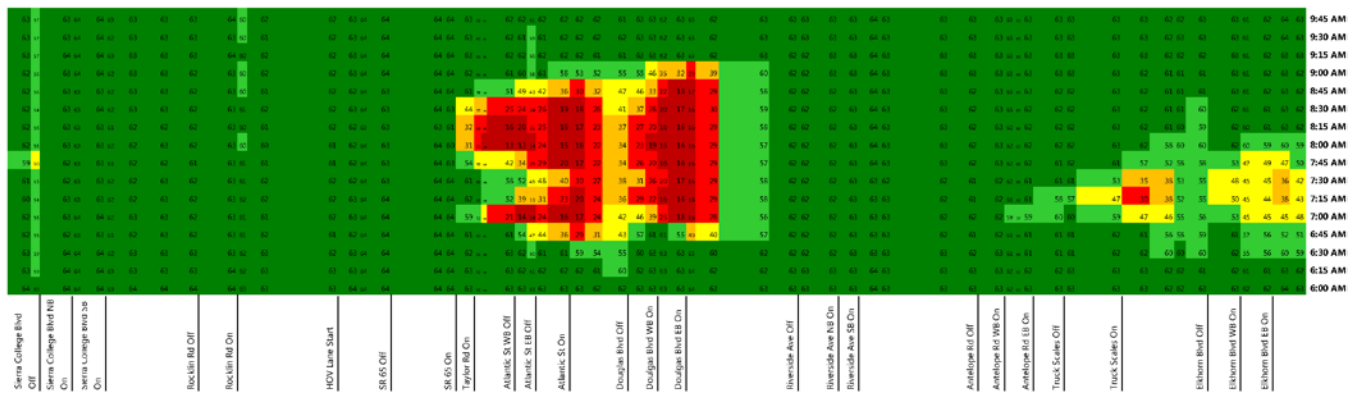


FIGURE 46 – WESTBOUND I-80 DESIGN YEAR AM PEAK PERIOD SPEED CONTOUR MAP

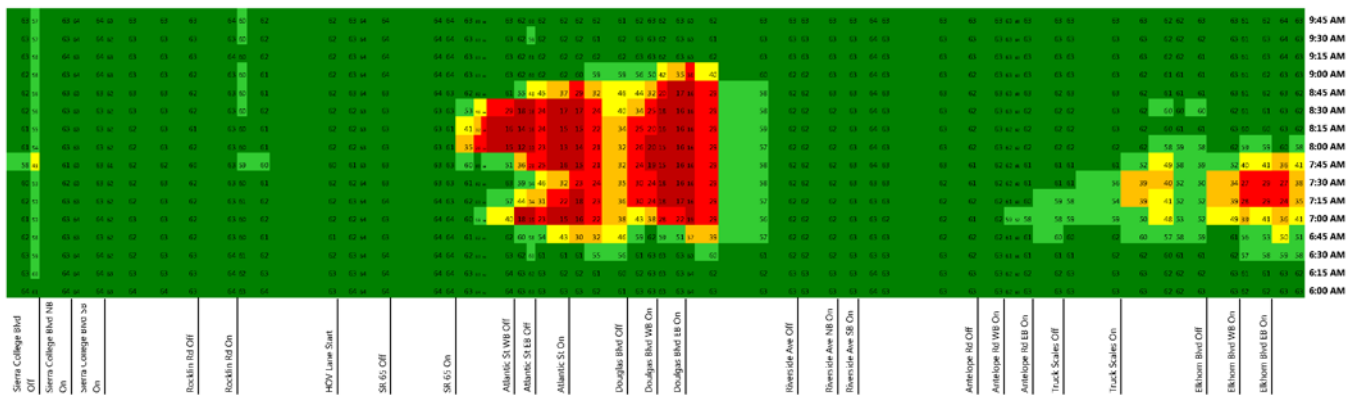
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

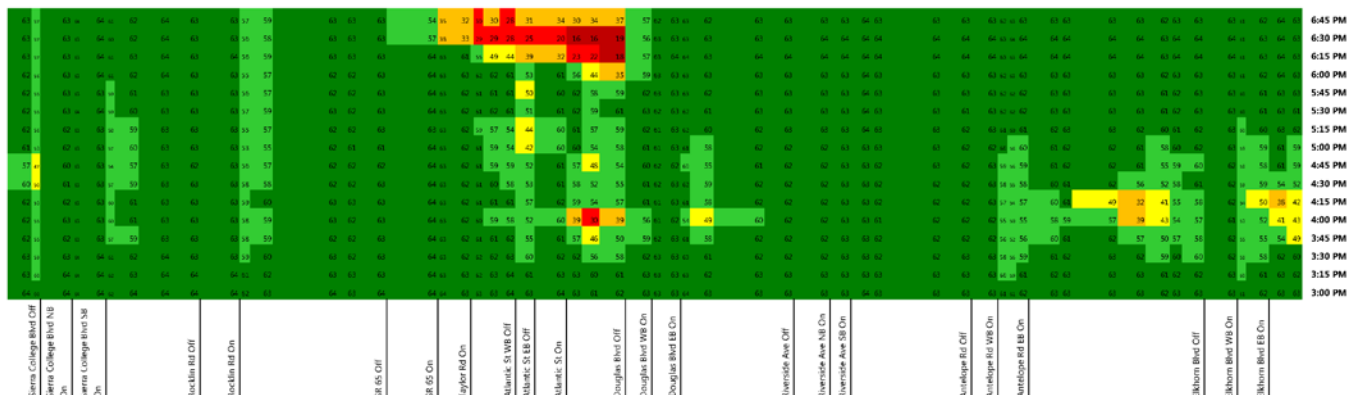
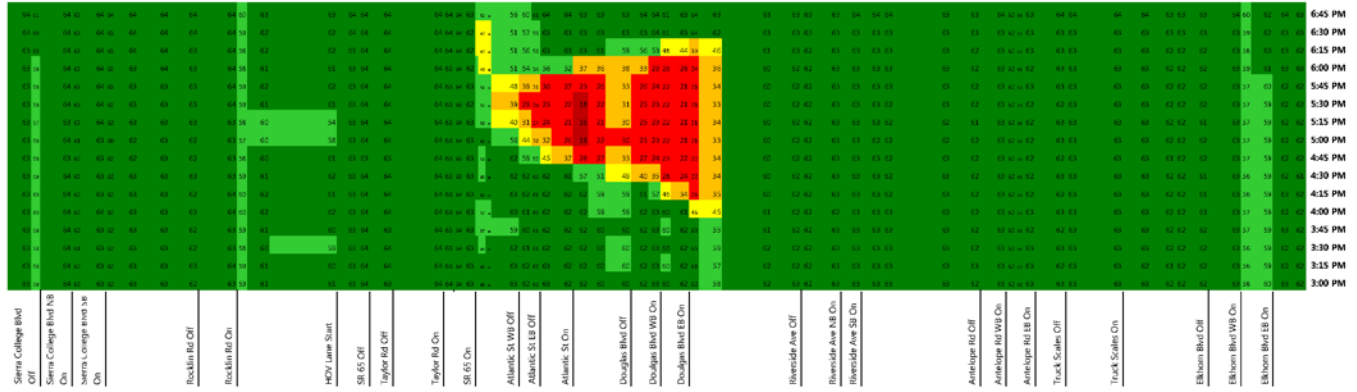
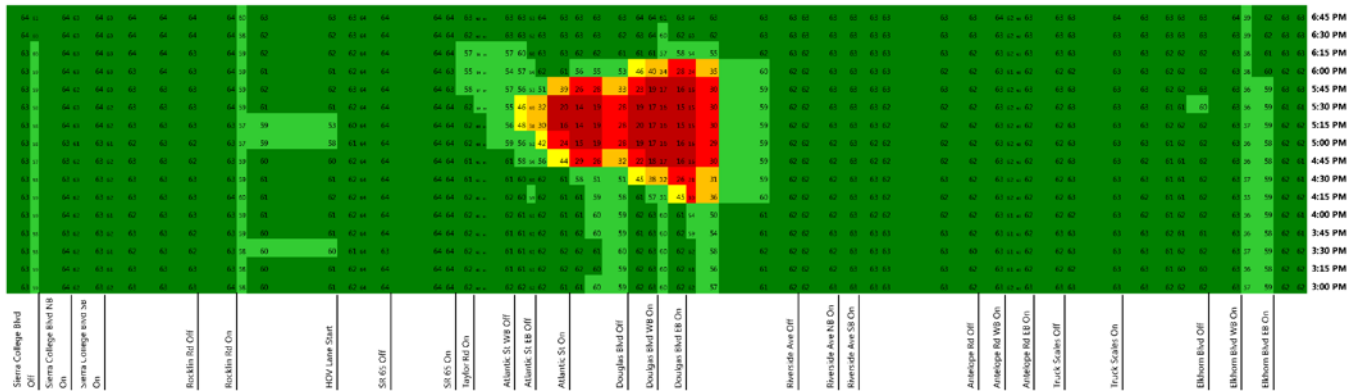


FIGURE 47 – WESTBOUND I-80 DESIGN YEAR PM PEAK PERIOD SPEED CONTOUR MAP

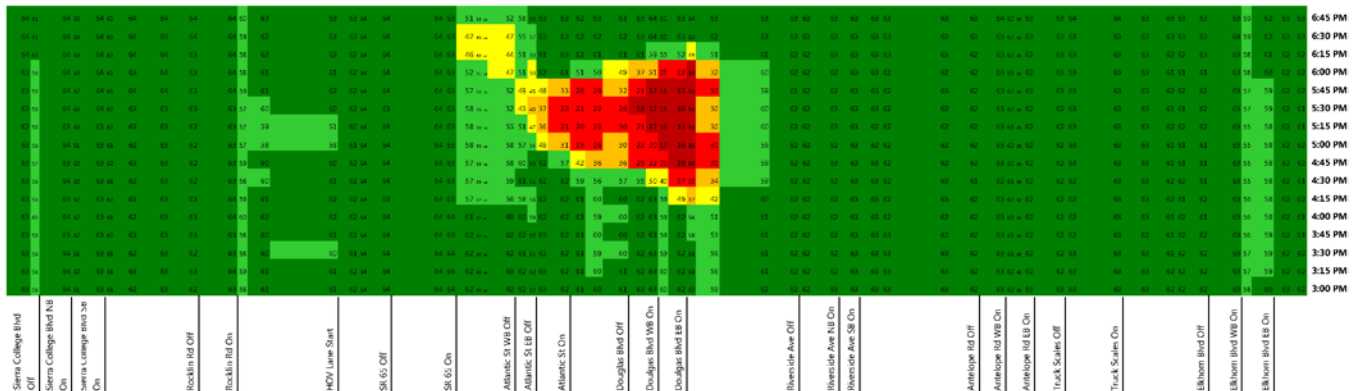
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

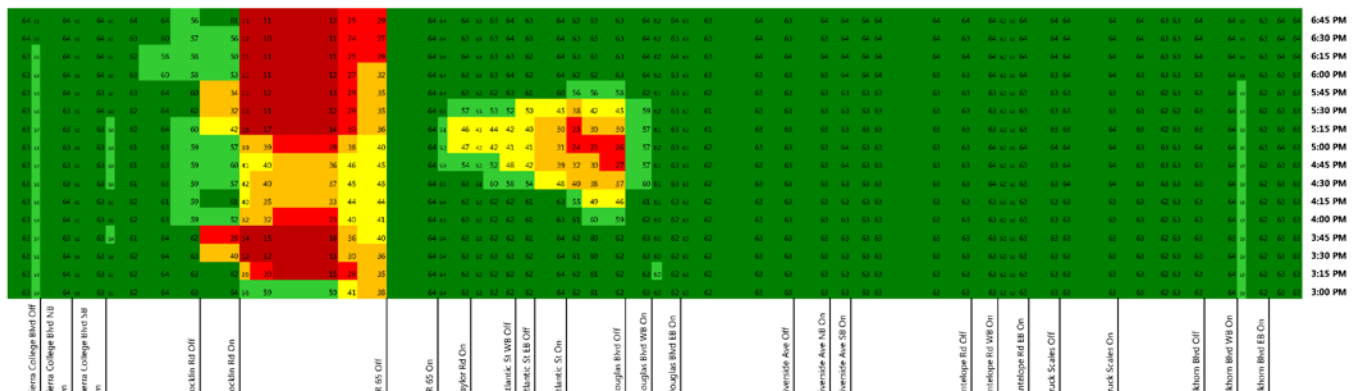
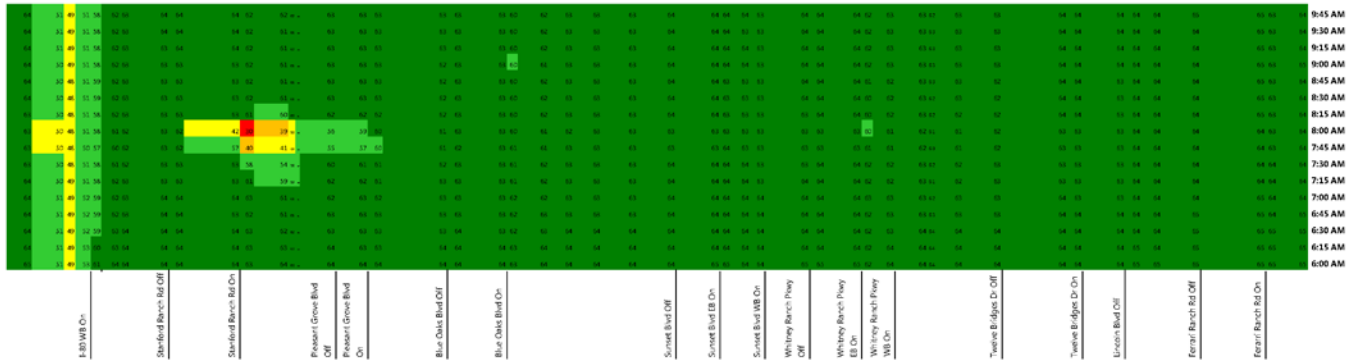
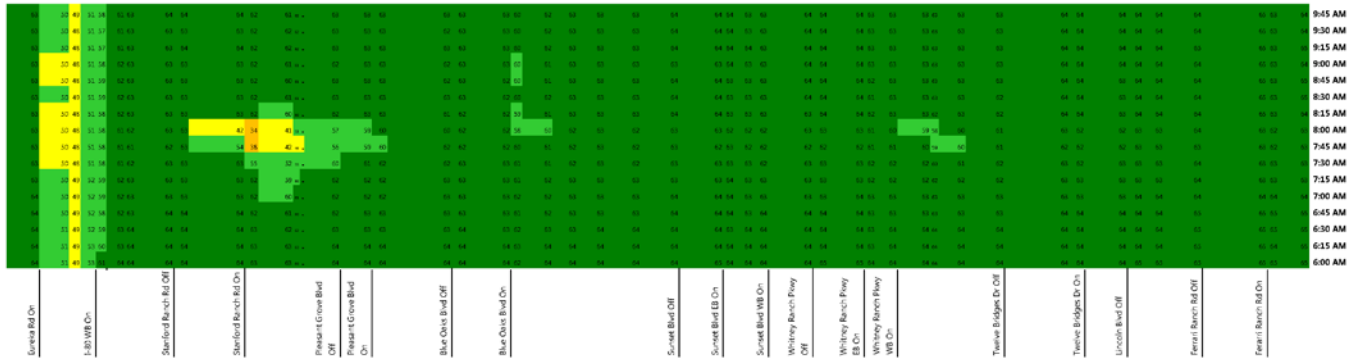


FIGURE 48 – NORTHBOUND SR 65 DESIGN YEAR AM PEAK PERIOD SPEED CONTOUR MAP

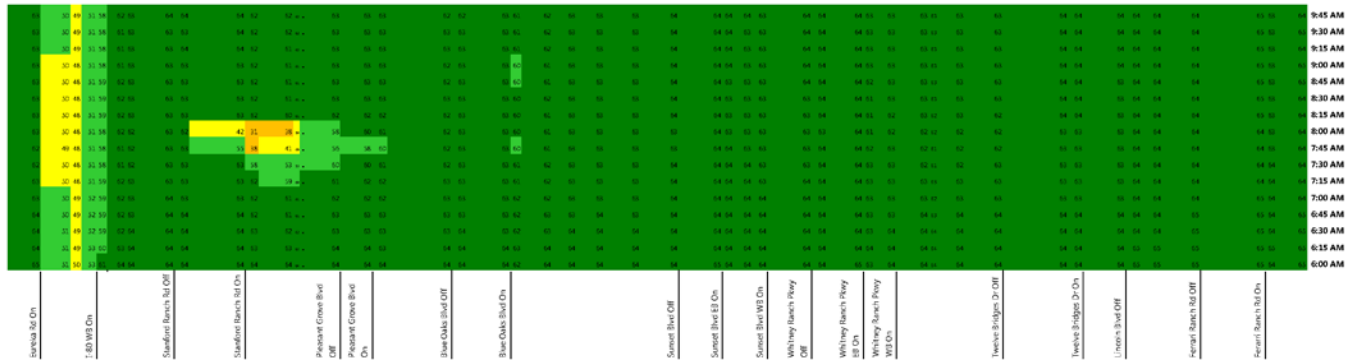
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

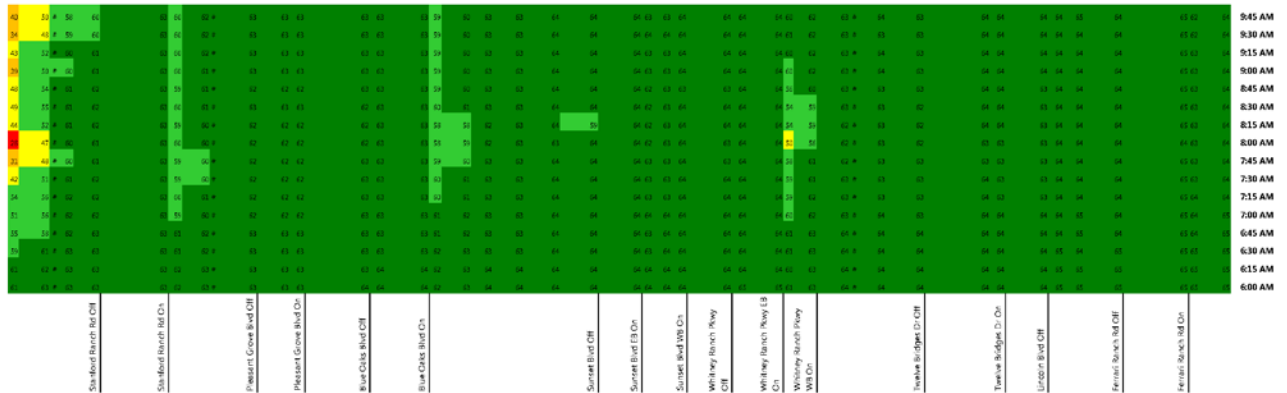
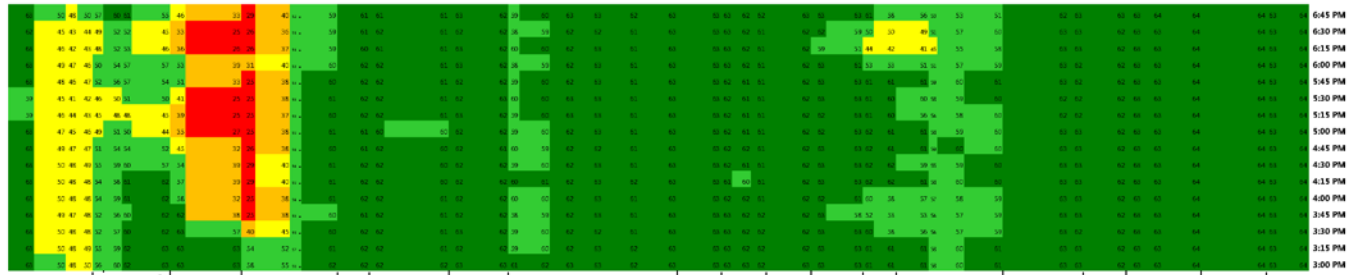
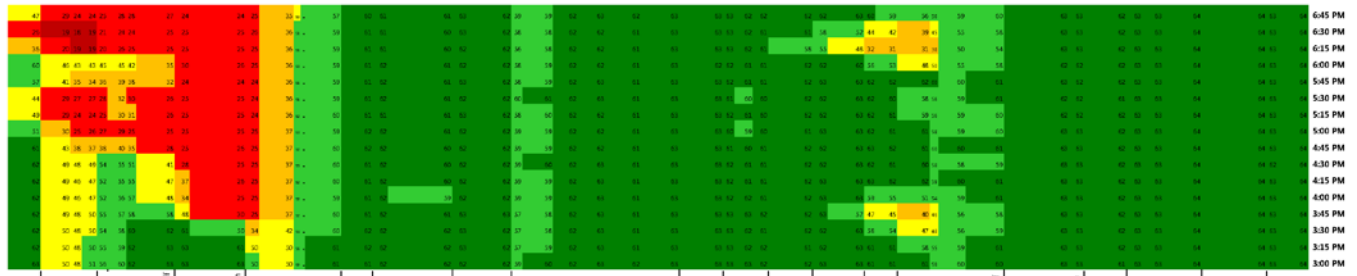


FIGURE 49 – NORTHBOUND SR 65 DESIGN YEAR PM PEAK PERIOD SPEED CONTOUR MAP

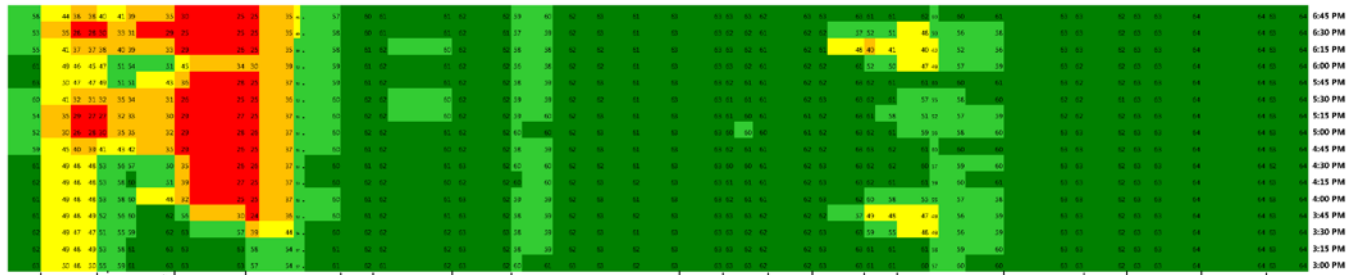
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

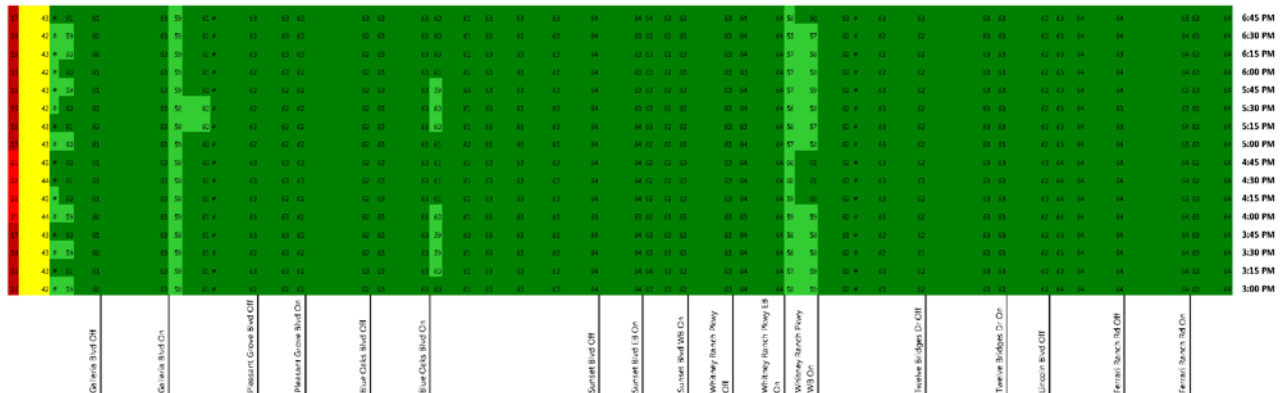
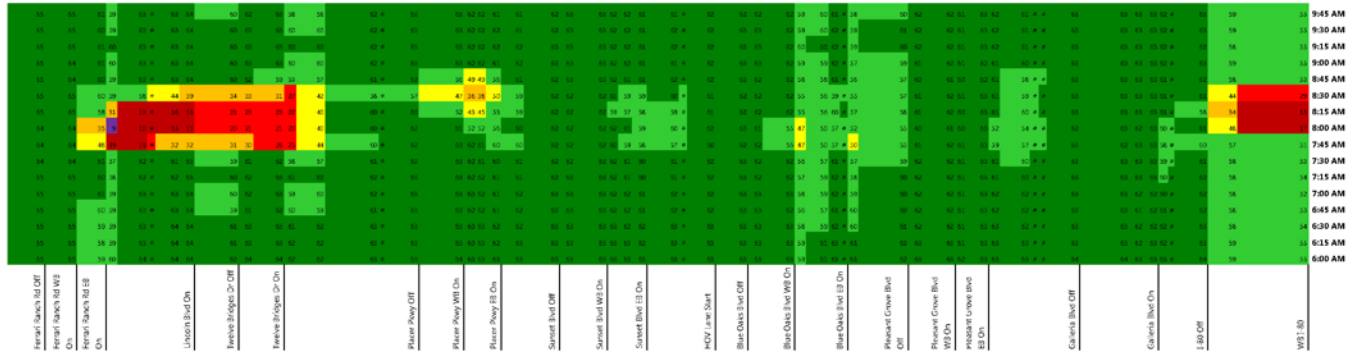
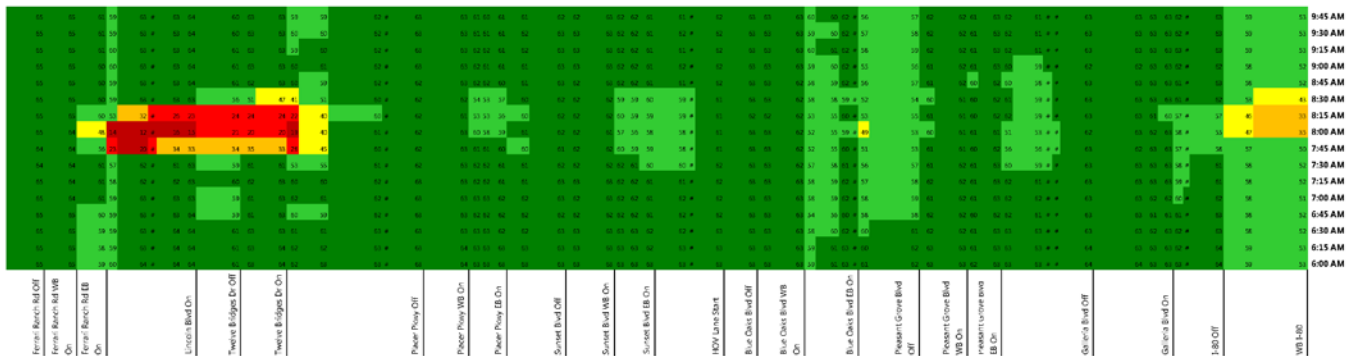


FIGURE 50 – SOUTHBOUND SR 65 DESIGN YEAR AM PEAK PERIOD SPEED CONTOUR MAP

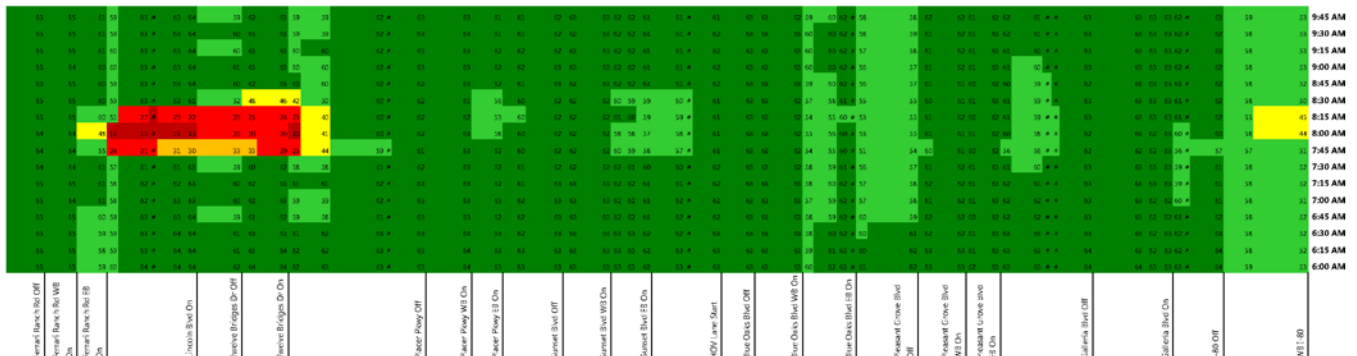
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

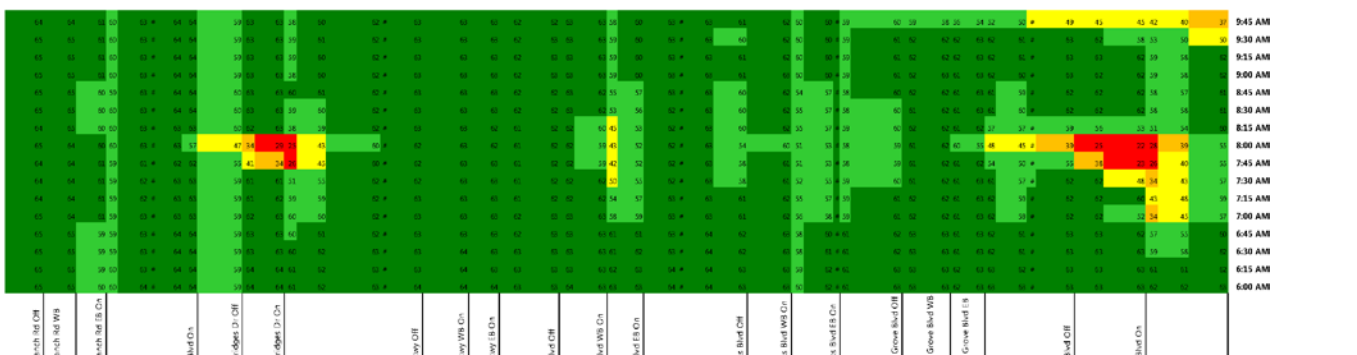
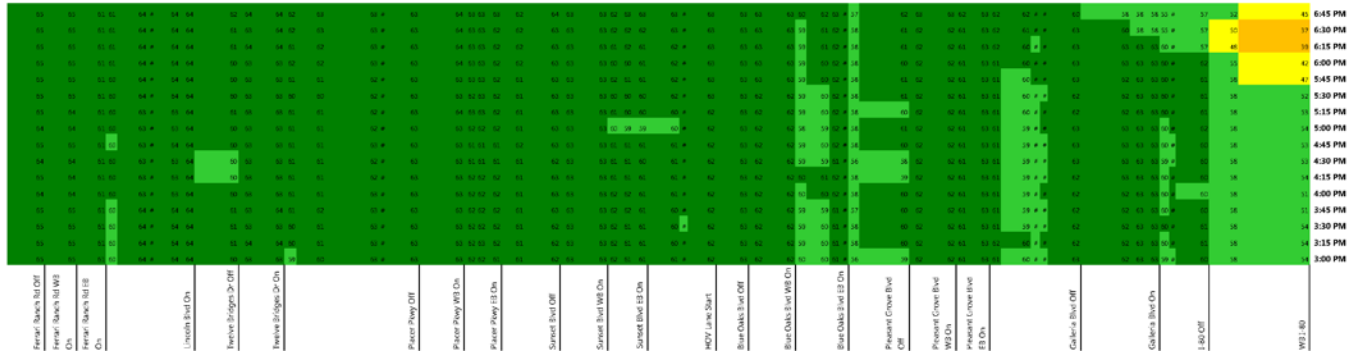
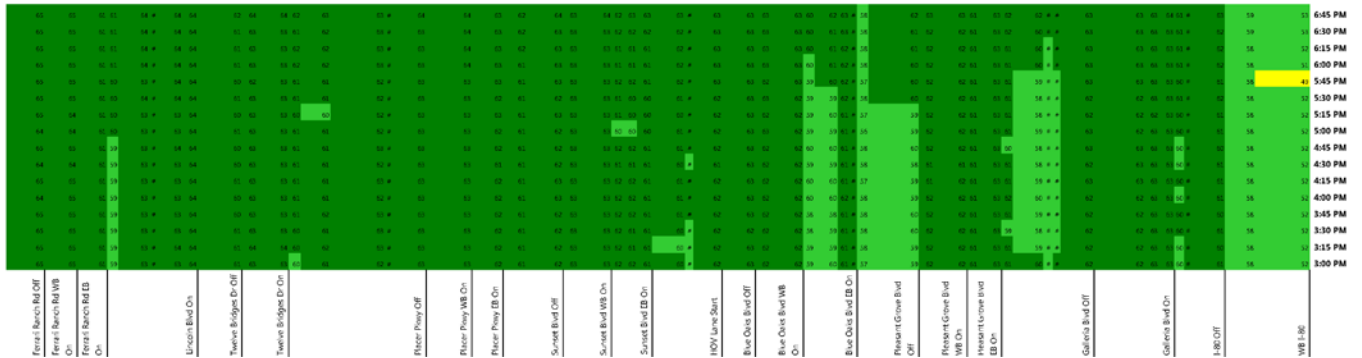


FIGURE 51 – SOUTHBOUND SR 65 DESIGN YEAR PM PEAK PERIOD SPEED CONTOUR MAP

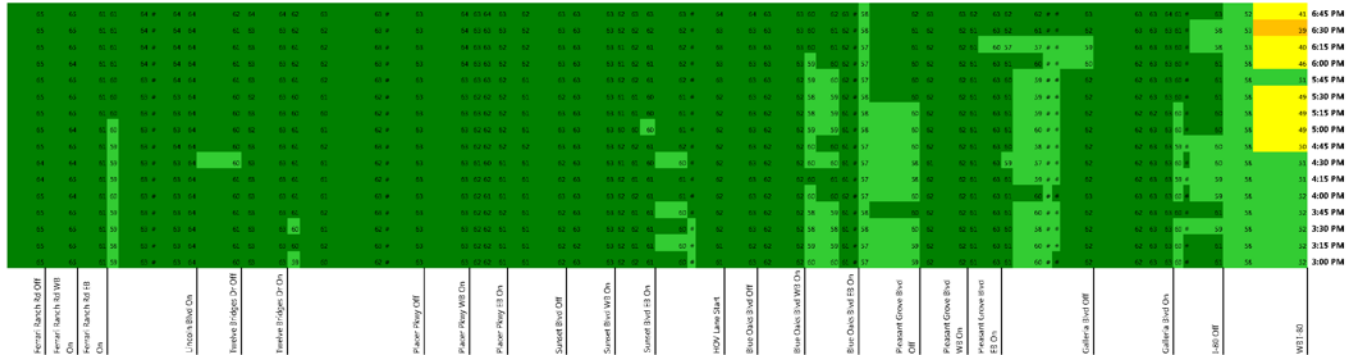
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



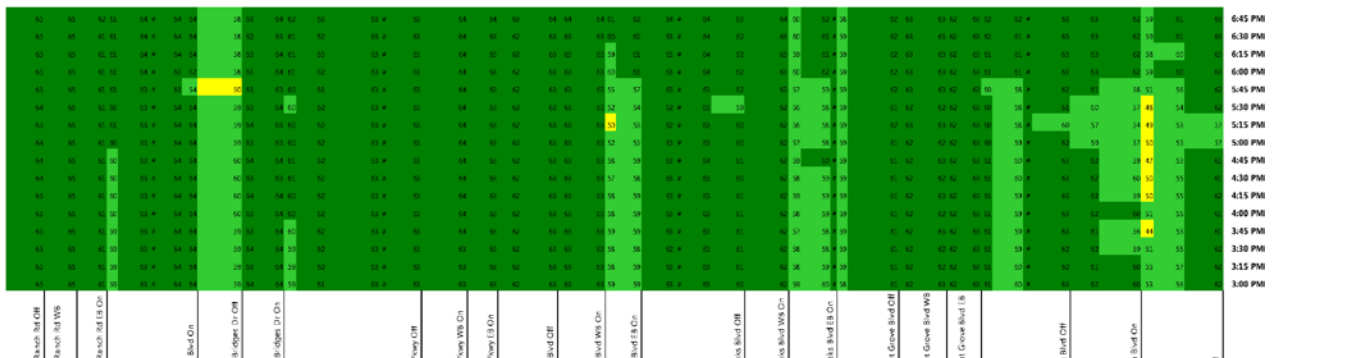
COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)



To mitigate the impact for the section from SR 65 through Douglas Boulevard, an additional through lane could be constructed at the Douglas Boulevard and Riverside Avenue interchanges. This capacity improvement may have secondary impacts downstream at Elkhorn Boulevard. An alternate mitigation would be to use more restrictive metering of westbound I-80 and southbound SR 65 on-ramps, and potentially installing a meter signal on the southbound SR 65 to westbound I-80 connector.

The impact to the section from the truck scales to Elkhorn Boulevard could be mitigated by providing additional mainline capacity such as a continuous auxiliary lane between the truck scales on-ramp and Elkhorn Boulevard off-ramp or more restrictive metering on-ramps. More restrictive metering for ramps at Elkhorn Boulevard, Antelope Road, and Riverside Avenue could cause queuing that would extend onto the local street network.

During the PM peak hour, LOS F conditions would occur between Atlantic Street and Douglas Boulevard under Alternatives 1, 2, and 3. For Alternative 5 (No Build), LOS F would also occur in this area, the upstream section between Rocklin Road and SR 65 would also have LOS F. Under Alternative 5, congestion on SR 65 northbound would spill back onto westbound I-80 for longer than the four-hour peak period. This bottleneck would constrain westbound through volumes (95 percent demand served downstream after SR 65 in the peak hour) which would result in better conditions downstream for the no build alternative compared to the build alternatives. The proposed project (Alternatives 1, 2, and 3) would result in impacts on westbound I-80 in the PM peak hour at Atlantic Street and at Douglas Boulevard. The potential mitigations are the same as discussed above: mainline widening at Douglas Boulevard and Riverside Avenue or more restrictive ramp meter operation.

Northbound SR 65

During the AM peak hour, Alternatives 1, 2, and 3 would have LOS F conditions at Stanford Ranch Road. The lane drop at the Pleasant Grove Boulevard off-ramp would be the bottleneck. Despite the LOS F conditions, the congested period would last for about 30 minutes (see Figure 48). Alternative 5 (No Build) would have in LOS F conditions at the I-80 westbound on-ramp to northbound SR 65. This bottleneck would constrain traffic (72 percent demand served in the peak hour) such that the downstream segments at Stanford Ranch Road would have LOS D conditions. The proposed project (Alternatives 1, 2, and 3) would result in an impact at the following locations.

- Stanford Ranch Road off-ramp to on-ramp
- Stanford Ranch Road on-ramp
- Stanford Ranch Road to Pleasant Grove Boulevard

These impacts could be mitigated by adding mainline capacity such as another through lane at Pleasant Grove Boulevard.

The PM peak hour results show the same trends as the AM peak hour; however, the demand volumes are higher, which results in more congestion. Alternative 1 (Taylor Road Full Access Interchange) has LOS F conditions at the same locations as in the AM peak hour. For Alternatives 2 (Collector-Distributor System Ramps) and 3 (Taylor Road Interchange Eliminated), the LOS F conditions extend back to I-80. Despite this congestion, the build alternatives would serve 97 to 99 percent of the peak-hour demand volume. Alternative 5 (No Build) has LOS F conditions at the I-80 westbound on-ramp and would serve about 70 percent of the demand. As shown in Figure 49, the northbound SR 65 bottleneck at Pleasant Grove Boulevard would occur for longer than three hours even in the build alternatives. Farther north, LOS E conditions occur for the build alternatives between Whitney Ranch Parkway and Twelve Bridges Drive indicating that further increases in volume may result in congested conditions.

Alternatives 2 (Collector-Distributor System Ramps) and 3 (Taylor Road Interchange Eliminated) show more congestion compared to Alternative 1 (Taylor Road Full Access Interchange). The three build alternatives have similar peak-hour volumes (within 40 vehicles per hour). However, the volume of weaving traffic between Stanford Ranch Road and Pleasant Grove Boulevard differs. The 4 to 5 PM demand volume for the weaving movements (on-ramp to downstream mainline and upstream mainline to off-ramp) are 46 vehicles per hour lower for Alternative 1 compared to Alternative 2 and 33 vehicles per hour lower for Alternative 3. The higher weaving volume disrupts the traffic flow in Alternatives 2 and 3, which results in worse operations compared to Alternative 1. The Vissim analysis results were confirmed using the Leisch Method procedure for the freeway segments between I-80 and Pleasant Grove Boulevard (see the Sensitivity Tests section of the appendix), which show LOS F conditions under all three build alternatives.

The proposed project (Alternatives 1, 2, and 3) would result in impacts during both peak hours to the segment between the Stanford Ranch Road off-ramp and on-ramp and at the Stanford Ranch Road on-ramp. Alternatives 2 and 3 would have impacts during the AM peak hour to the segment between Stanford Ranch Road and Pleasant Grove Boulevard. These impacts could be mitigated by adding mainline capacity such as another through lane at Pleasant Grove Boulevard.

Southbound SR 65

During the AM peak hour, all project alternatives have LOS F conditions on southbound SR 65 at the Twelve Bridges Drive on-ramp. For the build alternatives, LOS F conditions extend upstream to the Ferrari Ranch Road interchange. As noted previously, the difference is caused by different forecasts used for the analysis of Alternative 5 (No Build). For Alternatives 1, 2, and 3, slowing is also present at the Placer Parkway, Sunset Boulevard, and Blue Oaks Boulevard westbound on-ramps, and at the Pleasant Grove Boulevard interchange. For Alternative 5, a bottleneck at the Galleria Boulevard to I-80 weaving section causes LOS F conditions to extend back to Pleasant Grove Boulevard. Alternatives 1 and 2 have LOS F conditions on the connector to westbound I-80 due to downstream bottlenecks at Douglas Boulevard.

The proposed project (Alternatives 1, 2, and 3) would result in impacts at the following locations on southbound SR 65 during the AM peak hour.

- Between the eastbound Ferrari Ranch Road on-ramp and the Twelve Bridges Drive on-ramp
- Westbound Placer Parkway westbound on-ramp (Alternative 1 only)
- Southbound SR 65 to westbound I-80 connector (Alternatives 1 and 2 only)

To mitigate the impacts between Ferrari Ranch Road and Twelve Bridges Drive, additional mainline capacity is needed such as an auxiliary lane between Twelve Bridges Drive and Placer Parkway. This improvement would likely create additional impacts to facilities downstream by allowing more vehicles to reach locations that already operate at LOS E or worse, such as the ramps at Sunset Boulevard, Blue Oaks Boulevard, and Pleasant Grove Boulevard. Further, improving mixed-flow bottlenecks may influence demand for future HOV lanes. This suggests that the long-term solution for SR 65 carefully consider where additional mixed-flow lanes versus auxiliary lanes are warranted between Lincoln Boulevard and Pleasant Grove Boulevard. The impact to the Placer Parkway on-ramp can be mitigated by extending the auxiliary lane that starts at the eastbound on-ramp upstream to start at the westbound on-ramp. Potential mitigation for the impacts to the westbound I-80 connector is discussed above in the westbound I-80 section.

All of the study facilities operate at LOS E or better in the southbound direction during the PM peak hour.

5.1.2. Arterial Intersection Operations

Tables 21 and 23 show the LOS and average delay at key study intersections under design year conditions during the AM and PM peak hours, respectively. Tables 22 and 24 show the average maximum queue length at off-ramps under design year conditions during the AM and PM peak hours. Based on the evaluation criteria for this study, Alternative 1 (Taylor Road Full Access Interchange) has five impacts, Alternative 2 (Collector-Distributor System Ramps) has four impacts, and Alternative 3 (Taylor Road Interchange Eliminated) has six impacts. See the Technical Appendix for all study intersection results.

**TABLE 21: SELECTED INTERSECTION OPERATIONS RESULTS –
DESIGN YEAR AM PEAK HOUR CONDITIONS**

Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
6. Blue Oaks Blvd / Washington Blvd	<u>D / 45</u>	<u>D / 49</u>	<u>D / 50</u>	<u>F / 136</u>
7. Blue Oaks Blvd / SR 65 NB Ramps	B / 10	B / 11	B / 12	<u>F / 116</u>
10. Stanford Ranch Rd / Five Star Blvd	C / 28	C / 26	C / 28	<u>F / 151</u>
11. Stanford Ranch Rd / SR 65 NB Ramps	B / 16	C / 25	B / 19	<u>F / 127</u>
12. Galleria Blvd / SR 65 SB Ramps	C / 24	C / 34	C / 25	D / 38
14. Galleria Blvd / Roseville Pkwy	D / 45	D / 45	D / 46	D / 39
15. Roseville Pkwy / Creekside Ridge Dr	A / 7	A / 7	A / 7	B / 10
16. Roseville Pkwy / Taylor Rd	<u>E / 61</u>	<u>E / 62</u>	<u>F / 95</u>	<u>F / 98</u>
19. Atlantic St / I-80 WB Ramps	<u>D / 43</u>	C / 25	<u>D / 38</u>	B / 12
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	C / 32	C / 29	D / 42	E / 55
21. Eureka Rd / Sunrise Ave	<u>D / 38</u>	<u>D / 37</u>	<u>D / 39</u>	C / 29
23. Douglas Blvd / Harding Blvd	C / 28	C / 29	C / 30	C / 25
26. Douglas Blvd / Sunrise Ave	D / 37	D / 40	D / 47	C / 35
29. Rocklin Rd / Granite Dr	C / 27	C / 25	D / 42	D / 29

Note: Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported.

Source: Fehr & Peers, 2014

**TABLE 22: SELECTED MAXIMUM QUEUE LENGTH RESULTS –
DESIGN YEAR AM PEAK HOUR CONDITIONS**

Off-ramp	Storage	Alternative 1	Alternative 2	Alternative 3
Eastbound I-80 at Eureka Rd	1,700	600	650	900
Eastbound I-80 at Taylor Rd	>1,000	325	25	-
Eastbound I-80 at Rocklin Rd	1,080	275	275	275
Westbound I-80 at Rocklin Rd	1,230	200	175	200
Westbound I-80 at Taylor Rd	>1,000	325	-	-
Westbound I-80 at Douglas Blvd	1,530	375	375	375
Northbound SR 65 at Northbound Stanford Ranch Rd	1,170	150	200	150
Northbound SR 65 at Southbound Stanford Ranch Rd	1,800	75	75	75
Southbound SR 65 at Southbound Galleria Blvd	1,130	275	300	300
Southbound SR 65 at Northbound Galleria Blvd	1,780	50	75	75

Note: Bold and underline font indicate queues that exceed the ramp length. Shaded cells indicate a project impact. The reported value is the average maximum peak-hour queue length in feet.

Source: Fehr & Peers, 2014

TABLE 23: SELECTED INTERSECTION OPERATIONS RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS				
Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
6. Blue Oaks Blvd / Washington Blvd	<u>F / 165</u>	<u>F / 164</u>	<u>F / 175</u>	<u>F / >240</u>
7. Blue Oaks Blvd / SR 65 NB Ramps	<u>F / 85</u>	<u>E / 69</u>	<u>E / 80</u>	<u>F / 115</u>
10. Stanford Ranch Rd / Five Star Blvd	<u>E / 56</u>	<u>E / 55</u>	<u>E / 59</u>	<u>D / 36</u>
11. Stanford Ranch Rd / SR 65 NB Ramps	C / 26	C / 22	C / 22	D / 36
12. Galleria Blvd / SR 65 SB Ramps	C / 24	C / 23	C / 25	C / 29
14. Galleria Blvd / Roseville Pkwy	<u>F / 91</u>	<u>F / 131</u>	<u>F / 102</u>	<u>F / 213</u>
15. Roseville Pkwy / Creekside Ridge Dr	<u>E / 77</u>	<u>E / 72</u>	<u>D / 40</u>	C / 24
16. Roseville Pkwy / Taylor Rd	D / 54	D / 53	<u>E / 71</u>	D / 48
19. Atlantic St / I-80 WB Ramps	B / 15	B / 18	C / 34	<u>D / 51</u>
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	<u>F / 104</u>	<u>F / 103</u>	<u>F / 104</u>	<u>F / 92</u>
21. Eureka Rd / Sunrise Ave	<u>F / 99</u>	<u>F / 132</u>	<u>F / 113</u>	<u>F / 184</u>
23. Douglas Blvd / Harding Blvd	<u>F / 81</u>	E / 80	<u>F / 111</u>	<u>F / >240</u>
26. Douglas Blvd / Sunrise Ave	<u>F / 158</u>	<u>F / 240</u>	<u>F / 166</u>	<u>F / >240</u>
29. Rocklin Rd / Granite Dr	<u>F / 83</u>	<u>F / 97</u>	<u>F / 105</u>	<u>F / >240</u>
Note: Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported. Source: Fehr & Peers, 2014				

TABLE 24: SELECTED MAXIMUM QUEUE LENGTH RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS				
Off-ramp	Storage	Alternative 1	Alternative 2	Alternative 3
Eastbound I-80 at Eureka Rd	1,700	725	450	1,000
Eastbound I-80 at Taylor Rd	>1,000	300	75	-
Eastbound I-80 at Rocklin Rd	1,080	275	275	275
Westbound I-80 at Rocklin Rd	1,230	375	400	450
Westbound I-80 at Taylor Rd	>1,000	300	-	-
Westbound I-80 at Douglas Blvd	1,530	425	425	450
Northbound SR 65 at Northbound Stanford Ranch Rd	1,170	425	375	400
Northbound SR 65 at Southbound Stanford Ranch Rd	1,800	100	125	125
Southbound SR 65 at Southbound Galleria Blvd	1,130	325	325	350
Southbound SR 65 at Northbound Galleria Blvd	1,780	125	100	125
Note: Bold and underline font indicate queues that exceed the ramp length. Shaded cells indicate a project impact. The reported value is the average maximum peak-hour queue length in feet. Source: Fehr & Peers, 2014				

The following intersections would operate an unacceptable peak hour LOS based on the evaluation criteria under all project alternatives.

- Blue Oaks Boulevard/Washington Boulevard (AM and PM)
- Blue Oaks Boulevard/SR 65 Northbound Ramps (PM)
- Stanford Ranch Road/Five Star Boulevard (PM)
- Galleria Boulevard/Roseville Parkway (PM)
- Roseville Parkway/Taylor Road (AM)
- Eureka Road/Taylor Road/I-80 Eastbound Ramps (PM)
- Eureka Road/Sunrise Avenue (PM)
- Douglas Boulevard/Sunrise Avenue (PM)
- Rocklin Road/Granite Drive (PM)

The analysis results indicate these intersections will need significant capacity enhancements with and without the proposed project to operate within the established LOS thresholds for these locations. Before any improvements are proposed though, the interaction between these locations and the rest of the network should be considered. In some cases, the operation of these intersections meters traffic accessing the freeway. This may be desirable in certain locations, such as at Blue Oaks Boulevard/Washington Boulevard, at least until sufficient capacity is available on SR 65 to accommodate the demand levels. In other locations, improvements to the freeway system, such as an auxiliary lane, may reduce demand and/or queuing that would improve intersection operations.

During the AM peak hour, the two project impacts are on the Atlantic Street/Eureka Road corridor. For Alternative 1 (Taylor Road Full Access Interchange) and 3 (Taylor Road Interchange Eliminated) have LOS D conditions at the Atlantic Street/I-80 Westbound I-80 ramps intersection. The LOS threshold is C, and Alternative 5 (No Build) has LOS B. All three build alternatives have LOS D conditions at Eureka Road/Sunrise Avenue, while the No Build alternative has LOS C conditions, which is also the LOS threshold. Freeway congestion constrains demand at these intersections under Alternative 5. With the build alternatives, more traffic demand can reach the intersections resulting in higher average delays.

The impact at the Westbound I-80 ramps intersection is likely caused by queues from the ramp meter. So, potential mitigation would include changes to the meter signal operation or widening of the on-ramp to provide more storage. The design year model includes planned improvements at the Sunrise Avenue intersection. Further improvements could add third and fourth through lanes on some approaches. Alternately, the threshold could be adjusted to LOS D given that the intersection is accommodating a relatively high demand volume.

During the AM peak hour, the average maximum queue lengths for freeway off-ramps at all study intersections are less than the ramp storage length under all build alternatives. Even with an additional left-turn pocket lane, Alternative 3 has the longest queue on the eastbound I-80 off-ramp at Eureka Road. However, the queue is less than the ramp length, so the queue would not extend to the freeway mainline.

During the PM peak hour, the proposed project (Alternatives 1, 2, and 3) would have impacts at the following study intersections.

- Stanford Ranch Road/Five Star Boulevard
- Roseville Parkway/Creekside Ridge Drive
- Roseville Parkway/Taylor Road (Alternative 3 only)
- Eureka Road/Taylor Road/I-80 Eastbound Ramps

Under Alternative 5, traffic demand is constrained on eastbound I-80 at the SR 65 interchange. As a result, less traffic can reach the Stanford Ranch Road, Roseville Parkway, and Taylor Road corridors. With the project improvements, the increased volume results in a delay at the Five Star Boulevard intersection that is within 5 seconds of the LOS E threshold of 55 seconds for all three build alternatives. The impact at the Creekside Ridge Drive intersection is caused by the signal timings used at the adjacent Galleria Boulevard intersection. The westbound queue at Galleria Boulevard extends upstream into the Creekside Ridge Drive intersection.

At Eureka Road/Taylor Road, the average delay increases by about 10 seconds for all three build alternatives compared to the no build alternative. Even though Alternative 3 (Taylor Road Interchange Eliminated) has additional capacity on the northbound and southbound legs compared to Alternatives 1 (Taylor Road Full Access Interchange) and 2 (Collector-Distributor System Ramps), all three alternatives have about the same average delay. The additional westbound right-turn pocket for Alternative 3 at the Roseville Parkway/Taylor Road intersection provides LOS E rather than LOS F conditions, but the intersection threshold is LOS D.

Intersection mitigations would involve additional approach lanes. At Five Star Boulevard, adding a second eastbound right-turn lane would likely reduce intersection delay without affecting pedestrian safety since no conflicting crosswalk exists for this movement. For Creekside Ridge Drive, the signal timing or geometry at the adjacent Galleria Boulevard intersection would need to be modified. The Roseville Parkway/Taylor Road intersection already has right-turn overlap phases and dual left-turn lanes. Further improvements could include a fourth east or westbound through lane or a third southbound left-turn lane. For Eureka Road/Taylor Road, the Alternative 3 improvements (a second northbound left-turn lane and a second southbound right-turn lane) could be applied to Alternatives 1 and 2. The Alternative 3 intersection is built-out, so grade separation of certain movements – for example, westbound Eureka Road

to eastbound I-80 – may be needed. Mitigation of the impact at Roseville Parkway/Taylor Road under Alternative 3 may be accomplished by adding a third southbound left-turn lane.

5.2. Construction Year Conditions

Overall network performance statistics for AM and PM peak period operations are summarized for each alternative in Tables 25 and 26 below, respectively.

Performance Measure	Existing Conditions	Construction Year Conditions				
		Alternative 1	Alternative 2	Alternative 3	Alternative 5	
Volume Served (% of total demand)	143,450 (100%)	168,990 (100%)	167,770 (99%)	167,860 (99%)	163,780 (96%)	
VMT	645,270	794,080	788,250	788,060	740,650	
PMT	786,260	976,830	970,480	970,660	909,000	
VHT	13,760	16,990	16,800	16,760	23,040	
VHD (% of VHT)	2,670 (19%)	3,360 (20%)	3,300 (20%)	3,260 (20%)	10,330 (45%)	
Average Delay per Vehicle (min)	1.12	1.19	1.18	1.17	3.78	
PHD	3,240	3,990	3,930	3,890	12,370	
Average Speed	46.9	46.7	46.9	47.0	32.1	
Average Speed for HOVs	47.0	49.0	49.2	49.1	34.4	
Travel Time: Blue Oaks Blvd to Antelope Rd	SOV	9:44	8:56	8:45	9:22	17:10
	HOV	9:27	8:30	8:30	8:39	13:58
Notes: PMT = person miles of travel, PHD = person hours of delay						
Source: Fehr & Peers, 2014						

Reviewing the results in Tables 25 and 26 should consider the following information.

- Overall, the build alternatives improve overall network performance compared to no build conditions.
- The three build alternatives serve all of the peak period demand volume, but Alternative 5 (No Build) does not. The performance metrics do not fully account for vehicles that could not enter the network during the peak periods.

- During the AM peak period, Alternative 3 (Taylor Road Interchange Eliminated) has the lowest delay and highest average speed. However, all three build alternatives have about the same results.

TABLE 26: COMPARISON OF OVERALL NETWORK PERFORMANCE – CONSTRUCTION YEAR PM PEAK PERIOD						
Performance Measure		Existing Conditions	Construction Year Conditions			
			Alternative 1	Alternative 2	Alternative 3	Alternative 5
Volume Served (% of total demand)		198,170 (101%)	234,970 (101%)	235,230 (101%)	235,090 (101%)	216,610 (91%)
VMT		730,100	934,490	931,460	930,080	805,450
PMT		880,180	1,155,450	1,152,400	1,151,470	998,020
VHT		16,850	21,500	21,290	21,620	37,230
VHD (% of VHT)		3,950 (23%)	5,080 (24%)	4,940 (23%)	5,300 (25%)	23,020 (62%)
Average Delay per Vehicle (min)		1.20	1.30	1.26	1.35	6.38
PHD		4,670	6,140	5,970	6,420	27,150
Average Travel Speed		43.3	43.5	43.7	43.0	21.6
Average HOV Speed		44.7	45.2	45.4	44.7	25.8
Travel Time: Auburn Blvd to Blue Oaks Blvd	SOV	9:16	6:26	6:28	6:26	35:10
	HOV	9:11	6:23	6:23	6:23	14:07
Notes: PMT = person miles of travel, PHD = person hours of delay						
Source: Fehr & Peers, 2014						

- During the PM peak period, Alternative 2 (Collector-Distributor System Ramps) has the lowest delay and highest average speed. Since all three build alternatives have similar freeway operations (no congested segments), the arterial network is performing more efficiently for Alternative 2.
- The AM peak-hour SOV travel time from Blue Oaks Boulevard to Antelope Road is better for Alternative 2 than 3 even though Alternative 3 (Taylor Road Interchange Eliminated) has lower overall delay.
- The PM peak-hour travel time from Auburn Boulevard to Blue Oaks Boulevard for the build alternatives is similar.
- AM and PM travel times are better than existing conditions for all build alternatives.

Specific details about construction year freeway and arterial intersection operations are discussed in more detail in the following sections.

5.2.1. Freeway Operations

Detailed freeway operations analysis was completed for the peak hour (7:30 to 8:30 AM and 4:30 to 5:30 PM) of the four hour AM and PM peak periods. The AM and PM peak-hour served volume are percentage of the demand volume are listed in Figure 52. The AM and PM peak hour results for select locations are reported in Tables 27 and 28, respectively. The remaining results are available in the Technical Appendix. Figures 53 through 60 display the average speed in the mixed-flow lanes throughout the network during the peak periods for each alternative.

Eastbound I-80

The freeway operations results indicate that Alternative 5 (No Build) would result in LOS F operations on I-80 at the off-ramps to northbound SR 65 and Rocklin Road during the AM peak hour. In contrast, the build alternatives have LOS C or better conditions east of Eureka Road. All alternatives show LOS E between Auburn Boulevard and Douglas Boulevard. Only Alternative 1 (Taylor Road Full Access Interchange) has LOS E between Douglas Boulevard and Eureka Road due to the lack of an auxiliary lane compared to Alternatives 2 and 3.

During the PM peak hour, the No Build alternative would result in LOS F conditions from the beginning of the analysis area at Auburn Boulevard to the SR 65 off-ramp. In this area, speeds would be less than 20 mph for the majority of the peak period, and about 75 percent of the peak hour demand would be served. With the improvements at the SR 65 interchange, the build alternatives have LOS D or better conditions with one exception. Alternative 1 has LOS E at the Eureka Road off-ramp. As above, the lack of an auxiliary lane at this location compared to the other two build alternatives results in a higher density.

None of the build alternatives have in impacts on I-80 eastbound in the AM and PM peak hours.

Westbound I-80

During the AM peak period, bottlenecks would exist under all alternatives at Douglas Boulevard and Elkhorn Boulevard. Figure 55 shows that the build alternatives generally have higher levels of congestion between Antelope Road and Elkhorn Boulevard because the increase in capacity at the I-80/SR 65 interchange allows more vehicles to arrive at those locations during the peak hour. Alternative 5 has more congestion at Douglas Boulevard, which constrains traffic demand (to 92 percent) and causes less congestion downstream at Elkhorn Boulevard. As noted previously, the Alternative 5 uses different forecasts, which may partly explain these differences. The proposed project (Alternatives 1, 2, & 3) would result in impacts at the following locations during the AM peak hour.

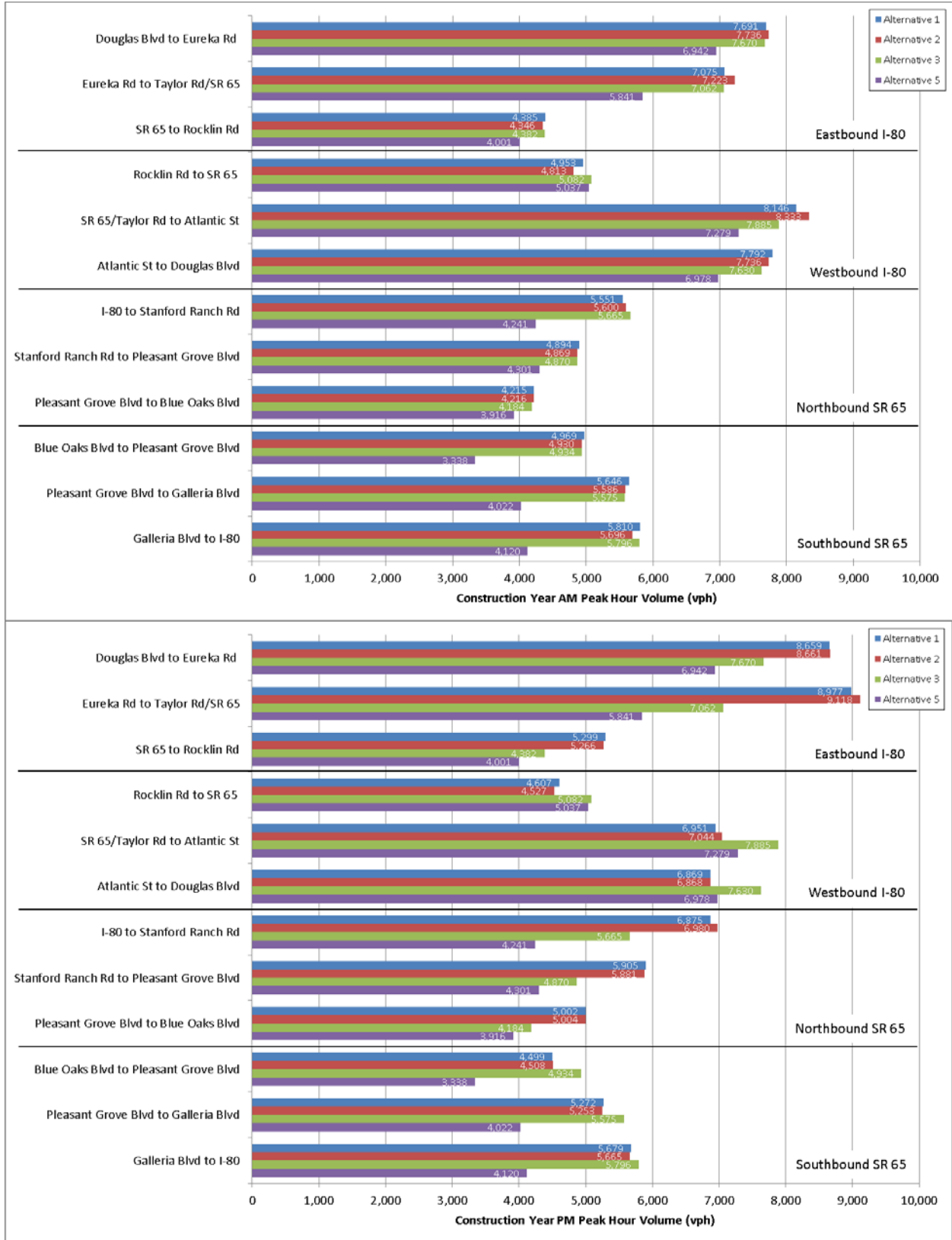


Figure 52 – Freeway Served Volume for Construction Year Conditions

TABLE 27: SELECTED FREEWAY OPERATIONS RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	Alternative 1	Alternative 2	Alternative 3	Alternative 5
EB I-80	Auburn Blvd On-ramp	Merge	D / 29	D / 29	D / 29	E / 37
	Auburn Blvd to Douglas Blvd	Basic	E / 36	E / 36	E / 36	E / 39
	Douglas Blvd EB Off-ramp	Diverge	D / 30	D / 30	D / 30	D / 34
	Douglas Blvd WB Off-ramp	Diverge	C / 24	C / 24	C / 25	E / 40
	Douglas Blvd On-ramp	Merge	E / 35	C / 24	C / 24	D / 28
	Eureka Rd Off-ramp	Diverge	E / 38			D / 30
	Eureka Rd to SR 65	Weave	C / 20	D / 27	D / 27	C / 25
	Taylor Rd Off-ramp	Diverge	B / 15	-	-	
	SR 65 Off-ramp	Diverge	-	C / 22	C / 22	F / 66
	SR 65 On-ramp	Merge	C / 27	C / 26	C / 26	B / 20
WB I-80	Rocklin Rd to HOV Lane Start	Basic	D / 28	D / 27	D / 29	D / 28
	SR 65 Off-ramp	Diverge	C / 22	C / 21	C / 22	F / 51
	SR 65 to Atlantic St	Weave	C / 25	C / 23	C / 23	D / 32
	Atlantic St EB Off-ramp	Diverge	D / 29	D / 30	D / 28	F / 93
	Atlantic St On-ramp	Merge	F / 47	E / 41	C / 22	F / 107
	Douglas Blvd Off-ramp	Diverge	F / 51	E / 43	E / 37	F / 46
	Douglas Blvd WB On-ramp	Merge	F / 99	F / 86	F / 87	F / 114
	Douglas Blvd EB On-ramp	Merge	F / 77	F / 76	F / 74	F / 71
	Truck Scales to Elkhorn Blvd	Basic	F / 67	F / 66	F / 64	E / 41
	Elkhorn Blvd WB On-ramp	Merge	F / 96	F / 96	F / 92	F / 93
Elkhorn Blvd EB On-ramp	Merge	F / 76	F / 76	F / 76	F / 82	

TABLE 27: SELECTED FREEWAY OPERATIONS RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	Alternative 1	Alternative 2	Alternative 3	Alternative 5
NB SR 65	I-80 to Stanford Ranch Rd	Weave	C / 21	C / 21	C / 22	<u>F / 87</u>
	Stanford Ranch Rd On-ramp	Merge	B / 11	B / 10	B / 11	<u>F / 64</u>
	Pleasant Grove Blvd Off-ramp	Diverge	D / 35	D / 34	D / 34	D / 33
	Blue Oaks Blvd On-ramp	Merge	C / 23	C / 23	C / 23	C / 21
	Twelve Bridges Dr Off-ramp	Diverge	B / 18	B / 18	B / 18	B / 17
SB SR 65	Ferrari Ranch Rd EB On-ramp	Merge	B / 16	B / 15	B / 14	E / 38
	Lincoln Blvd to Twelve Bridges Dr	Weave	C / 27	C / 25	C / 25	<u>F / 153</u>
	Twelve Bridges Dr On-ramp	Merge	E / 40	D / 35	E / 35	<u>F / 164</u>
	Placer Pkwy WB On-ramp	Merge	E / 35	D / 34	D / 31	<u>F / 165</u>
	Sunset Blvd EB On-ramp	Merge	<u>F / 51</u>	E / 45	E / 43	<u>F / 126</u>
	Blue Oaks Blvd WB On-ramp	Merge	E / 39	E / 35	E / 36	<u>F / 111</u>
	Blue Oaks Blvd to Pleasant Grove Blvd	Weave	E / 40	E / 38	E / 37	<u>F / 96</u>
	Pleasant Grove Blvd WB On-ramp	Merge	D / 29	D / 29	D / 29	<u>F / 79</u>
	Pleasant Grove Blvd EB On-ramp	Merge	D / 32	D / 32	D / 33	<u>F / 58</u>
	Galleria Blvd Off-ramp	Diverge	C / 28	D / 28	D / 28	D / 34
Galleria Blvd to I-80	Weave	C / 24	C / 24	C / 24	C / 26	

Notes: Bold and underline font indicate LOS F conditions. Shaded cells indicate a project impact. The level of service and average density for the study segment are reported.
¹The facility type reported is for Alternative 1. The other results are contained in the Technical Appendix.

Source: Fehr & Peers, 2014

TABLE 28: SELECTED FREEWAY OPERATIONS RESULTS – CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	Alternative 1	Alternative 2	Alternative 3	Alternative 5
EB I-80	Auburn Blvd On-ramp	Merge	C / 27	C / 27	C / 27	<u>F / 180</u>
	Auburn Blvd to Douglas Blvd	Basic	D / 32	D / 32	D / 32	<u>F / 142</u>
	Douglas Blvd EB Off-ramp	Diverge	D / 29	D / 29	D / 29	<u>F / 103</u>
	Douglas Blvd WB Off-ramp	Diverge	C / 25	C / 25	C / 25	<u>F / 158</u>
	Douglas Blvd On-ramp	Merge	D / 33	C / 25	C / 25	<u>F / 165</u>
	Eureka Rd Off-ramp	Diverge	E / 35			<u>F / 131</u>
	Eureka Rd to SR 65	Weave	C / 24	D / 30	D / 31	<u>F / 135</u>
	Taylor Rd Off-ramp	Diverge	B / 16	-	-	
	SR 65 Off-ramp	Diverge	-	C / 24	C / 25	<u>F / 79</u>
	SR 65 On-ramp	Merge	D / 28	C / 27	C / 28	B / 19
WB I-80	Rocklin Rd to HOV Lane Start	Basic	D / 27	C / 25	D / 26	<u>F / 128</u>
	SR 65 Off-ramp	Diverge	C / 20	B / 19	B / 19	<u>F / 140</u>
	SR 65 to Atlantic St	Weave	C / 20	B / 20	B / 20	C / 25
	Atlantic St EB Off-ramp	Diverge	C / 22	C / 23	C / 21	C / 28
	Atlantic St On-ramp	Merge	C / 25	C / 25	B / 20	C / 20
	Douglas Blvd Off-ramp	Diverge	D / 31	D / 31	D / 30	B / 15
	Douglas Blvd WB On-ramp	Merge	C / 26	C / 26	C / 26	D / 29
	Douglas Blvd EB On-ramp	Merge	C / 26	C / 25	C / 24	D / 33
	Truck Scales to Elkhorn Blvd	Basic	D / 29	D / 28	D / 28	C / 26
	Elkhorn Blvd WB On-ramp	Merge	C / 27	C / 26	C / 26	C / 23
	Elkhorn Blvd EB On-ramp	Merge	D / 29	D / 29	D / 29	C / 27

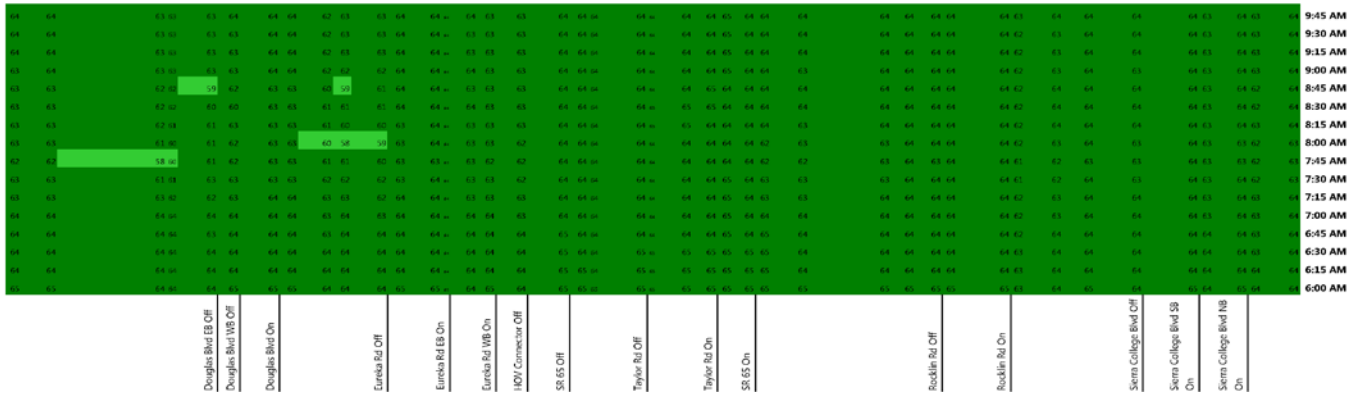
TABLE 28: SELECTED FREEWAY OPERATIONS RESULTS – CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	Alternative 1	Alternative 2	Alternative 3	Alternative 5
NB SR 65	I-80 to Stanford Ranch Rd	Weave	C / 24	C / 25	C / 26	F / 90
	Stanford Ranch Rd On-ramp	Merge	B / 18	B / 18	B / 18	F / 83
	Pleasant Grove Blvd Off-ramp	Diverge	D / 35	E / 36	E / 35	D / 31
	Blue Oaks Blvd On-ramp	Merge	E / 36	E / 38	E / 39	C / 22
	Twelve Bridges Dr Off-ramp	Diverge	D / 30	D / 29	D / 30	C / 25
SB SR 65	Ferrari Ranch Rd EB On-ramp	Merge	A / 7	A / 7	A / 7	A / 7
	Lincoln Blvd to Twelve Bridges Dr	Weave	B / 14	B / 14	B / 14	B / 13
	Twelve Bridges Dr On-ramp	Merge	B / 19	B / 19	B / 19	B / 18
	Placer Pkwy WB On-ramp	Merge	B / 18	B / 18	B / 18	B / 18
	Sunset Blvd EB On-ramp	Merge	D / 34	D / 33	D / 33	<u>F / 113</u>
	Blue Oaks Blvd WB On-ramp	Merge	C / 27	C / 27	C / 28	<u>F / 129</u>
	Pleasant Grove Blvd EB On-ramp	Merge	C / 27	C / 26	C / 26	<u>F / 60</u>
	Galleria Blvd Off-ramp	Diverge	C / 25	C / 25	C / 25	E / 36
Galleria Blvd to I-80	Weave	C / 22	C / 22	C / 23	D / 29	

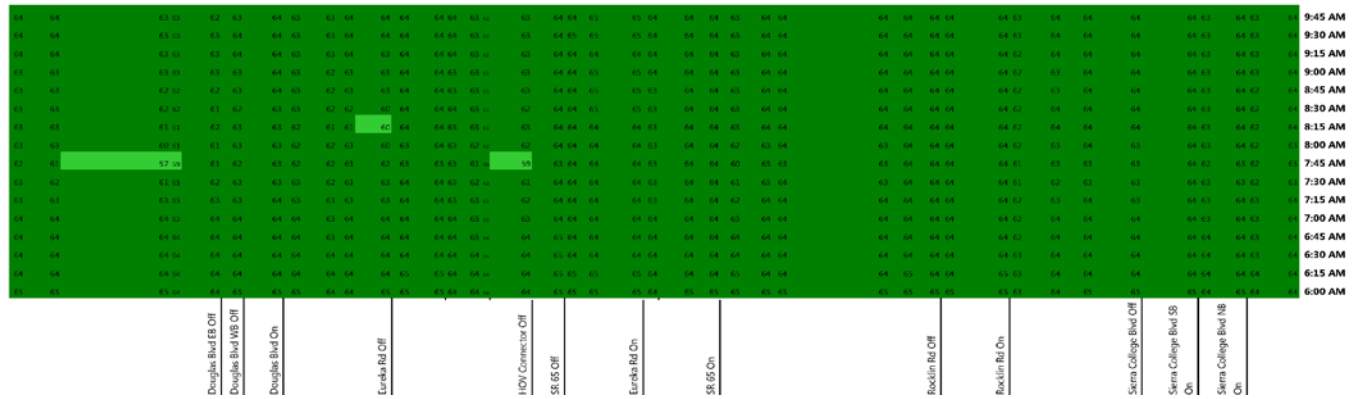
Notes: Bold and underline font indicate LOS F conditions. Shaded cells indicate a project impact. The level of service and average density for the study segment are reported.
¹The facility type reported is for Alternative 1. The other results are contained in the Technical Appendix.
Source: Fehr & Peers, 2014

FIGURE 53 – EASTBOUND I-80 CONSTRUCTION YEAR AM PEAK PERIOD SPEED CONTOUR MAP

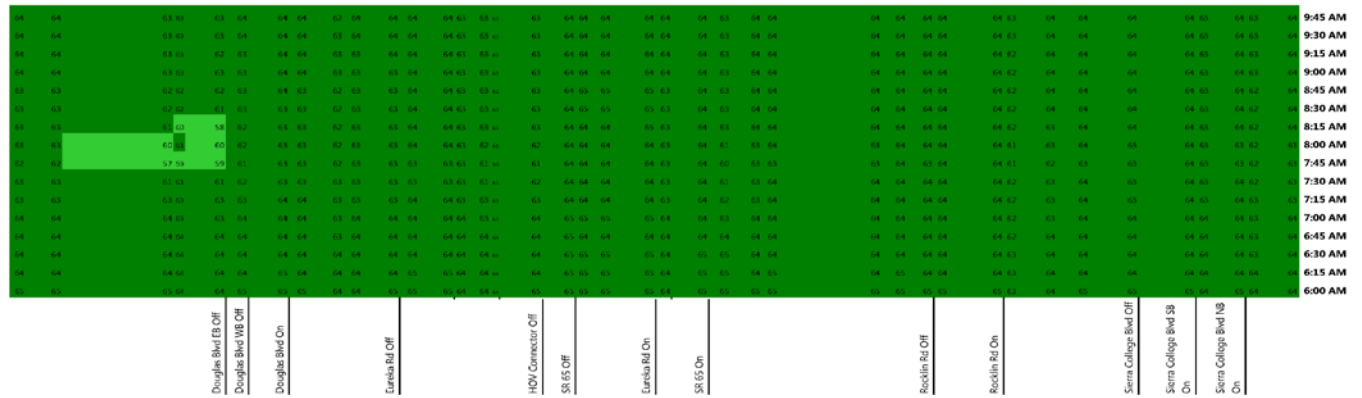
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

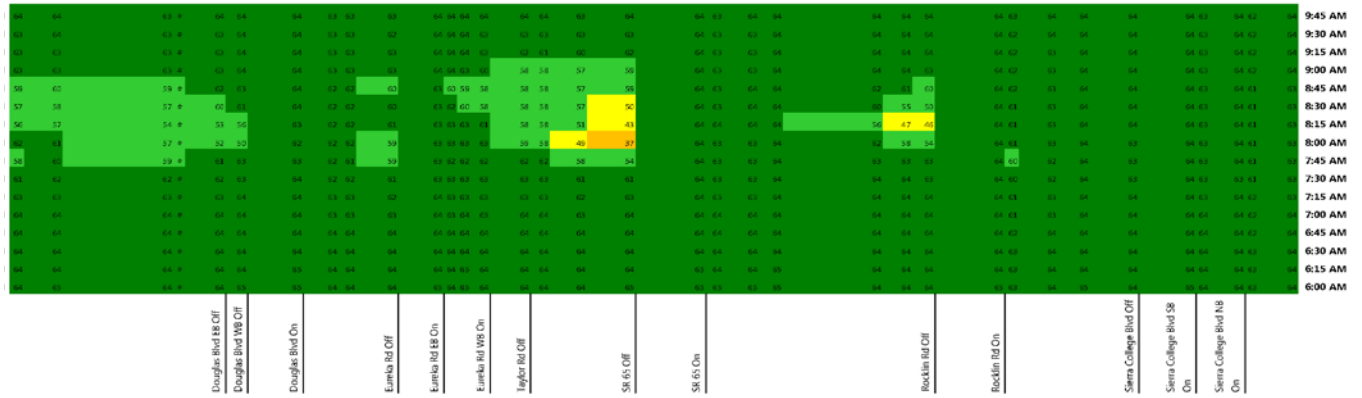
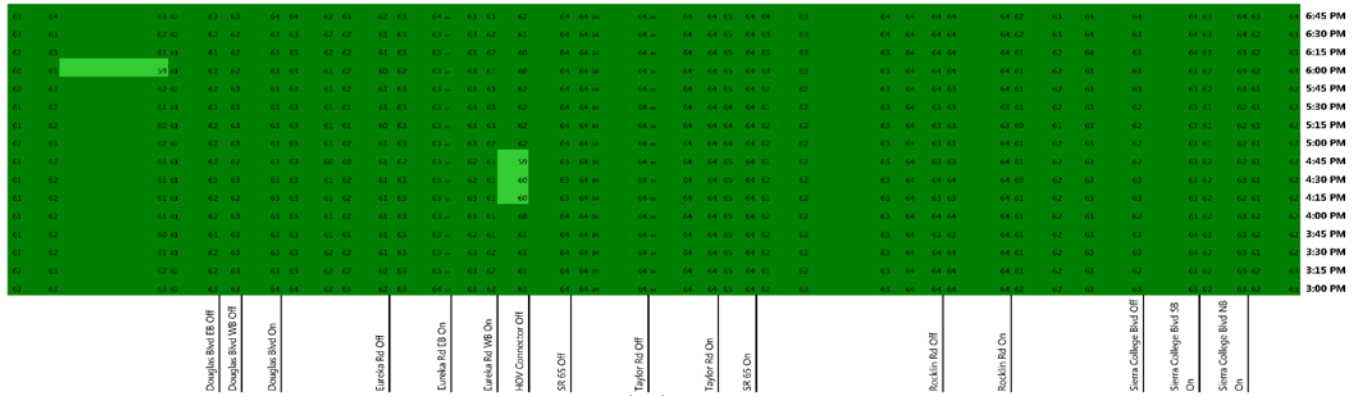
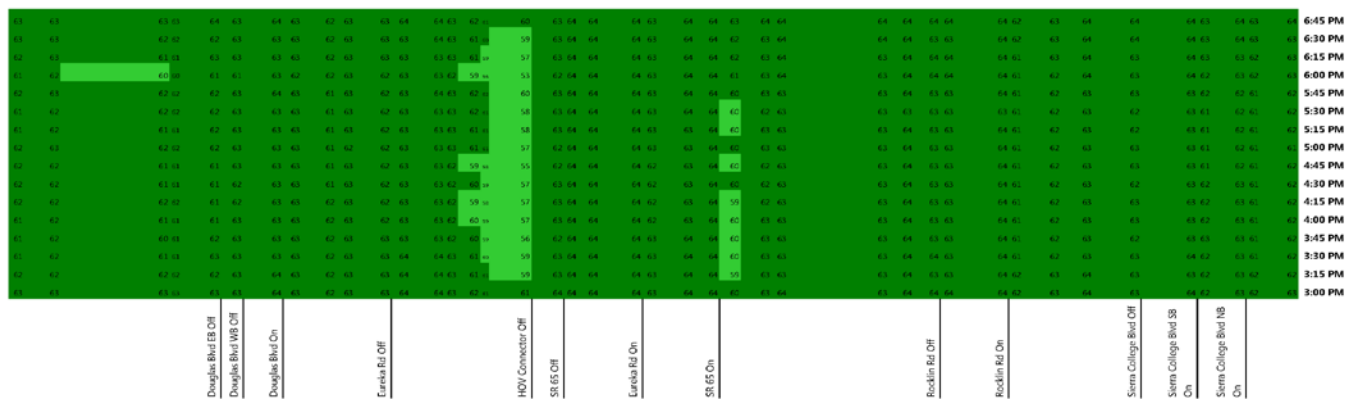


FIGURE 54 – EASTBOUND I-80 CONSTRUCTION YEAR PM PEAK PERIOD SPEED CONTOUR MAP

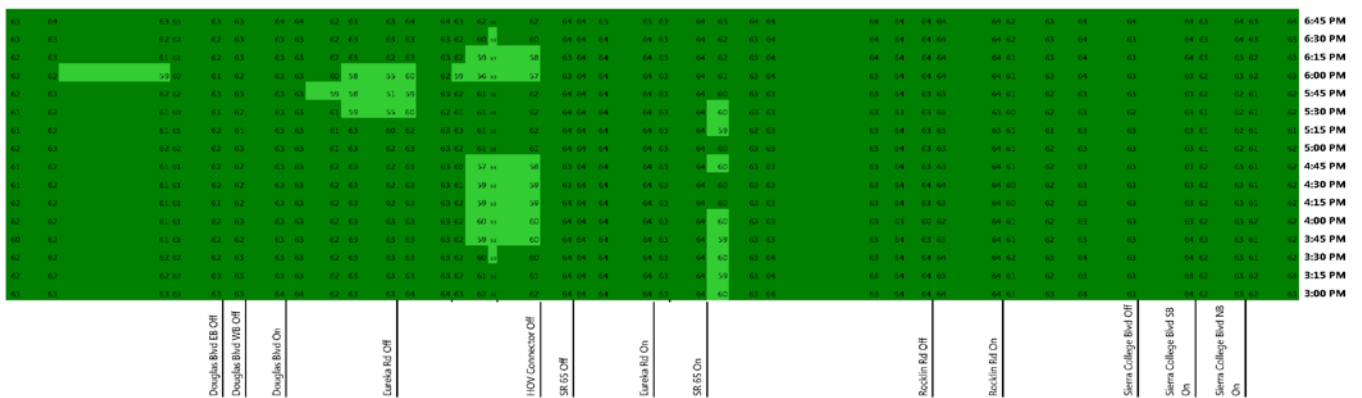
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

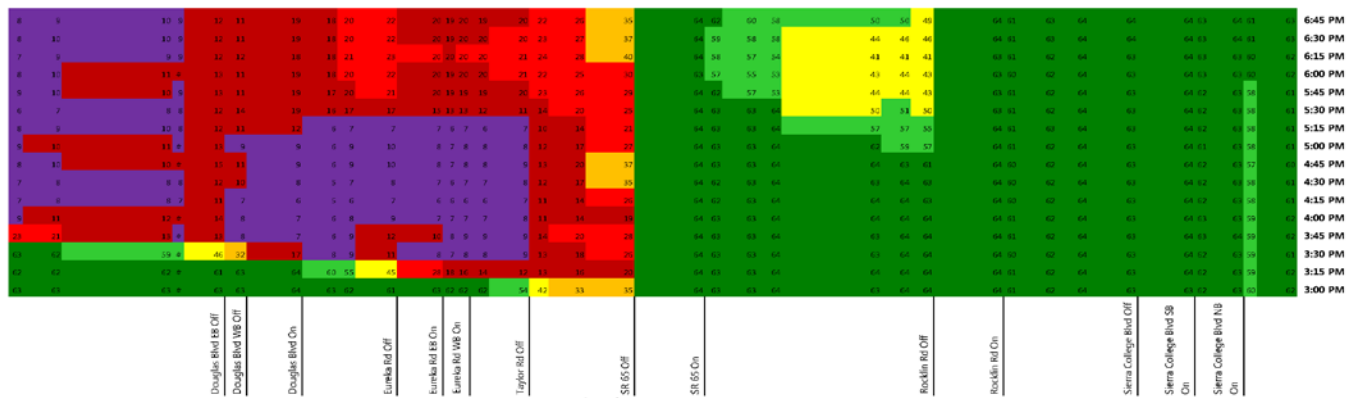
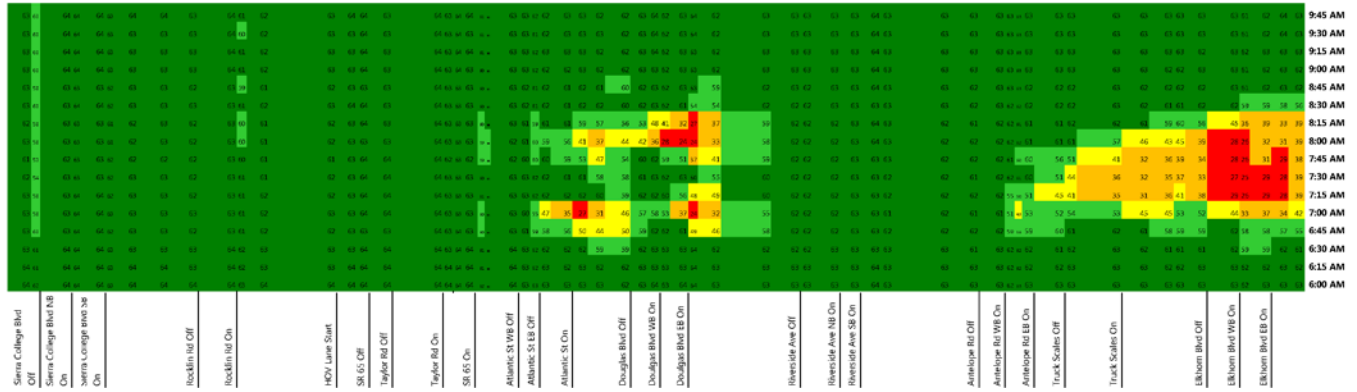
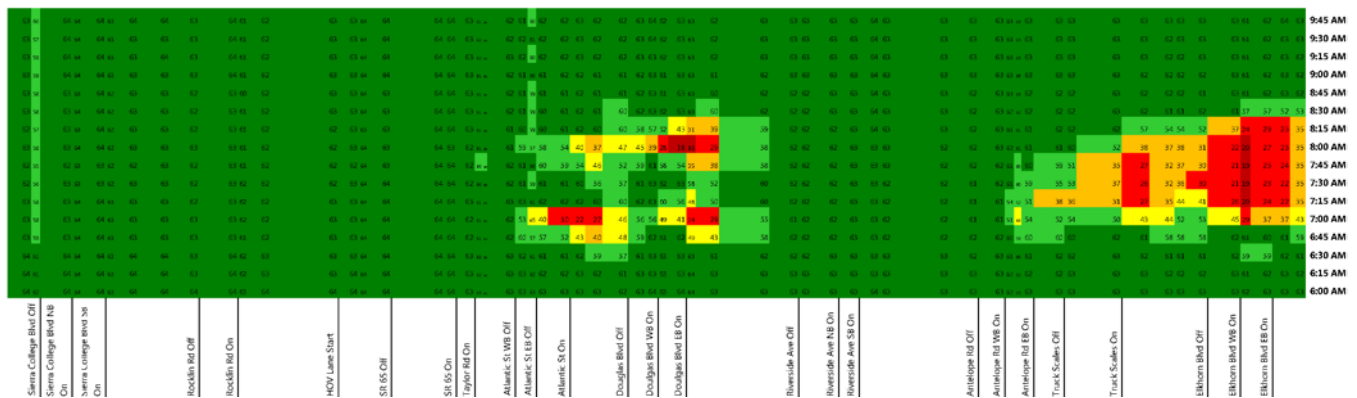


FIGURE 55 – WESTBOUND I-80 CONSTRUCTION YEAR AM PEAK PERIOD SPEED CONTOUR MAP

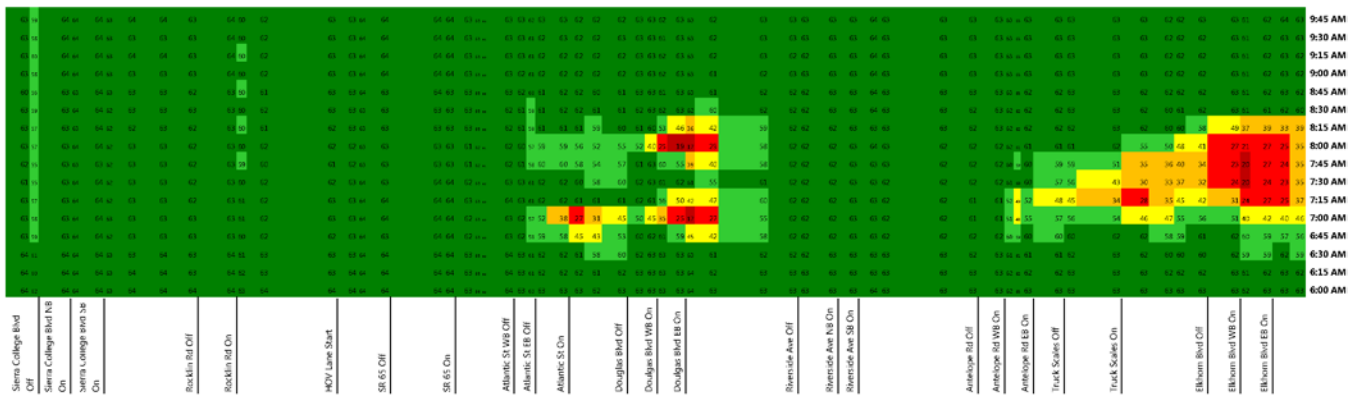
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

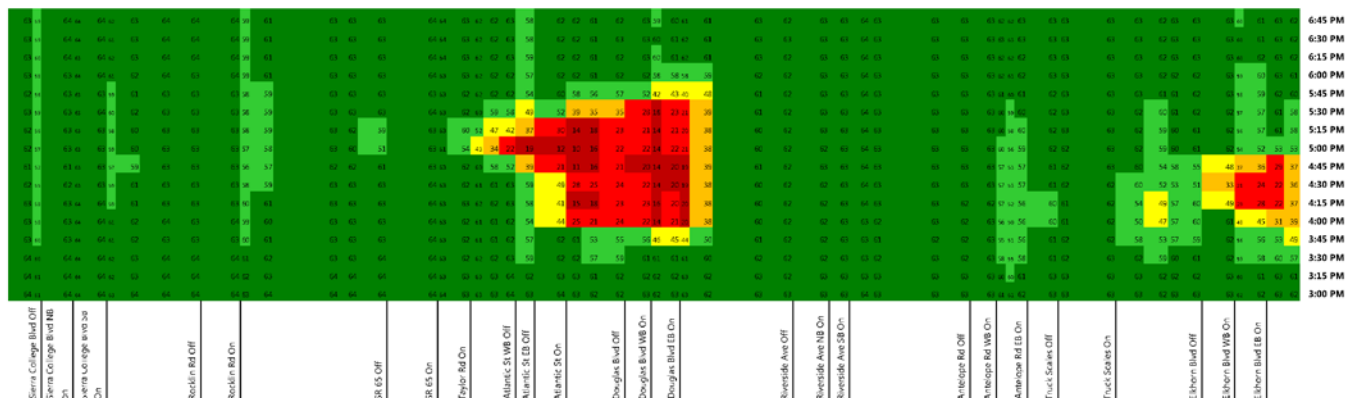
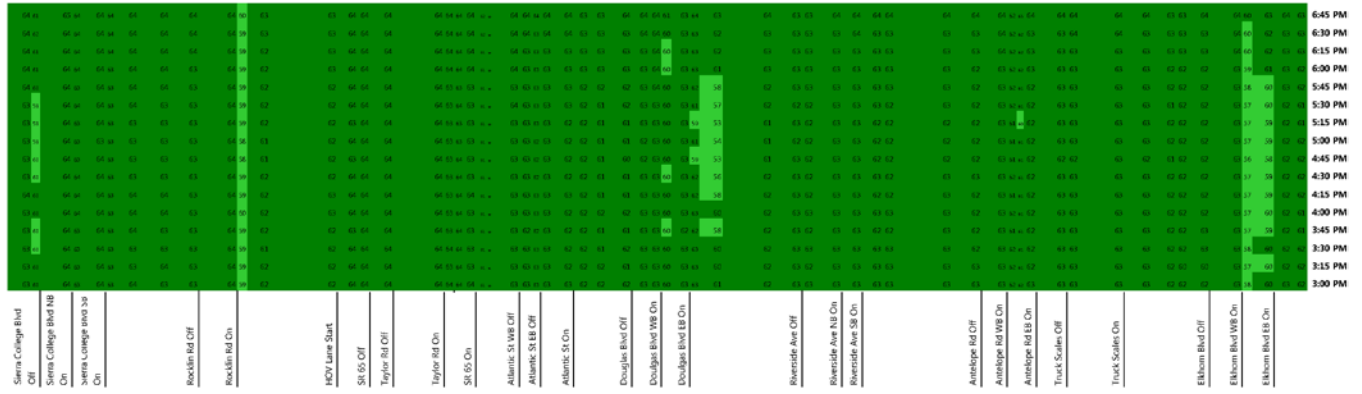
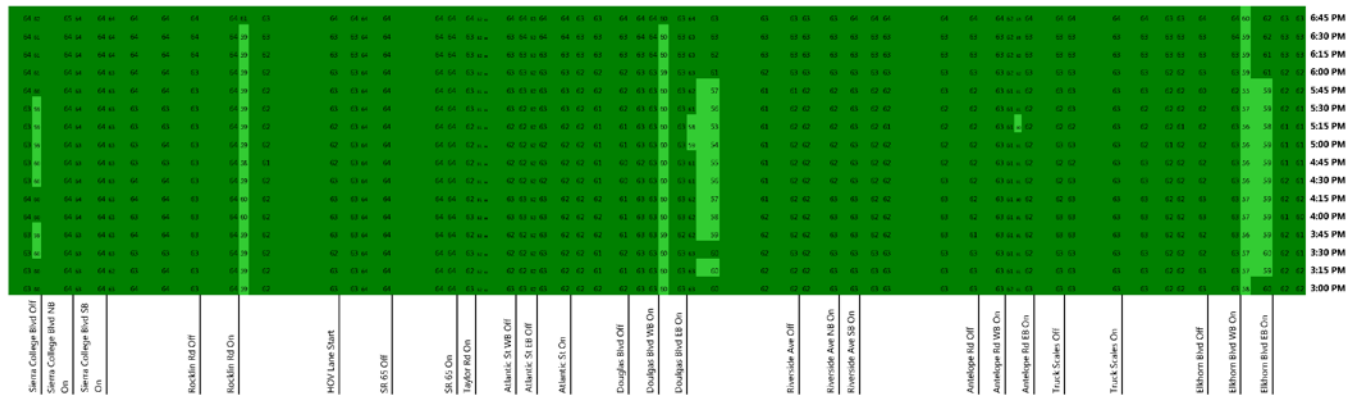


FIGURE 56 – WESTBOUND I-80 CONSTRUCTION YEAR PM PEAK PERIOD SPEED CONTOUR MAP

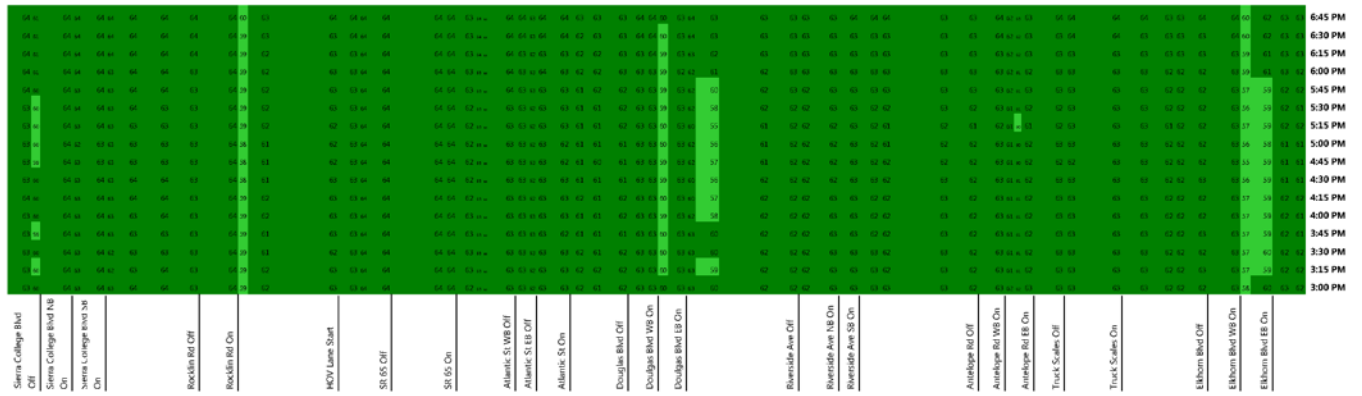
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

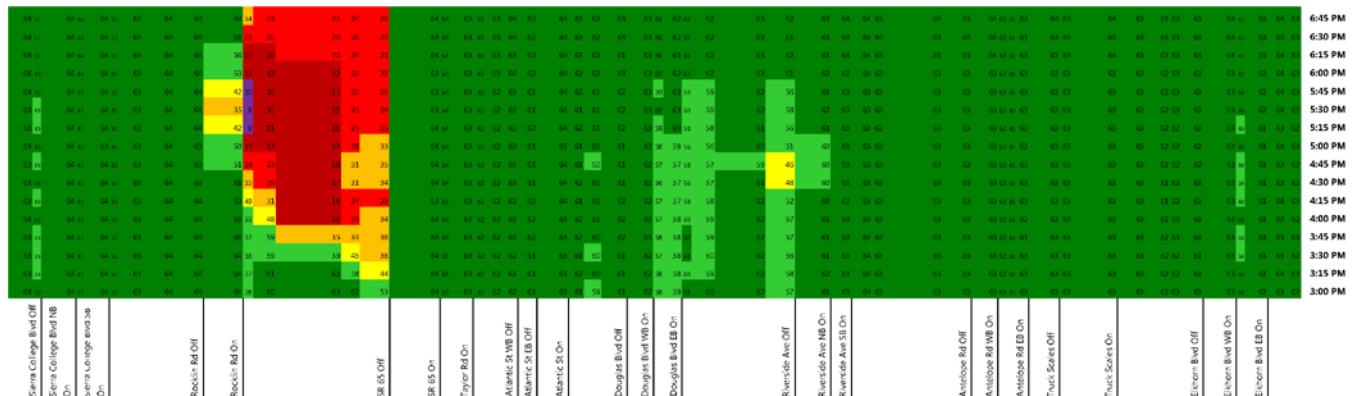
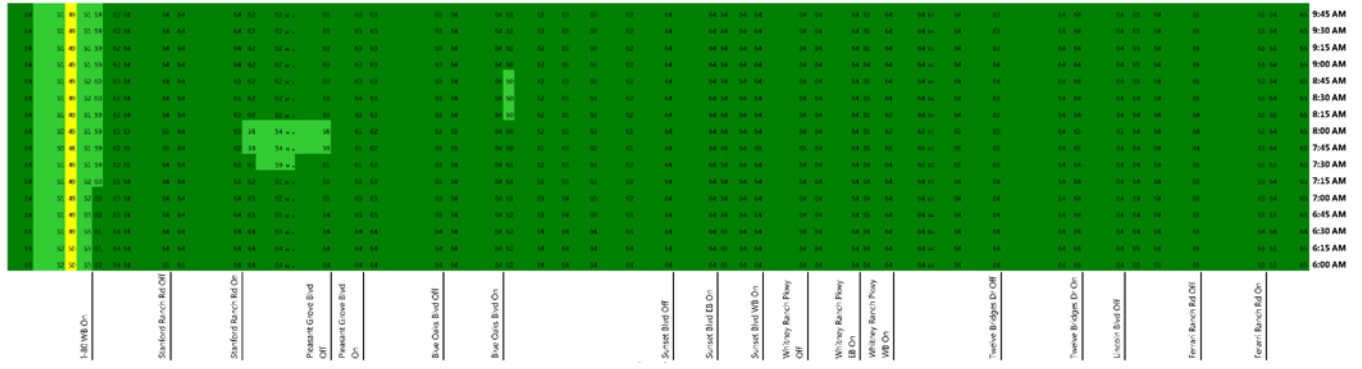
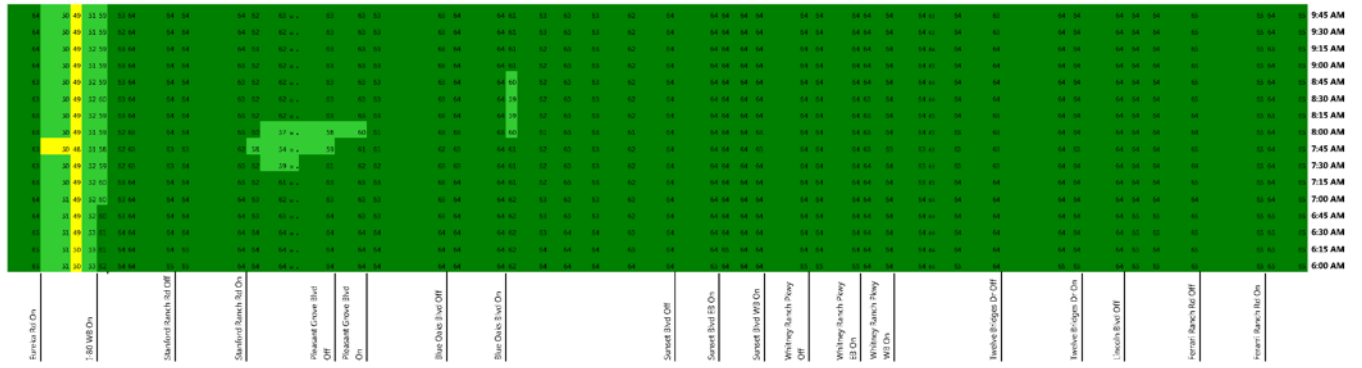


FIGURE 57 – NORTHBOUND SR 65 CONSTRUCTION YEAR AM PEAK PERIOD SPEED CONTOUR MAP

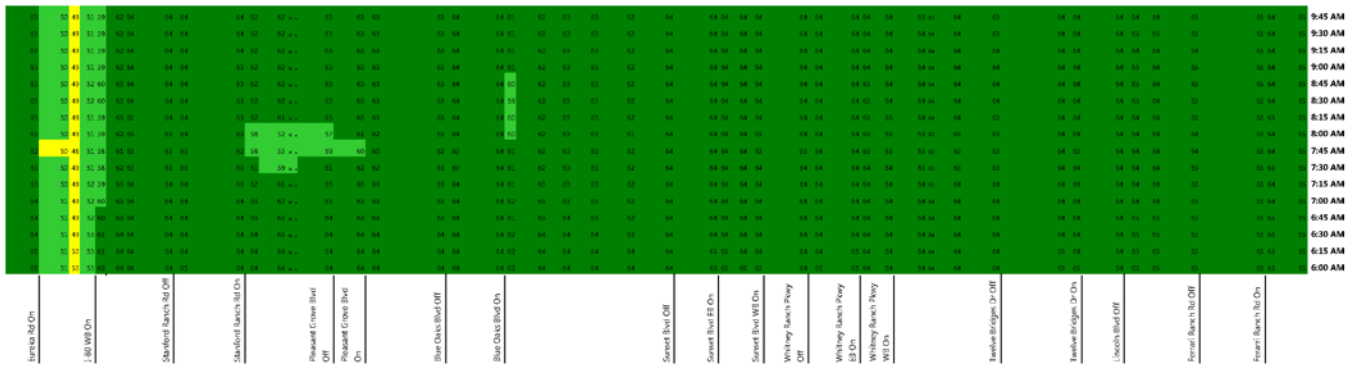
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

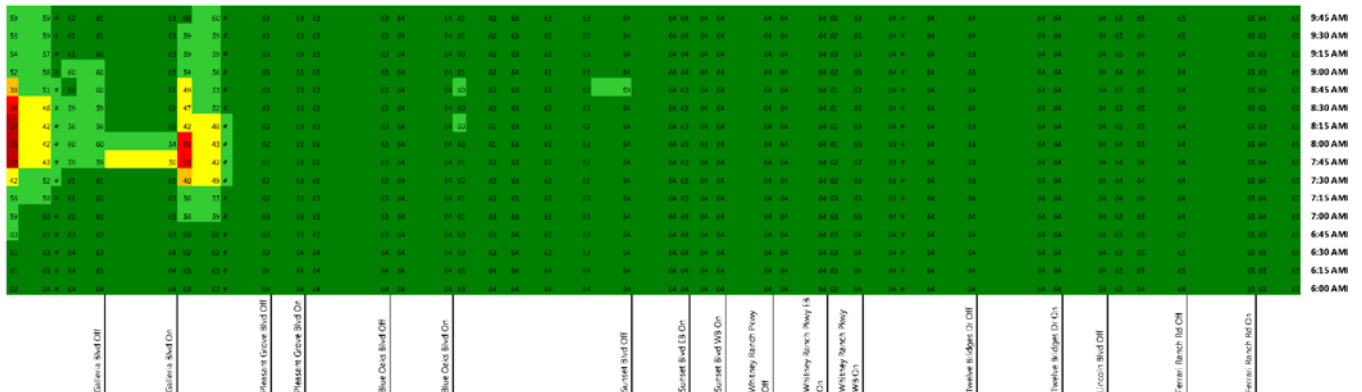
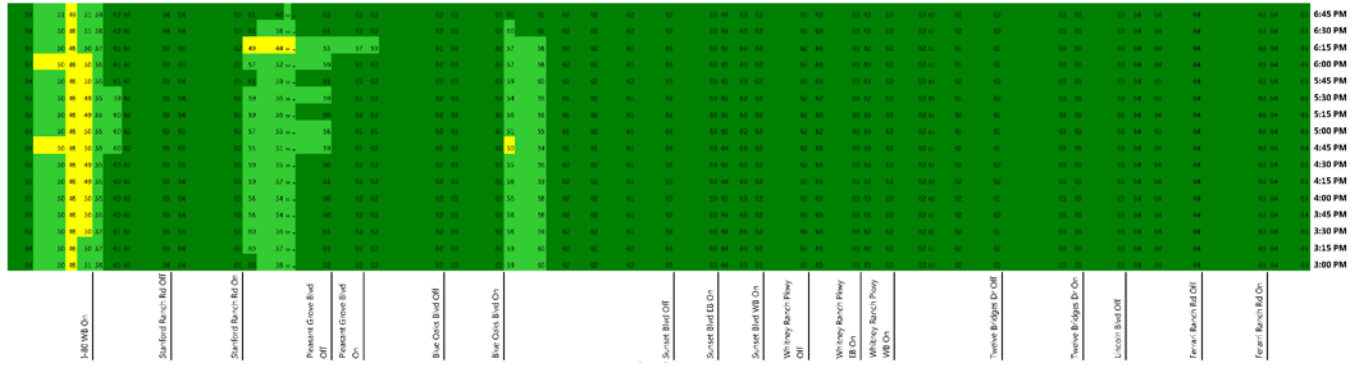
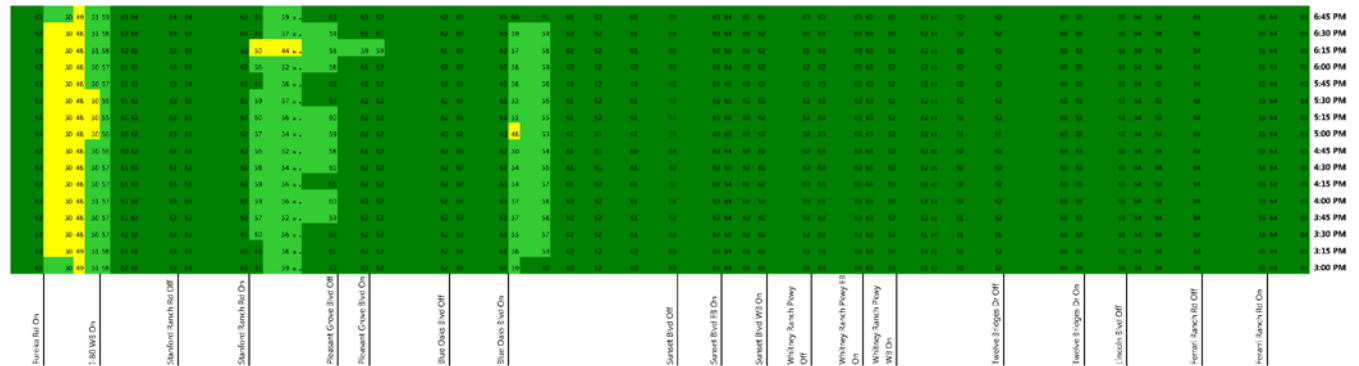


FIGURE 58 – NORTHBOUND SR 65 CONSTRUCTION YEAR PM PEAK PERIOD SPEED CONTOUR MAP

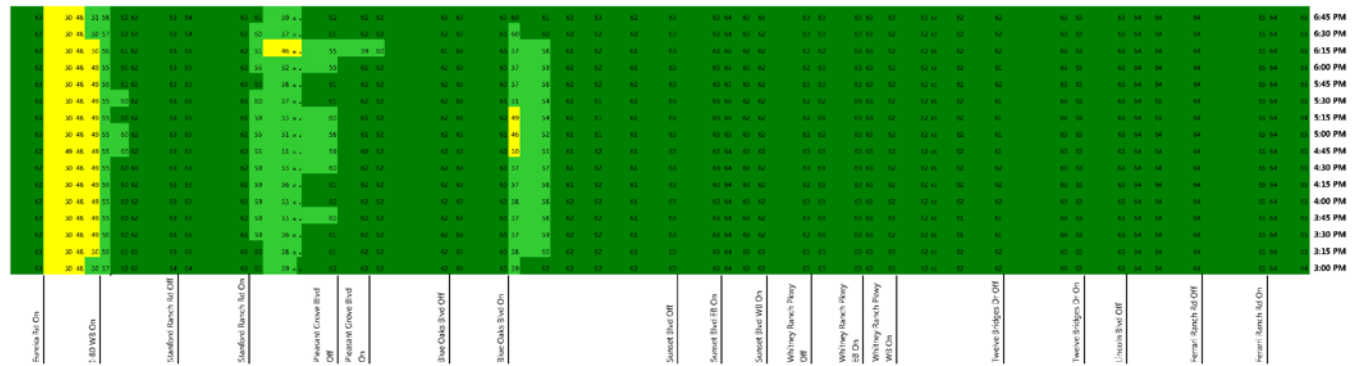
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

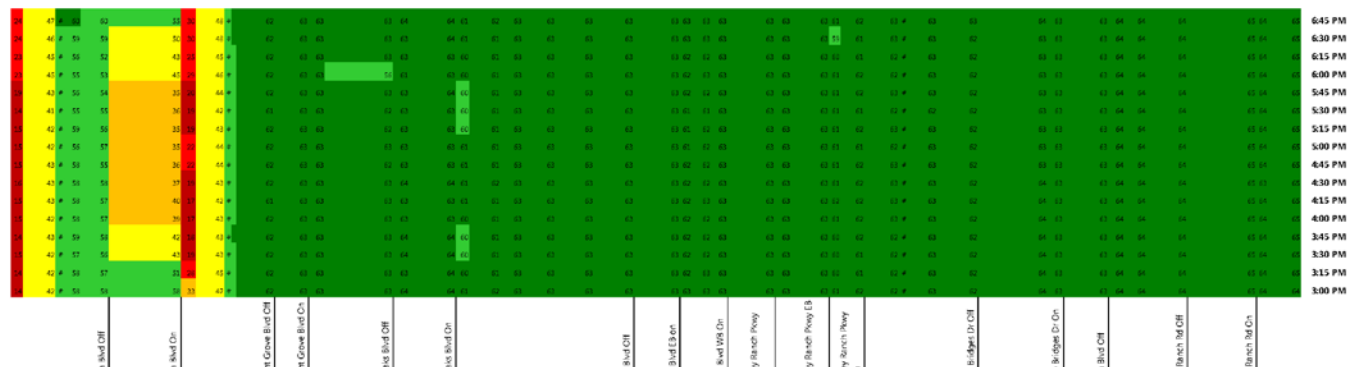
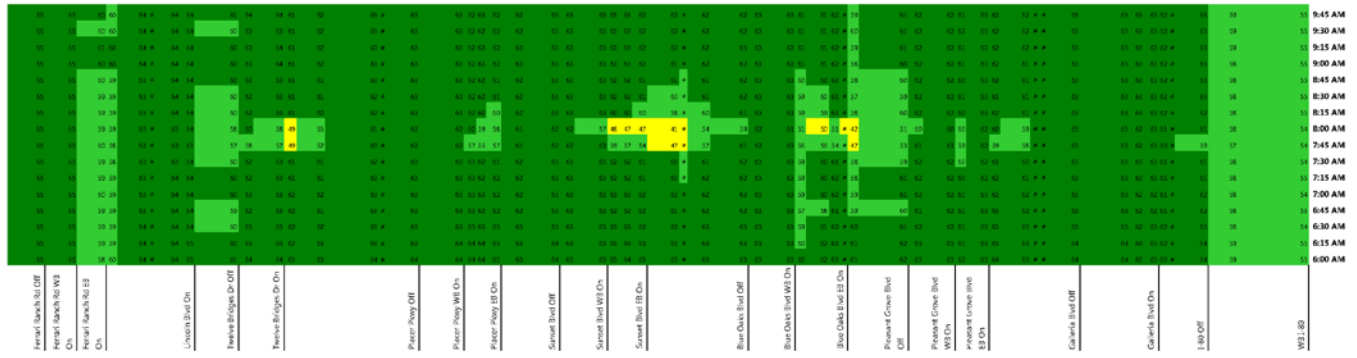
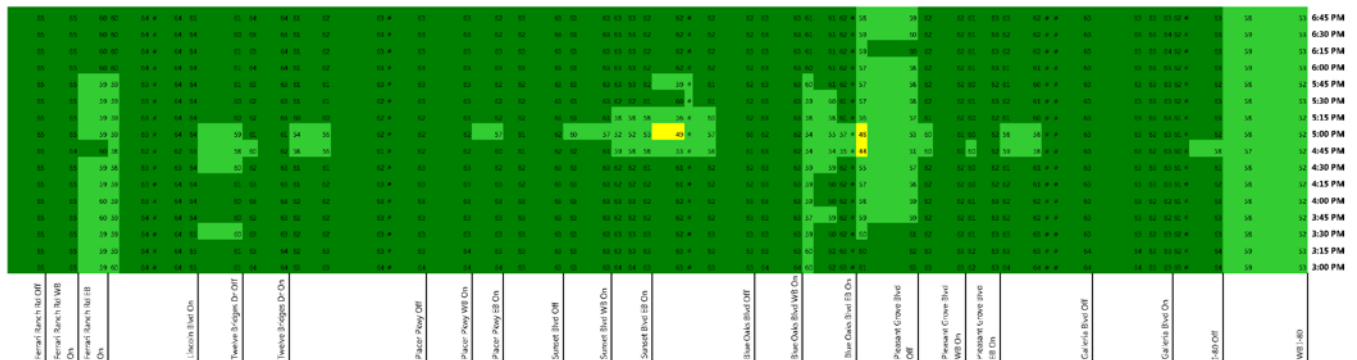


FIGURE 59 – SOUTHBOUND SR 65 CONSTRUCTION YEAR AM PEAK PERIOD SPEED CONTOUR MAP

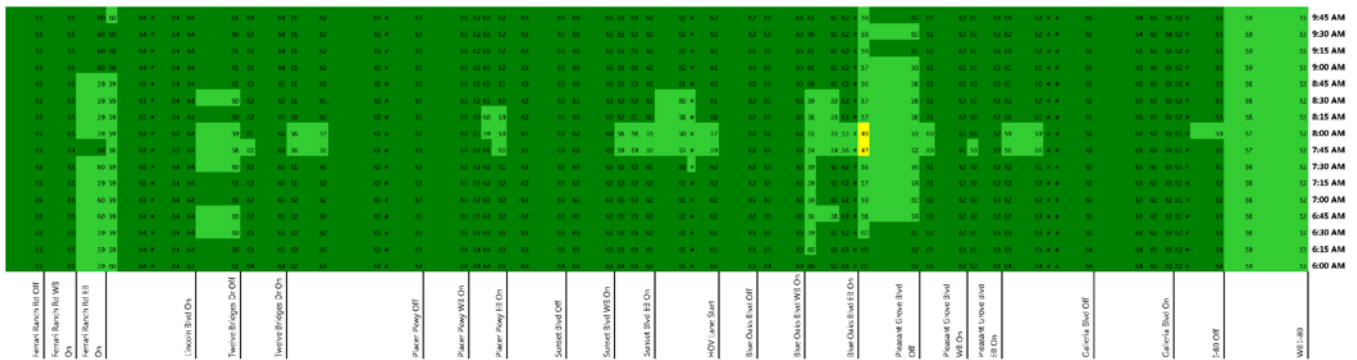
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)

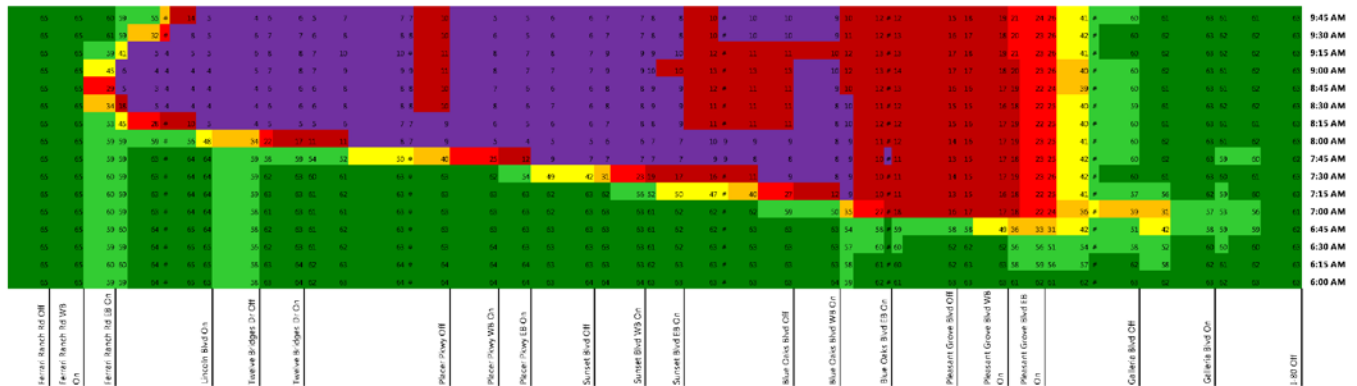
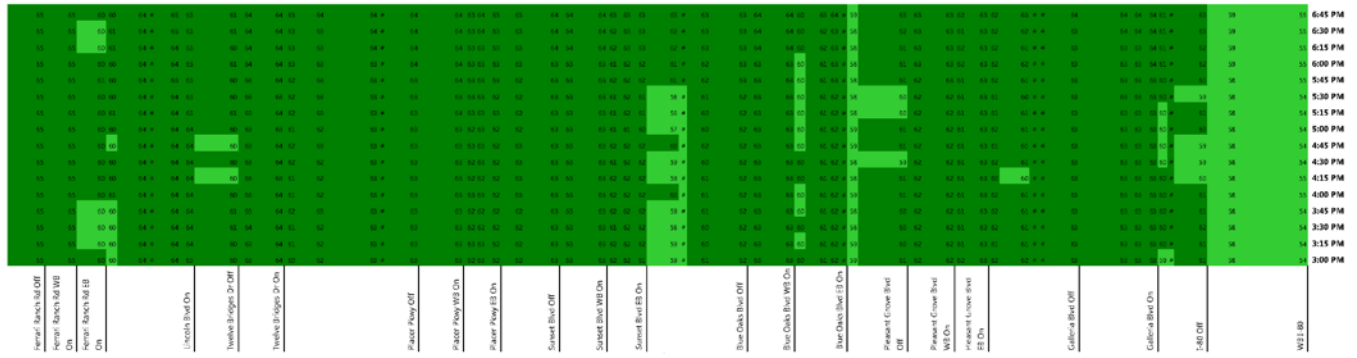
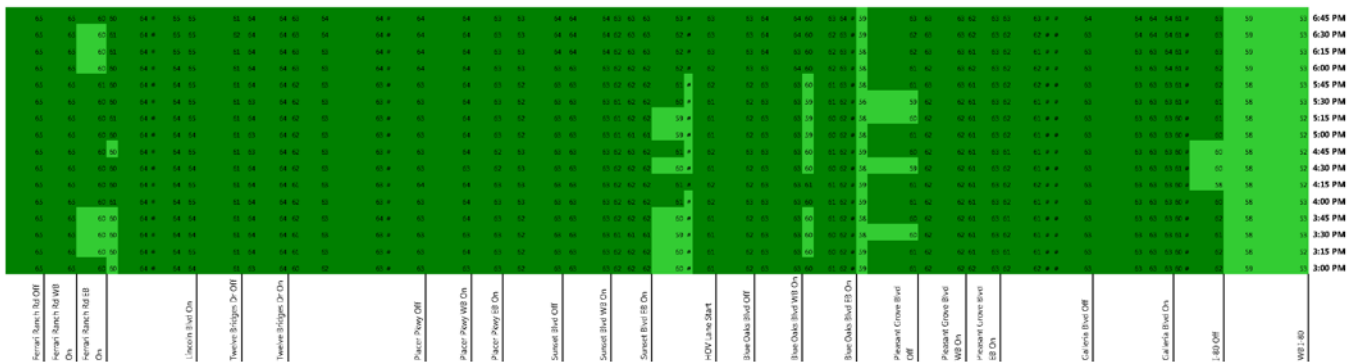


FIGURE 60 – SOUTHBOUND SR 65 CONSTRUCTION YEAR PM PEAK PERIOD SPEED CONTOUR MAP

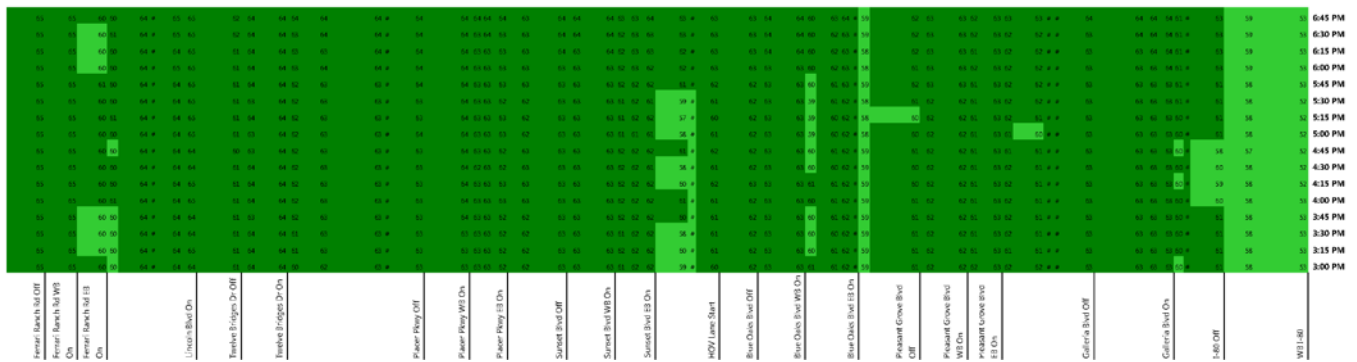
TAYLOR ROAD FULL ACCESS INTERCHANGE (ALTERNATIVE 1)



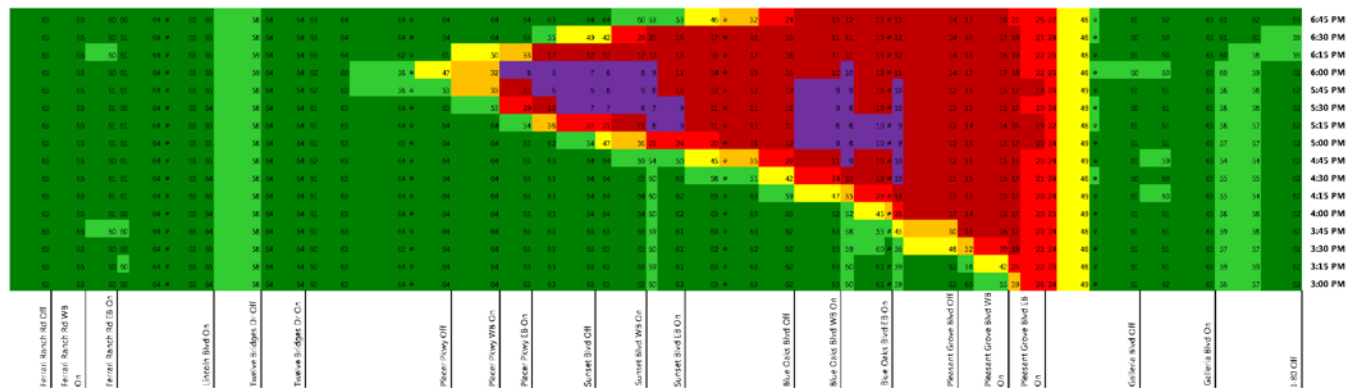
COLLECTOR-DISTRIBUTOR SYSTEM RAMPS (ALTERNATIVE 2)



TAYLOR ROAD INTERCHANGE ELIMINATED (ALTERNATIVE 3)



NO BUILD (ALTERNATIVE 5)



- Douglas Boulevard off-ramp (Alternative 1 only)
- Eastbound Douglas Boulevard on-ramp
- From the Truck Scales off-ramp to westbound Elkhorn Boulevard on-ramp
- Westbound Elkhorn Boulevard on-ramp (Alternatives 1 & 2 only)
- Eastbound Elkhorn Boulevard on-ramp

To mitigate the impact for the sections at Douglas Boulevard, an additional through lane could be constructed at the Douglas Boulevard and Riverside Avenue interchanges. This capacity improvement may have secondary impacts downstream at Elkhorn Boulevard. An alternate mitigation would be to use more restrictive metering of westbound I-80 and southbound SR 65 on-ramps, and potentially installing a meter signal on the southbound SR 65 to westbound I-80 connector.

The impact to the section from the truck scales to Elkhorn Boulevard could be mitigated by providing additional mainline capacity such as a continuous auxiliary lane between the truck scales on-ramp and Elkhorn Boulevard off-ramp or more restrictive metering on-ramps. More restrictive metering for ramps at Elkhorn Boulevard, Antelope Road, and Riverside Avenue could cause queuing that would extend onto the local street network.

During the PM peak hour, LOS F conditions would occur between Rocklin Road and SR 65 under Alternative 5 (No Build) due to traffic queued from northbound SR 65. Under the build alternatives, all segments would operate with LOS D or better conditions.

Northbound SR 65

During the AM and PM peak hours, the No Build alternative would have LOS F conditions at the I-80 westbound on-ramp and the Stanford Ranch Road on-ramp. The build alternatives would have LOS E conditions at Pleasant Grove Boulevard in both peak hours and at the Blue Oaks Boulevard on-ramp in the PM peak hour. The latter location would be a project impact that could be mitigated through more aggressive ramp metering or providing an auxiliary lane. All other study facilities on northbound SR 65 – including the I-80 and Stanford Ranch Road on-ramps – are projected to operate acceptably. There are no project impacts under construction year on northbound SR 65.

Southbound SR 65

During the AM peak hour, the No Build alternative would result in LOS F operations between Ferrari Ranch Road and Pleasant Grove Boulevard. Figure 59 indicates the travel speed would be less than 20 mph for most of the AM peak period.

The three build alternatives offer significantly less delay and higher travel speeds. Alternative 1 (Taylor Road Full Access Interchange) would have LOS F for the Sunset Boulevard eastbound on-ramp, but the

other two alternatives would have LOS E or better at all locations. LOS E conditions would occur under all build alternatives between Sunset Boulevard and Pleasant Grove Boulevard.

During the PM peak hour, the Alternative 5 would have significant delays from Placer Parkway to Pleasant Grove Boulevard. The build alternatives would result in acceptable operations at all study facilities on southbound SR 65 during the PM peak hour. There are no project impacts under construction year on southbound SR 65.

5.2.2. Arterial Intersection Operations

Tables 29 and 31 show the LOS and average delay at key study intersections under construction year conditions during the AM and PM peak hours, respectively. Tables 30 and 32 show the average maximum queue length at off-ramps under construction year conditions during the AM and PM peak hours. Based on the evaluation criteria for this study, Alternative 1 (Taylor Road Full Access Interchange) results in three impacts, Alternative 2 (Collector-Distributor System Ramps) results in two impacts, and Alternative 3 (Taylor Road Interchange Eliminated) has one impact. See the Technical Appendix for all study intersection results.

TABLE 29: SELECTED INTERSECTION OPERATIONS RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS				
Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
6. Blue Oaks Blvd / Washington Blvd	C / 33	C / 33	C / 33	<u>F / 187</u>
7. Blue Oaks Blvd / SR 65 NB Ramps	B / 12	B / 11	B / 11	B / 12
10. Stanford Ranch Rd / Five Star Blvd	C / 24	C / 25	C / 24	C / 29
11. Stanford Ranch Rd / SR 65 NB Ramps	A / 7	A / 7	A / 8	C / 27
12. Galleria Blvd / SR 65 SB Ramps	B / 20	B / 19	B / 19	C / 23
14. Galleria Blvd / Roseville Pkwy	C / 31	D / 36	C / 33	D / 36
16. Roseville Pkwy / Taylor Rd	D / 47	D / 46	D / 49	<u>F / 130</u>
19. Atlantic St / I-80 WB Ramps	C / 29	B / 12	C / 26	B / 16
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	C / 26	C / 28	C / 31	C / 22
21. Eureka Rd / Sunrise Ave	<u>D / 36</u>	C / 34	<u>D / 35</u>	C / 25
23. Douglas Blvd / Harding Blvd	C / 22	C / 25	C / 23	C / 22
26. Douglas Blvd / Sunrise Ave	D / 35	D / 37	D / 37	C / 30
28. Pacific St / Sunset Blvd	C / 22	C / 22	B / 17	C / 28
29. Rocklin Rd / Granite Dr	B / 18	B / 19	B / 19	C / 21
Notes:	Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported.			
Source:	Fehr & Peers, 2014			

TABLE 30: SELECTED MAXIMUM QUEUE LENGTH RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS				
Off-ramp	Storage	Alternative 1	Alternative 2	Alternative 3
Eastbound I-80 at Eureka Rd	1,700	525	700	825
Eastbound I-80 at Taylor Rd	>1,000	400	25	-
Eastbound I-80 at Rocklin Rd	1,080	275	250	275
Westbound I-80 at Rocklin Rd	1,230	225	200	250
Westbound I-80 at Taylor Rd	>1,000	400	-	-
Westbound I-80 at Douglas Blvd	1,530	350	400	375
Northbound SR 65 at Northbound Stanford Ranch Rd	1,170	0	0	0
Northbound SR 65 at Southbound Stanford Ranch Rd	1,800	50	75	100
Southbound SR 65 at Southbound Galleria Blvd	1,130	225	250	225
Southbound SR 65 at Northbound Galleria Blvd	1,780	50	25	50
Note: Bold and underline font indicate queues that exceed the ramp length. Shaded cells indicate a project impact. The reported value is the average maximum peak-hour queue length in feet. Source: Fehr & Peers, 2014				

TABLE 31: SELECTED INTERSECTION OPERATIONS RESULTS – CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS				
Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
6. Blue Oaks Blvd / Washington Blvd	<u>D / 39</u>	<u>D / 43</u>	<u>D / 40</u>	<u>F / 188</u>
7. Blue Oaks Blvd / SR 65 NB Ramps	B / 11	B / 12	B / 12	C / 26
10. Stanford Ranch Rd / Five Star Blvd	<u>D / 43</u>	<u>D / 37</u>	<u>D / 37</u>	<u>F / 107</u>
11. Stanford Ranch Rd / SR 65 NB Ramps	B / 11	A / 10	B / 10	D / 45
12. Galleria Blvd / SR 65 SB Ramps	B / 17	B / 16	B / 17	D / 43
14. Galleria Blvd / Roseville Pkwy	E / 61	E / 56	E / 58	<u>F / 227</u>
16. Roseville Pkwy / Taylor Rd	D / 48	D / 42	D / 53	D / 37
19. Atlantic St / I-80 WB Ramps	B / 17	B / 12	C / 29	<u>D / 36</u>
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	E / 63	E / 77	E / 78	D / 42
21. Eureka Rd / Sunrise Ave	<u>D / 52</u>	<u>E / 63</u>	<u>D / 48</u>	<u>D / 49</u>
23. Douglas Blvd / Harding Blvd	D / 42	D / 39	D / 49	<u>F / 123</u>
26. Douglas Blvd / Sunrise Ave	D / 50	<u>E / 56</u>	D / 47	<u>F / 203</u>
28. Pacific St / Sunset Blvd	<u>D / 39</u>	<u>D / 43</u>	C / 24	C / 30
29. Rocklin Rd / Granite Dr	<u>F / 101</u>	<u>F / 91</u>	<u>F / 110</u>	<u>F / 170</u>
Notes: Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported. Source: Fehr & Peers, 2014				

Off-ramp	Storage	Alternative 1	Alternative 2	Alternative 3
Eastbound I-80 at Eureka Rd	1,700	900	525	1,325
Eastbound I-80 at Taylor Rd	>1,000	225	125	-
Eastbound I-80 at Rocklin Rd	1,080	400	275	350
Westbound I-80 at Rocklin Rd	1,230	225	250	300
Westbound I-80 at Taylor Rd	>1,000	225	-	-
Westbound I-80 at Douglas Blvd	1,530	375	350	375
Northbound SR 65 at Northbound Stanford Ranch Rd	1,170	25	125	0
Northbound SR 65 at Southbound Stanford Ranch Rd	1,800	175	200	150
Southbound SR 65 at Southbound Galleria Blvd	1,130	250	225	225
Southbound SR 65 at Northbound Galleria Blvd	1,780	100	125	125
Note:	Bold and underline font indicate queues that exceed the ramp length. Shaded cells indicate a project impact. The reported value is the average maximum peak-hour queue length in feet.			
Source:	Fehr & Peers, 2014			

The following intersections would operate at an unacceptable LOS based on the evaluation criteria under all project alternatives during the PM peak hour.

- Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps
- Stanford Ranch Road/Five Star Boulevard
- Eureka Road/Sunrise Avenue
- Rocklin Road/Granite Drive

The analysis results indicate these intersections will need significant capacity enhancements with and without the proposed project to operate within the established LOS thresholds for these locations. Before any improvements are proposed though, the interaction between these locations and the rest of the network should be considered. In some cases, the operation of these intersections meters traffic accessing the freeway or contributes to queuing that may extend back onto the freeway. In other locations, improvements to the freeway system, such as an auxiliary lane, may reduce demand and/or queuing that would improve intersection operations.

During the AM peak hour, only one intersection would have deficient operations under the build alternatives. The Eureka Road/Sunrise Avenue intersection would have LOS D conditions for Alternatives 1 (Taylor Road Full Access Interchange and 3 (Taylor Road Interchange Eliminated) although the delay value is within two seconds of the LOS C/D threshold. Since the intersection would operate acceptably at LOS C

under the No Build Alternative, the intersection is also an impact. All intersections would operate acceptably under Alternative 2 (Collector-Distributor System Ramps) during the AM peak hour. Adjustments to the signal timing may mitigate this impact.

During the AM peak hour, the average maximum queue lengths for freeway off-ramps at all study intersections are less than the ramp storage length under all build alternatives. Even with an additional left-turn pocket lane, Alternative 3 (Taylor Road Interchange Eliminated) has the longest queue on the eastbound I-80 off-ramp at Eureka Road. However, the queue is less than the ramp length, so the queue would not extend to the freeway mainline.

During the PM peak hour, Alternatives 1 (Taylor Road Full Access Interchange) and 2 would have impacts at the following study intersections.

- Eureka Road/Sunrise Avenue
- Pacific Street/Sunset Boulevard

Under Alternative 5 (No Build), traffic volumes are constrained on eastbound I-80, which restricts the traffic that can reach these intersections. With the build alternatives, the volume served, and also the delay, are higher. At Eureka Road/Sunrise Avenue, the westbound queue from Eureka Road/Taylor Road extends to the intersection causing additional delay. To reduce the delay below the 49 seconds (LOS D) in Alternative 5 would likely require improvements at the Eureka Road/Taylor Road intersections that included with Alternative 3 (a second northbound left-turn lane and a second southbound right-turn lane).

At the Pacific Street/Sunset Boulevard intersection, Alternatives 1 and 2 would have LOS D conditions compared to LOS C for Alternatives 3 and 5. The intersection is planned to be widened as part of the widening of Sunset Boulevard from four to six lanes. This widening project is assumed to be in place by design year conditions. So, the proposed mitigation for this impact is to construct the planned widening of Sunset Boulevard.

Similar to AM peak hour conditions, the average maximum queues at the off-ramps do not exceed the ramp lengths. The longest queue for the build alternatives occurs on the eastbound off-ramp at Eureka Road. Alternative 3 has the longest queue. This alternative has the highest volume on this ramp due to the diversion of traffic with the closure of the eastbound off-ramp to Taylor Road.

Chapter 6. Summary and Conclusions

6.1. Deficiencies

The study locations that do not meet the LOS threshold are summarized below by alternative. The LOS thresholds are provided in Section 2.5.

Existing Conditions

- AM Peak Hour
 - Westbound I-80: from the westbound Antelope Road on-ramp to the Elkhorn Boulevard off-ramp
 - Northbound SR 65: westbound I-80 on-ramp
 - Southbound SR 65: from the westbound Blue Oaks Boulevard on-ramp to the eastbound Pleasant Grove Boulevard on-ramp
 - Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps
- PM Peak Hour
 - Eastbound I-80: Eureka Road off-ramp and SR 65 off-ramp
 - Westbound I-80: SR 65 off-ramp
 - Northbound SR 65: from the westbound I-80 on-ramp to the Stanford Ranch Road off-ramp
 - Intersections: Eureka Road/Taylor Road/I-80 Westbound Ramps

Alternative 1 (Taylor Road Full Access Interchange)

- Design Year AM Peak Hour
 - Westbound I-80: from the SR 65 to Atlantic Street weave section to the eastbound Douglas Boulevard on-ramp and from the Truck Scales off-ramp to the eastbound Elkhorn Boulevard on-ramp except for the Elkhorn Boulevard off-ramp
 - Northbound SR 65: Stanford Ranch Road off-ramp to on-ramp and Stanford Ranch Road on-ramp
 - Southbound SR 65: eastbound Ferrari Ranch Road on-ramp to Twelve Bridges Drive on-ramp, westbound Placer Parkway on-ramp, and westbound I-80 connector

- Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Roseville Parkway/Taylor Road, Atlantic Street/I-80 Westbound Ramps, and Eureka Road/Sunrise Avenue
- Design Year PM Peak Hour
 - Westbound I-80: Eastbound Atlantic Street off-ramp to the eastbound Douglas Boulevard on-ramp
 - Northbound SR 65: Stanford Ranch Road off-ramp to on-ramp and the Stanford Ranch Road on-ramp
 - Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Blue Oaks Boulevard/SR 65 Northbound Ramps, Stanford Ranch Road/Five Star Boulevard, Galleria Boulevard/Roseville Parkway, Roseville Parkway/Creekside Ridge Drive, Eureka Road/Taylor Road/I-80 Eastbound Ramps, Eureka Road/Sunrise Avenue, Douglas Boulevard/Harding Boulevard, Douglas Boulevard/Sunrise Avenue, and Rocklin Road/Granite Drive
- Construction Year AM Peak Hour
 - Westbound I-80: from the Atlantic Street on-ramp to the eastbound Douglas Boulevard on-ramp and from the Truck Scales off-ramp to the eastbound Elkhorn Boulevard on-ramp
 - Southbound SR 65: eastbound Sunset Boulevard on-ramp
 - Intersections: Eureka Road/Sunrise Avenue
- Construction Year PM Peak Hour
 - Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Stanford Ranch Road/Five Star Boulevard, Eureka Road/Sunrise Avenue, Pacific Street/Sunset Boulevard, and Rocklin Road/Granite Drive

Alternative 2 (Collector-Distributor System Ramps)

- Design Year AM Peak Hour
 - Westbound I-80: from the SR 65 to Atlantic Street weave section to the eastbound Douglas Boulevard on-ramp and from the Truck Scales on-ramp to the eastbound Elkhorn Boulevard on-ramp except for the Elkhorn Boulevard off-ramp
 - Northbound SR 65: Stanford Ranch Road off-ramp to on-ramp, Stanford Ranch Road on-ramp, and Stanford Ranch Road to Pleasant Grove Boulevard
 - Southbound SR 65: eastbound Ferrari Ranch Road on-ramp to Twelve Bridges Drive on-ramp and westbound I-80 connector

- Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Roseville Parkway/Taylor Road, Eureka Road/Sunrise Avenue, and Douglas Boulevard/I-80 Westbound Ramps
- Design Year PM Peak Hour
 - Westbound I-80: Eastbound Atlantic Street off-ramp to the eastbound Douglas Boulevard on-ramp
 - Northbound SR 65: Eureka Road on-ramp to Stanford Ranch Road on-ramp
 - Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Blue Oaks Boulevard/SR 65 Northbound Ramps, Stanford Ranch Road/Five Star Boulevard, Galleria Boulevard/Roseville Parkway, Roseville Parkway/Creekside Ridge Drive, Eureka Road/Taylor Road/I-80 Eastbound Ramps, Eureka Road/Sunrise Avenue, Douglas Boulevard/Sunrise Avenue, Rocklin Road/Granite Drive, and Lincoln Boulevard/SR 65 Southbound on-ramp
- Construction Year AM Peak Hour
 - Westbound I-80: Douglas Boulevard off-ramp to westbound on-ramp section to eastbound Douglas Boulevard on-ramp and from the Truck Scales off-ramp to the eastbound Elkhorn Boulevard on-ramp
- Construction Year PM Peak Hour
 - Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Stanford Ranch Road/Five Star Boulevard, Eureka Road/Sunrise Avenue, Douglas Boulevard/Sunrise Avenue, Pacific Street/Sunset Boulevard, and Rocklin Road/Granite Drive

Alternative 3 (Taylor Road Interchange Eliminated)

- Design Year AM Peak Hour
 - Westbound I-80: from the SR 65 to Atlantic Street weave section to the eastbound Douglas Boulevard on-ramp and from the Truck Scales on-ramp to the eastbound Elkhorn Boulevard on-ramp except for the Elkhorn Boulevard off-ramp
 - Northbound SR 65: Stanford Ranch Road off-ramp to on-ramp, Stanford Ranch Road on-ramp, and Stanford Ranch Road to Pleasant Grove Boulevard
 - Southbound SR 65: eastbound Ferrari Ranch Road on-ramp to Twelve Bridges Drive on-ramp

- Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Roseville Parkway/Taylor Road, Atlantic Street/I-80 Westbound Ramps, Eureka Road/Sunrise Avenue, and Douglas Boulevard/I-80 Westbound Ramps
- Design Year PM Peak Hour
 - Westbound I-80: Eastbound Atlantic Street off-ramp to on-ramp section to the eastbound Douglas Boulevard on-ramp
 - Northbound SR 65: Eureka Road on-ramp to Stanford Ranch Road on-ramp
 - Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Blue Oaks Boulevard/SR 65 Northbound Ramps, Stanford Ranch Road/Five Star Boulevard, Galleria Boulevard/Roseville Parkway, Roseville Parkway/Creekside Ridge Drive, Roseville Parkway/Taylor Road, Atlantic Street/Wills Road, Eureka Road/Taylor Road/I-80 Eastbound Ramps, Eureka Road/Sunrise Avenue, Douglas Boulevard/Harding Boulevard, Douglas Boulevard/I-80 Westbound Ramps, Douglas Boulevard/Sunrise Avenue, Rocklin Road/Granite Drive, and Lincoln Boulevard/SR 65 Southbound On-ramp
- Construction Year AM Peak Hour
 - Westbound I-80: Douglas Boulevard off-ramp to westbound on-ramp section to eastbound Douglas Boulevard on-ramp and from the Truck Scales off-ramp to the eastbound Elkhorn Boulevard on-ramp
 - Intersections: Eureka Road/Sunrise Avenue
- Construction Year PM Peak Hour
 - Intersections: Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Stanford Ranch Road/Five Star Boulevard, Eureka Road/Sunrise Avenue, Rocklin Road/Granite Drive, and Rocklin Road/Aguilar Road

Alternative 5 (No Build)

- Design Year AM Peak Hour
 - Eastbound I-80: Auburn Boulevard on-ramp to SR 65 off-ramp
 - Westbound I-80: Eastbound Atlantic Street off-ramp
 - Northbound SR 65: Westbound I-80 on-ramp
 - Southbound SR 65: Twelve Bridges Drive off-ramp to on-ramp, Twelve Bridges Drive on-ramp, and from the Pleasant Grove Boulevard to Galleria Boulevard section to the Galleria Boulevard on-ramp
 - Intersections: Lincoln Boulevard/Sterling Parkway, Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Blue Oaks Boulevard/SR 65 Northbound Ramps,

Stanford Ranch Road/Five Star Boulevard, Stanford Ranch Road/SR 65 Northbound Ramps, Roseville Parkway/Taylor Road, Douglas Boulevard/I-80 Westbound Ramps, Douglas Boulevard/I-80 Eastbound Ramps, Lincoln Boulevard/SR 65 Northbound Off-ramp, Lincoln Boulevard/SR 65 Southbound On-ramp, and Placer Parkway/SR 65 Northbound Ramps

- Design Year PM Peak Hour
 - Eastbound I-80: Auburn Boulevard on-ramp to SR 65 off-ramp
 - Westbound I-80: Rocklin Road on-ramp to SR 65 off-ramp and Taylor Road on-ramp to Douglas Boulevard off-ramp
 - Northbound SR 65: Westbound I-80 on-ramp
 - Intersections: Lincoln Boulevard/Sterling Parkway, Twelve Bridges Drive/SR 65 Northbound Ramps, Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Blue Oaks Boulevard/SR 65 Northbound Ramps, Stanford Ranch Road/Five Star Boulevard, Galleria Boulevard/Roseville Parkway, Roseville Parkway/Sunrise Avenue, Atlantic Street/Wills Road, Atlantic Street/I-80 Westbound Ramps, Eureka Road/Taylor Road/I-80 Eastbound Ramps, Eureka Road/Sunrise Avenue, Douglas Boulevard/Harding Boulevard, Douglas Boulevard/I-80 Westbound Ramps, Douglas Boulevard/I-80 Eastbound Ramps, Douglas Boulevard/Sunrise Avenue, Rocklin Road/Granite Drive, Rocklin Road/I-80 Westbound Ramps, Rocklin Road/I-80 Eastbound Ramps, Rocklin Road/Aguilar Road, Lincoln Boulevard/SR 65 Northbound Off-ramp, Lincoln Boulevard/SR 65 Southbound On-ramp, and Whitney Ranch Parkway/SR 65 Northbound Ramps
- Construction Year AM Peak Hour
 - Eastbound I-80: SR 65 off-ramp and Rocklin Road off-ramp
 - Westbound I-80: SR 65 off-ramp, Taylor Road on-ramp to eastbound Douglas Boulevard on-ramp, and from the Elkhorn Boulevard off-ramp to on-ramp section to the eastbound Elkhorn Boulevard on-ramp
 - Northbound SR 65: Westbound I-80 on-ramp and Stanford Ranch Road on-ramp
 - Southbound SR 65: from the Ferrari Ranch Road to Lane Drop section to the eastbound Pleasant Grove Boulevard on-ramp
 - Intersections: Twelve Bridges Drive/SR 65 Southbound Ramps, Twelve Bridges Drive/SR 65 Northbound Ramps, Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Pleasant Grove Boulevard/SR 65 Southbound Ramps, Roseville Parkway/Taylor Road, Douglas Boulevard/I-80 Westbound Ramps, Douglas Boulevard/I-80 Eastbound Ramps, Rocklin Road/I-80 Eastbound Ramps, Lincoln Boulevard/SR 65 Southbound On-ramp, and Placer Parkway/SR 65 Southbound Ramps

- Construction Year PM Peak Hour
 - Eastbound I-80: Auburn Boulevard on-ramp to SR 65 off-ramp
 - Westbound I-80: Rocklin Road on-ramp to SR 65 off-ramp
 - Northbound SR 65: Westbound I-80 on-ramp, Stanford Ranch Road off-ramp to on-ramp, and Stanford Ranch Road on-ramp
 - Southbound SR 65: from the Placer Parkway to Sunset Boulevard weaving section to the eastbound Pleasant Grove Boulevard on-ramp
 - Intersections: Lincoln Boulevard/Sterling Parkway, Sunset Boulevard/SR 65 Southbound Ramps, Sunset Boulevard/SR 65 Northbound Ramps, Blue Oaks Boulevard/Washington Boulevard/SR 65 Southbound Ramps, Stanford Ranch Road/Five Star Boulevard, Galleria Boulevard/Roseville Parkway, Roseville Parkway/Creekside Ridge Drive, Atlantic Street/I-80 Westbound Ramps, Eureka Road/Sunrise Avenue, Douglas Boulevard/Harding Boulevard, Douglas Boulevard/I-80 Westbound Ramps, Douglas Boulevard/I-80 Eastbound Ramps, Douglas Boulevard/Sunrise Avenue, Rocklin Road/Granite Drive, Rocklin Road/I-80 Westbound Ramps, Rocklin Road/I-80 Eastbound Ramps, Rocklin Road/Aguilar Road, and Lincoln Boulevard/SR 65 Northbound Off-ramp, and Lincoln Boulevard/SR 65 Southbound On-ramp

6.2. Project Impacts

The project impacts are summarized below by alternative. A project impact occurs where (1) the LOS threshold is exceeded and (2) the conditions are worse than the no build alternative (Alternative 5).

Alternative 1 (Taylor Road Full Access Interchange)

- Design Year AM Peak Hour
 - Westbound I-80: from the SR 65 to Atlantic Street weave section to the eastbound Douglas Boulevard on-ramp and from the Truck Scales off-ramp to the eastbound Elkhorn Boulevard on-ramp except for the Elkhorn Boulevard off-ramp
 - Northbound SR 65: Stanford Ranch Road off-ramp to on-ramp and Stanford Ranch Road on-ramp
 - Southbound SR 65: eastbound Ferrari Ranch Road on-ramp to Twelve Bridges Drive on-ramp, westbound Placer Parkway on-ramp, and westbound I-80 connector
 - Intersections: Atlantic Street/I-80 Westbound Ramps and Eureka Road/Sunrise Avenue

- Design Year PM Peak Hour
 - Westbound I-80: Eastbound Atlantic Street off-ramp, eastbound Atlantic Street off-ramp to on-ramp, Douglas Boulevard off-ramp to westbound on-ramp, westbound Douglas Boulevard on-ramp, and eastbound Douglas Boulevard on-ramp
 - Northbound SR 65: Stanford Ranch Road off-ramp to on-ramp and the Stanford Ranch Road on-ramp
 - Intersections: Stanford Ranch Road/Five Star Boulevard, Roseville Parkway/Creekside Ridge Drive, and Eureka Road/Taylor Road/I-80 Eastbound Ramps
- Construction Year AM Peak Hour
 - Westbound I-80: Douglas Boulevard off-ramp, eastbound Douglas Boulevard on-ramp, and from the Truck Scales off-ramp to the eastbound Elkhorn Boulevard on-ramp
 - Intersections: Eureka Road/Sunrise Avenue
- Construction Year PM Peak Hour
 - Intersections: Eureka Road/Sunrise Avenue and Pacific Street/Sunset Boulevard

Alternative 2 (Collector-Distributor System Ramps)

- Design Year AM Peak Hour
 - Westbound I-80: from the SR 65 to Atlantic Street weave section to the eastbound Douglas Boulevard on-ramp and from the Truck Scales on-ramp to the eastbound Elkhorn Boulevard on-ramp except for the Elkhorn Boulevard off-ramp
 - Northbound SR 65: Stanford Ranch Road off-ramp to on-ramp, Stanford Ranch Road on-ramp, and Stanford Ranch Road to Pleasant Grove Boulevard
 - Southbound SR 65: eastbound Ferrari Ranch Road on-ramp to Twelve Bridges Drive on-ramp and westbound I-80 connector
 - Intersections: Eureka Road/Sunrise Avenue
- Design Year PM Peak Hour
 - Westbound I-80: Eastbound Atlantic Street off-ramp to on-ramp, Douglas Boulevard off-ramp to westbound on-ramp, westbound Douglas Boulevard on-ramp, and eastbound Douglas Boulevard on-ramp
 - Northbound SR 65: from I-80 to the Stanford Ranch Road on-ramp
 - Intersections: Stanford Ranch Road/Five Star Boulevard, Roseville Parkway/Creekside Ridge Drive, and Eureka Road/Taylor Road/I-80 Eastbound Ramps

- Construction Year AM Peak Hour
 - Westbound I-80: Eastbound Douglas Boulevard on-ramp and from the Truck Scales off-ramp to the eastbound Elkhorn Boulevard on-ramp
- Construction Year PM Peak Hour
 - Intersections: Eureka Road/Sunrise Avenue and Pacific Street/Sunset Boulevard

Alternative 3 (Taylor Road Interchange Eliminated)

- Design Year AM Peak Hour
 - Westbound I-80: from the SR 65 to Atlantic Street weave section to the eastbound Douglas Boulevard on-ramp and from the Truck Scales on-ramp to the eastbound Elkhorn Boulevard on-ramp except for the Elkhorn Boulevard off-ramp
 - Northbound SR 65: Stanford Ranch Road off-ramp to on-ramp, Stanford Ranch Road on-ramp, and Stanford Ranch Road to Pleasant Grove Boulevard
 - Southbound SR 65: eastbound Ferrari Ranch Road on-ramp to Twelve Bridges Drive on-ramp
 - Intersections: Atlantic Street/I-80 Westbound Ramps and Eureka Road/Sunrise Avenue
- Design Year PM Peak Hour
 - Westbound I-80: Douglas Boulevard off-ramp to westbound on-ramp, westbound Douglas Boulevard on-ramp, and eastbound Douglas Boulevard on-ramp
 - Northbound SR 65: from I-80 to the Stanford Ranch Road on-ramp
 - Intersections: Stanford Ranch Road/Five Star Boulevard, Roseville Parkway/Creekside Ridge Drive, Roseville Parkway/Taylor Road, and Eureka Road/Taylor Road/I-80 Eastbound Ramps
- Construction Year AM Peak Hour
 - Westbound I-80: Eastbound Douglas Boulevard on-ramp, from the Truck Scales off-ramp to the westbound Elkhorn Boulevard on-ramp
- Construction Year PM Peak Hour
 - None

6.3. Potential Mitigation Measures

The potential mitigation measures for the project impacts identified in the previous section are provided below.

Westbound I-80

- Impacts from SR 65 to Riverside Avenue can be mitigated by providing an additional through lane from the Douglas Boulevard off-ramp to the westbound on-ramp and from the Riverside Avenue off-ramp to the northbound on-ramp. This mitigation may cause a secondary impact downstream at Elkhorn Boulevard.
- Impacts from the truck scales to Elkhorn Boulevard can be mitigated by providing a full auxiliary lane from the truck scales to Elkhorn Boulevard or adding a through lane at Elkhorn Boulevard.
- An alternate mitigation to the above widening options would be to operate the ramp meters on westbound I-80 and southbound SR 65 at a more restrictive rate. With the more restrictive rates, longer ramp queues may cause secondary impacts to local streets.

Northbound SR 65

- Impacts from Stanford Ranch Road to Pleasant Grove Boulevard can be mitigated by providing an additional through lane from the Pleasant Grove Boulevard off-ramp to on-ramp. The additional lane may need to be extended past the Blue Oaks Boulevard interchange to mitigate potential secondary impacts.

Southbound SR 65

- Impacts from Ferrari Ranch Road to Twelve Bridges Drive can be mitigated by providing an auxiliary lane between Twelve Bridge Drive and Placer Parkway. Secondary impacts may occur at downstream sections.
- The impact to the westbound Placer Parkway on-ramp (Alternative 1 only) may be mitigated by extending the planned auxiliary lane between Placer Parkway and Sunset Boulevard to start at the westbound, instead of the eastbound, on-ramp.
- The impact to the southbound to westbound connector at I-80 (Alternatives 1 and 2) would be mitigated by widening westbound I-80 at Douglas Boulevard or adjusting ramp meter rates as discussed above under the westbound I-80 mitigation measures.

Intersections

- Stanford Ranch Road/Five Star Boulevard – The impact would likely be mitigated by providing a second eastbound right-turn lane.
- Roseville Parkway/Creekside Ridge Drive – The impact is caused by queuing from the adjacent intersection at Roseville Parkway/Galleria Boulevard, so signal timing adjustments (to be implemented when warranted based on monitoring) or widening improvements would be needed at the adjacent signal.

- Roseville Parkway/Taylor Road (Alternative 3 only) – The impact may be mitigated by adding a third southbound left-turn lane.
- Atlantic Street/I-80 Westbound Ramps (Alternatives 1 and 3) – Peak hour delay can be reduced by adjusting the ramp meter rate or widening the on-ramp to provide more storage.
- Eureka Road/Taylor Road/I-80 Eastbound Ramps – For Alternatives 1 and 2, second northbound left-turn and southbound right-turn lanes could be added to reduce delays although accommodations may be needed for bicycles and pedestrians. Alternative 3 already includes these modifications, so further improvements, such as grade separation, would be needed to mitigate the impact.
- Eureka Road/Sunrise Avenue – Peak hour delay can be reduced by widening to provide a fourth through lane or a third left-turn lane on some approaches.
- Pacific Street/Sunset Boulevard (Alternatives 1 and 2) – This impact under construction year conditions can be mitigated by constructing the planned widening of Sunset Boulevard from four to six lanes, which is assumed to occur before the design year.

6.4. Safety Assessment

The build alternatives will likely provide similar improvements to transportation safety. A key improvement will be provided by congestion reduction on the freeway. Rear-end collisions on the freeway are associated with congested conditions. As noted in the existing conditions section, rear-end collisions in the study area are highest on eastbound I-80 west of SR 65 during the congested PM peak period. Since the build alternatives will reduce congestion compared to Alternative 5 (No Build), the expected number of rear-end end collision would be reduced with the build alternatives.

Freeway ramp junctions are also associated with higher collision rates. Due to the different configurations, the number of ramp junctions on I-80 between Eureka Road/Atlantic Street and SR 65 differs among the build alternatives. Alternative 1 (Taylor Road Interchange Full Access) has the highest number of ramp junctions, 16. Alternative 2 (Collector-Distributor System Ramps) has 15 ramp junctions although some of these are on the collector-distributor roadway, which will have a lower free-flow speed. Alternative 3 (Taylor Road Interchange Eliminated) has the fewest ramp junctions, 12.

Roadway design standards are used to provide consistent expectations for drivers, which helps improve transportation safety by reducing collision risks. When these standards are not met, collision risks may increase. For the build alternatives, the following design exceptions are related to freeway operations.

- Interchange spacing – The existing configuration for the project area does not meet the interchange spacing standard for one mile between local interchanges and two miles between system interchanges and local interchanges. None of the build alternatives would meet these

standards, either. However, Alternative 3 (Taylor Road Interchange Eliminated) would provide the largest distance between the Eureka Road/Atlantic Street and SR 65 interchanges on I-80.

- Lane and shoulder width – The Roseville Parkway overcrossing is a “pinch point” on I-80 in the project area. The right-of-way is restricted initially by the overcrossing itself. However, if the overcrossing were replaced with a wider structure, the standard lane and shoulder widths could not be provided due to right-of-way constraints: a railroad to the north and an electrical tower and commercial properties to the east. As a result, all build alternatives have a similar, narrow cross-section at the Roseville Parkway overcrossing.
- Connector ramp design speed – The design speed for the freeway-to-freeway connector ramps under all build alternatives is less than the standard due to right-of-way constraints on I-80 west of the interchange and the location and design of the existing SR 65 viaduct north of I-80.
- For Alternatives 2 and 3, the westbound on-ramp from Taylor Road would be maintained. Due to the added lanes on I-80 and the Roseville Parkway overcrossing pinch point described above, the merge area would be shorter than standard length.

Finally, the freeway analysis has been conducted assuming that traffic using the I-80/SR 65 interchange HOV direct connector ramps do not enter or exit the freeway network at the Eureka Road/Atlantic Street or Stanford Ranch Road/Galleria Boulevard interchanges. On northbound SR 65, this movement will be prevented under all alternatives using a physical barrier (median) between I-80 and Stanford Ranch Road. Alternatives 2 and 3 will prevent this movement through the use of a collector-distributor roadway on eastbound I-80 between Eureka Road and SR 65. For eastbound I-80 under Alternative 1 and westbound I-80 and southbound SR 65 under all three build alternatives, the weaving movement into and out of the HOV lane will be prohibited by signs, pavement markings, and (likely) a “soft” barrier of plastic vertical delineators. Because the lane will not be physically separate, vehicles traveling in the HOV lane will have additional exposure to errant vehicles.

6.5. Comparison of Project Alternatives

In general, the three build alternatives perform similarly under design year conditions. Table 33 compares the build alternatives across a range of performance measures based on the project objectives. Listed in Section 1.3, the project objectives can be summarized as reducing congestion, balancing local access and safety, and accommodating multiple modes of travel.

In the comparison summary table, two performance measures for the overall network performance are provided: the sum of the AM and PM peak period volume served (throughput) and vehicle hours of delay. The three build alternatives have similar performance, with less than 2 percent difference among the alternatives. Alternative 1 (Taylor Road Full Access Interchange) has the best performance since the full Taylor Road interchange provides alternate paths to spread traffic demand across the network.

Alternative 3 (Taylor Road Interchange Eliminated) would serve about the same volume as Alternative 1, but Alternative 2 (Collector-Distributor System Ramps) would have less delay than Alternative 3.

The comparison table lists the total number of design year AM and PM peak hour impacts for study freeway sections and intersections. Alternative 3 (Taylor Road Access Eliminated) has the fewest freeway impacts but the most intersection impacts. Conversely, Alternative 1 (Taylor Road Full Access Interchange) has the most freeway impacts but the fewest intersection impacts. Alternative 2 (Collector-Distributor System Ramps) has the fewest total impacts (freeway and intersection impacts combined).

Category	Alternative 1	Alternative 2	Alternative 3
Network Throughput (Design Year AM & PM) ¹	1st	3rd (-0.17%)	2nd (-0.04%)
Network Delay (Design Year AM & PM) ¹	1st	2nd (-1.1%)	3rd (-1.4%)
Freeway Impacts (Design Year AM & PM)	31	30	28
Intersection Impacts (Design Year AM & PM)	5	3	6
Ramp Junctions on I-80 in the Project Area	16	15	12
Ramps on I-80 in the Project Area	16	14	12
Note: 1. The percent difference from the first place value is shown in parentheses.			
Source: Fehr & Peers, 2014			

As noted in the safety assessment (Section 6.3), collisions tend to be located near ramp junctions, so the number of ramp junctions is used here as a proxy for vehicle safety. Alternative 1 has the most ramp junctions, while Alternative 3 has the fewest. Freeway ramps provide access to and from the local street network, so they are important for local network circulation. Alternative 1 provides the most points for local access, while Alternative 3 has the fewest. Ramps and ramp junctions for an alternative can differ depending on how the ramps connect to the freeway, the collector-distributor roadway (in Alternatives 2 and 3), and the local streets.

The third project objective relating the accommodation of multiple modes is equally addressed by all three build alternatives. The alternatives provide mainline freeway connections for the HOV lane network including the direct connectors at the I-80/SR 65 interchange and HOV preferential lanes at ramp meters. The local street improvements planned for Taylor Road under all alternatives will provide pedestrian (sidewalks, crosswalks, etc.) and bicycle (Class II lane) facilities according to local design standards and planning documents.

In summary, all three build alternatives would meet the project need and purpose. Alternative 1 would provide better network conditions and a higher level of local access. In contrast, Alternative 3 would have

fewer impacts to the freeway system and a lower level of risk for freeway safety. Alternative 2 would provide a balance of the competing objectives of local access and freeway safety risk.

Chapter 7. References

This chapter contains the references cited in the Transportation Analysis Report.

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I-80/SR 65 Interchange Improvements

Transportation Analysis Report

Technical Appendix – Part 1

Placer County, CA

03-PLA-80-PM 1.9 to 6.1

03-PLA-65-PM R4.8 to R7.3

EA 03-4E3200

Project ID 0300000696

August 2014



PLACER COUNTY
TRANSPORTATION
PLANNING AGENCY

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Traffic Counts

Travel Demand Forecasts Memorandum, June 2012

Existing Conditions Operations Model Calibration and Validation Memorandum, July 2012

Draft I-80/SR 65 Interchange Improvements Traffic Analysis Report, February 2013

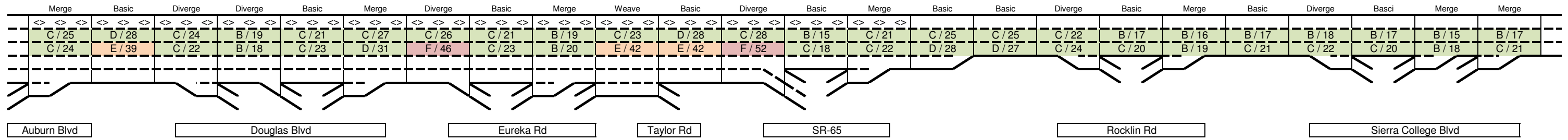
Traffic Focus Meeting Minutes

I-80/SR 65 Interchange Improvements

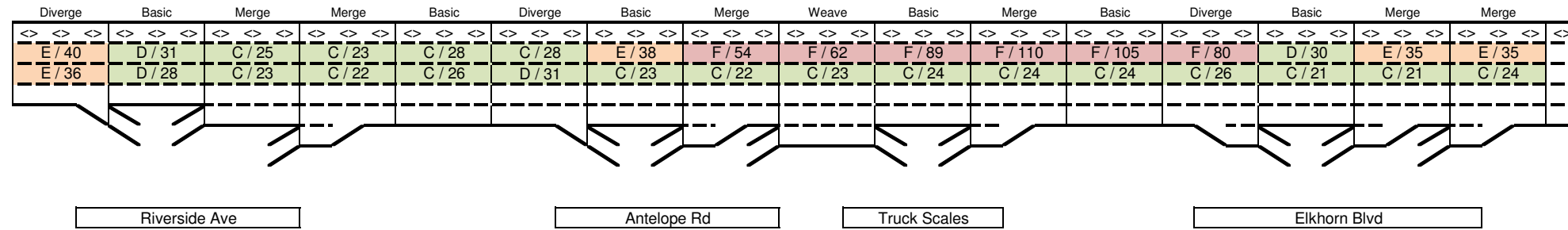
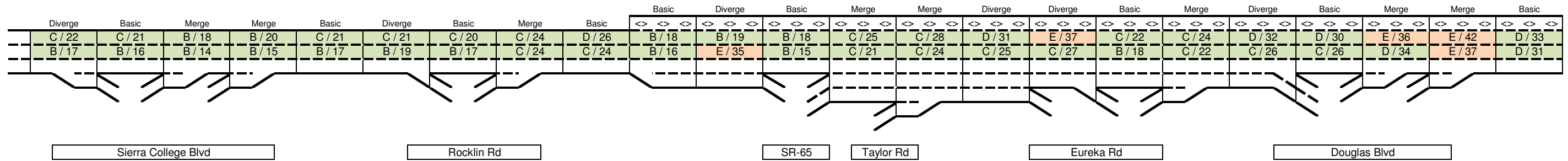
Analysis Results Summary Tables and Figures

**I-80/SR-65 Interchange
Existing Conditions**

Eastbound I-80



Westbound I-80



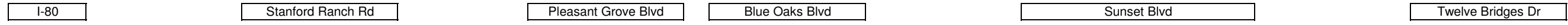
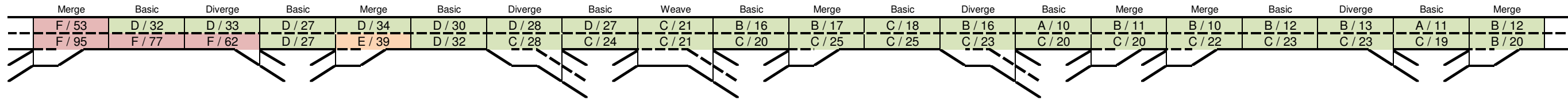
Legend:

- LOS A - D
- LOS E
- LOS F
- Interchange
- HOV Lane
- Facility Type (Basic, Merge, Diverge, or Weave)

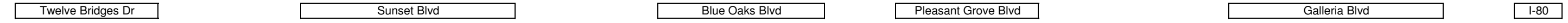
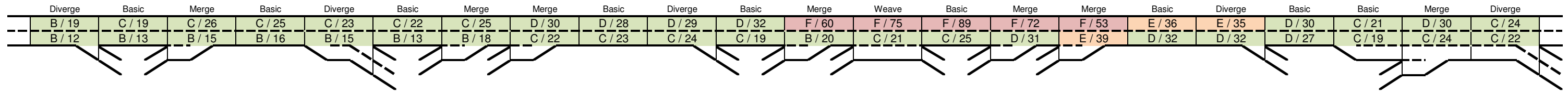
AM Peak Hour LOS / Density
PM Peak Hour LOS / Density

**I-80/SR-65 Interchange
Existing Conditions**

Northbound SR-65



Southbound SR-65



Legend:

- LOS A - D
- LOS E
- LOS F
- Interchange
- HOV Lane
- Facility Type (Basic, Merge, Diverge, or Weave)

AM Peak Hour LOS / Density
PM Peak Hour LOS / Density

TABLE 8: INTERSECTION OPERATIONS RESULTS – EXISTING (2012) CONDITIONS

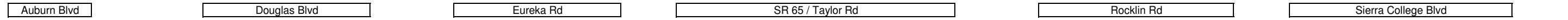
Intersection	Threshold	AM Peak Hour	PM Peak Hour
1. SR 65 / Sterling Pkwy	C	B / 19	B / 18
2. Twelve Bridges Dr / SR 65 SB Ramps	C	A / 4	A / 5
3. Twelve Bridges Dr / SR 65 NB Ramps	C	A / 3	A / 3
4. Sunset Blvd / SR 65 SB Ramps	C	A / 7	A / 6
5. Sunset Blvd / SR 65 NB Ramps	C	A / 10	A / 9
6. Blue Oaks Blvd / Washington Blvd / SR 65 SB Ramps	C	<u>D / 43</u>	C / 33
7. Blue Oaks Blvd / SR 65 NB Ramps	C	C / 24	C / 23
8. Pleasant Grove Blvd / SR 65 NB Ramps	C	A / 9	A / 8
9. Pleasant Grove Blvd / SR 65 SB Ramps	C	B / 10	B / 14
10. Stanford Ranch Rd / Five Star Blvd	C	B / 19	C / 32
11. Stanford Ranch Rd / SR 65 NB Ramps	D	A / 9	B / 15
12. Galleria Blvd / SR 65 SB Ramps	D	B / 13	B / 19
13. Galleria Blvd / Antelope Creek Dr	C	B / 10	C / 24
14. Galleria Blvd / Roseville Pkwy	E	C / 30	D / 36
15. Roseville Pkwy / Creekside Ridge Dr	C	A / 6	B / 17
16. Roseville Pkwy / Taylor Rd	D	C / 30	C / 28
17. Roseville Pkwy / Sunrise Ave	E	D / 37	D / 37
18. Atlantic St / Wills Rd	C	B / 10	B / 12
19. Atlantic St / I-80 WB Ramps	C	A / 7	B / 11
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	E	C / 26	<u>E / 61</u>
21. Eureka Rd / Sunrise Ave	C	C / 24	C / 30
22. Harding Blvd / Wills Rd	C	B / 12	B / 13
23. Douglas Blvd / Harding Blvd	E	B / 19	C / 28
24. Douglas Blvd / I-80 WB Ramps	C	B / 14	B / 17
25. Douglas Blvd / I-80 EB Ramps	C	A / 6	A / 6
26. Douglas Blvd / Sunrise Ave	D	C / 26	D / 35
27. Pacific St / Woodside Dr	C	A / 7	A / 6
28. Pacific St / Sunset Blvd	C	B / 18	C / 29
29. Rocklin Rd / Granite Dr	D	B / 15	D / 37
30. Rocklin Rd / I-80 WB Ramps	D	C / 21	B / 17
31. Rocklin Rd / I-80 EB Ramps	D	B / 17	B / 20
32. Rocklin Rd / Aguilar Rd	D	A / 8	B / 13

Notes: Bold and underline font indicate unacceptable operations. The LOS and average delay in seconds per vehicle are reported. The outlined area is shown in the main body of the report.

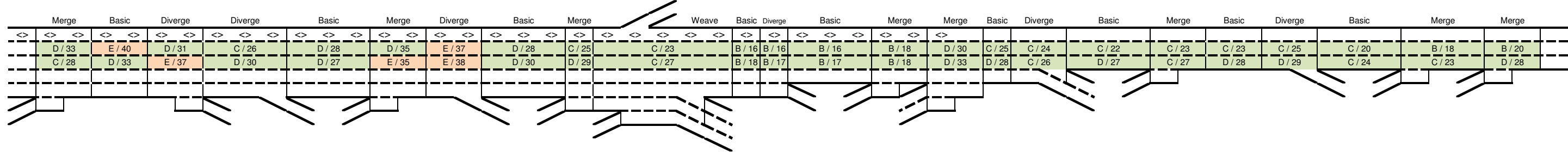
Source: Fehr & Peers, 2014

I-80/SR 65 Interchange
Design Year
Freeway Operations Results

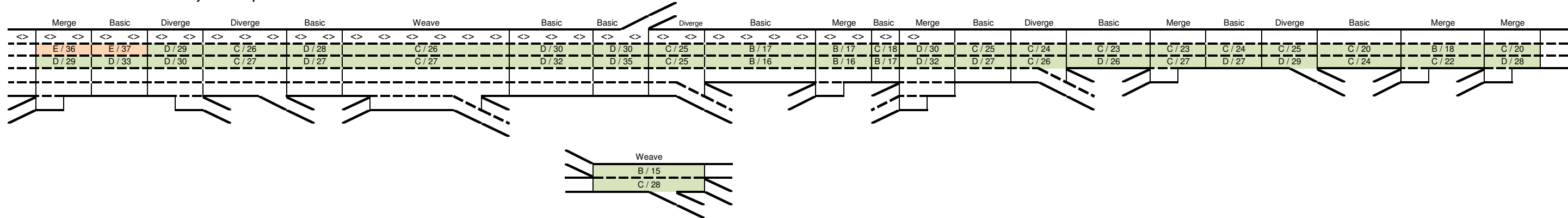
Eastbound I-80



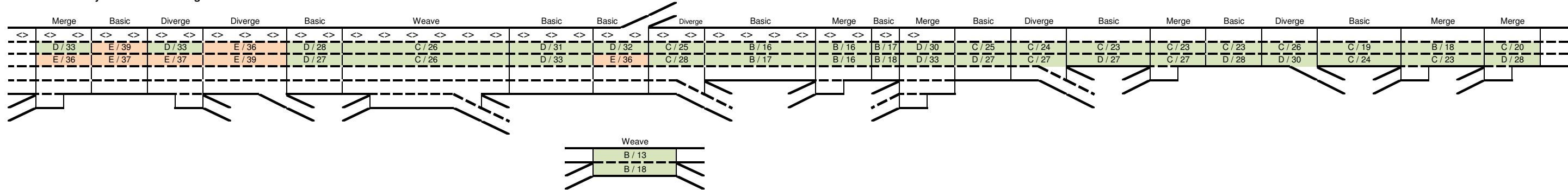
Alternative 1 - Taylor Road Full Access Interchange



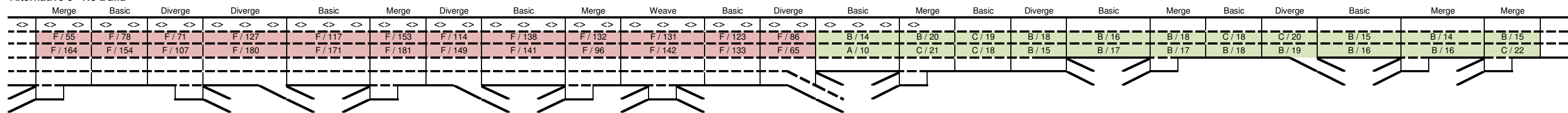
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build

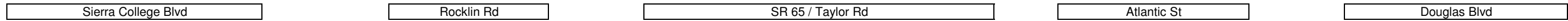


Legend:
 LOS A - D
 LOS E
 LOS F

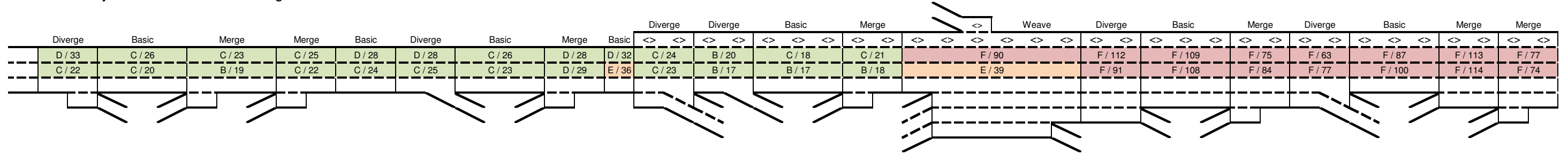
Interchange
 <> HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)

AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

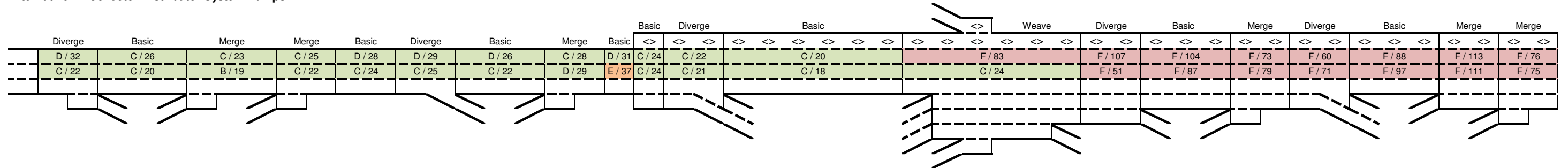
Westbound I-80



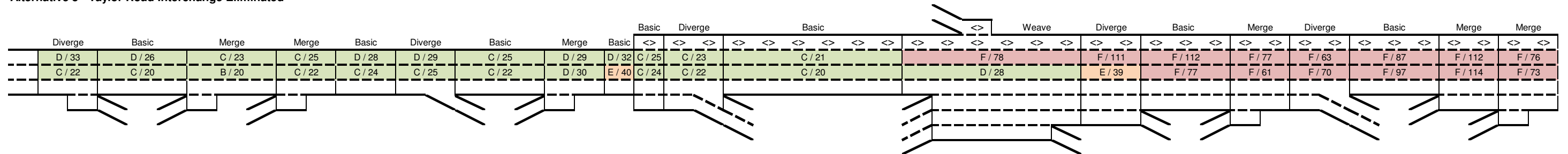
Alternative 1 - Taylor Road Full Access Interchange



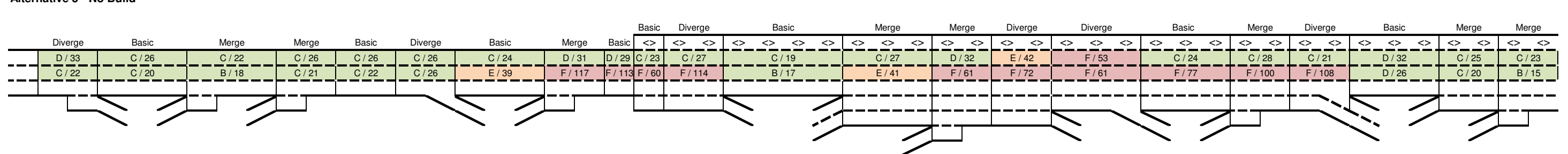
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build

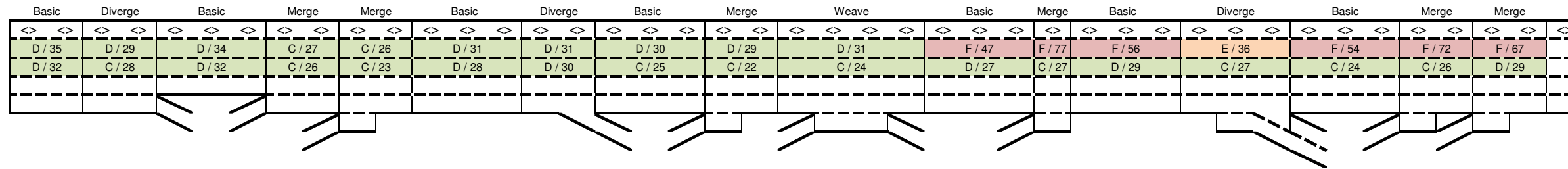


Legend:
 LOS A - D
 LOS E
 LOS F
 Interchange
 HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)
 AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

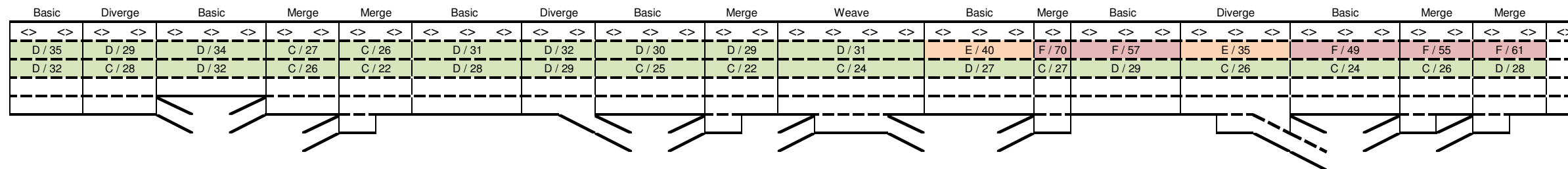
Westbound I-80



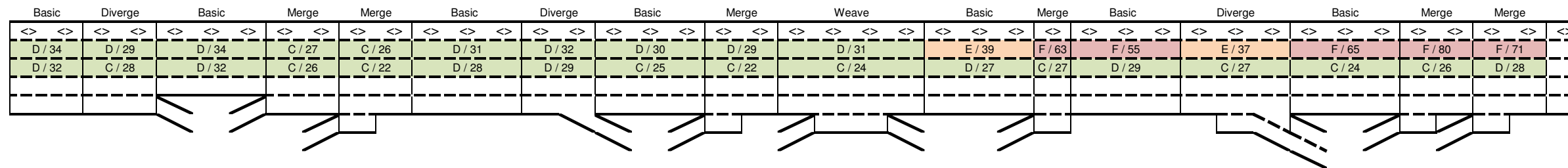
Alternative 1 - Taylor Road Full Access Interchange



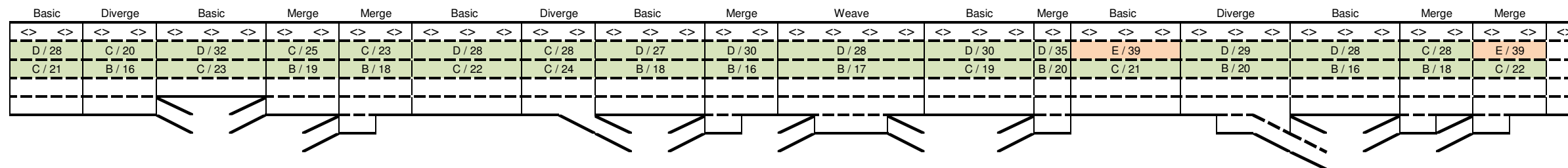
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build



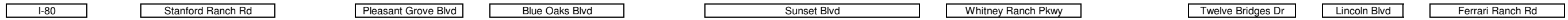
Legend:
 LOS A - D
 LOS E
 LOS F

Interchange
 << HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)

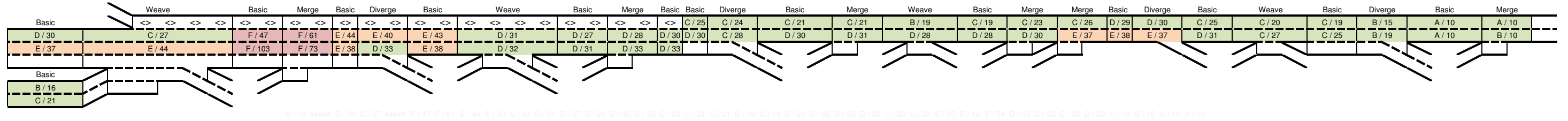
AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

I-80/SR 65 Interchange
 Design Year
 Freeway Operations Results

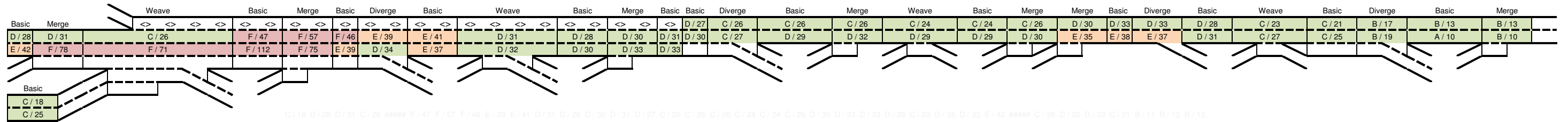
Northbound SR 65



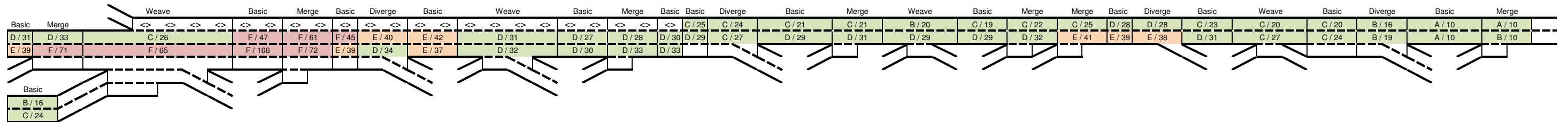
Alternative 1 - Taylor Road Full Access Interchange



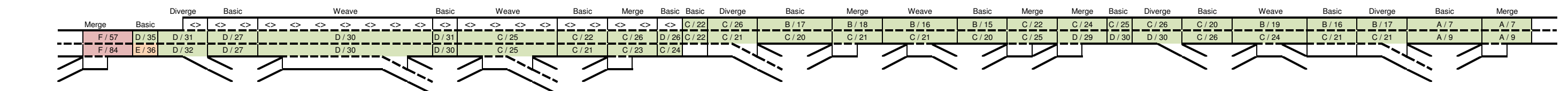
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated

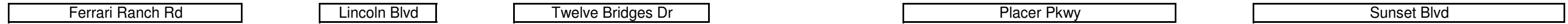


Alternative 5 - No Build

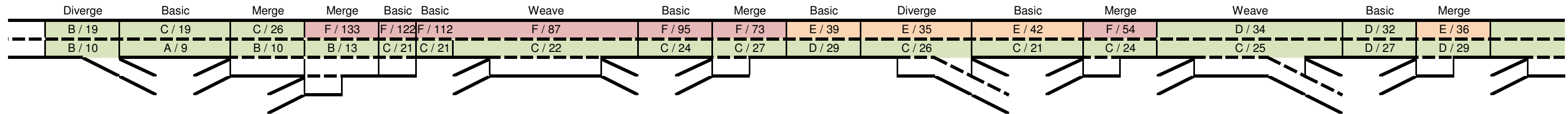


Legend:
 LOS A - D
 LOS E
 LOS F
 Interchange
 HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)
 AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

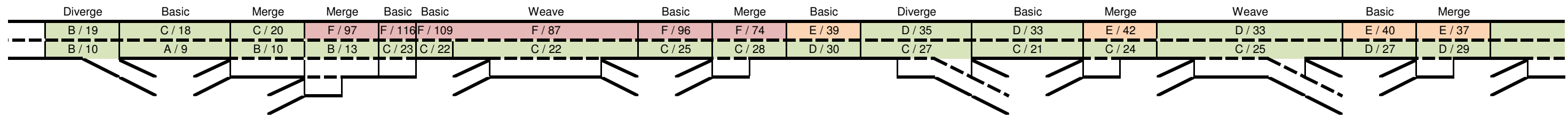
Southbound SR 65



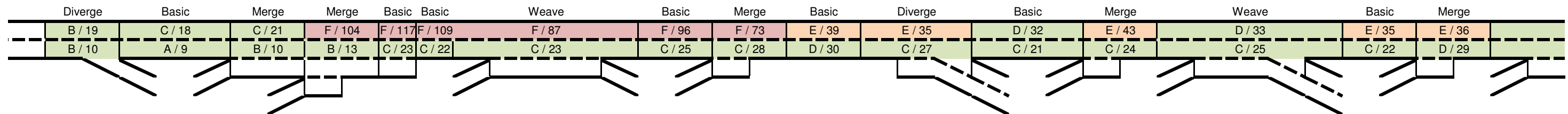
Alternative 1 - Taylor Road Full Access Interchange



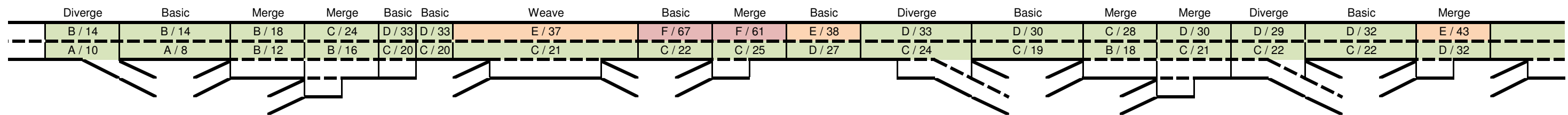
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build

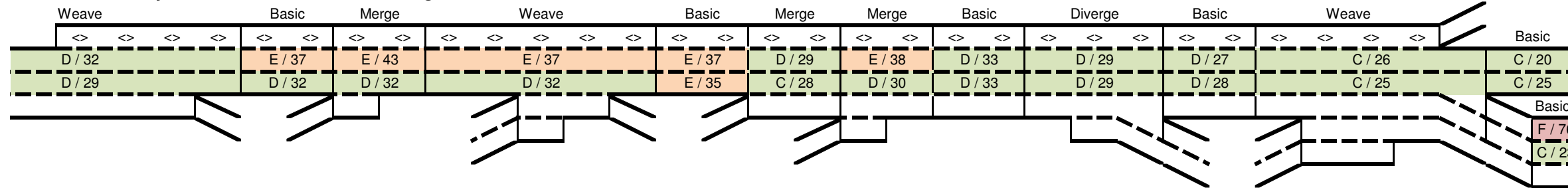


Legend:
 LOS A - D
 LOS E
 LOS F
Interchange AM Peak Hour LOS / Density
<> HOV Lane PM Peak Hour LOS / Density
 Facility Type (Basic, Merge, Diverge, or Weave)

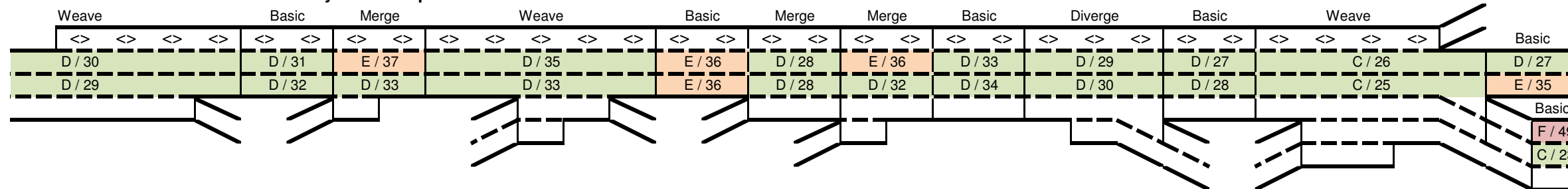
Southbound SR 65



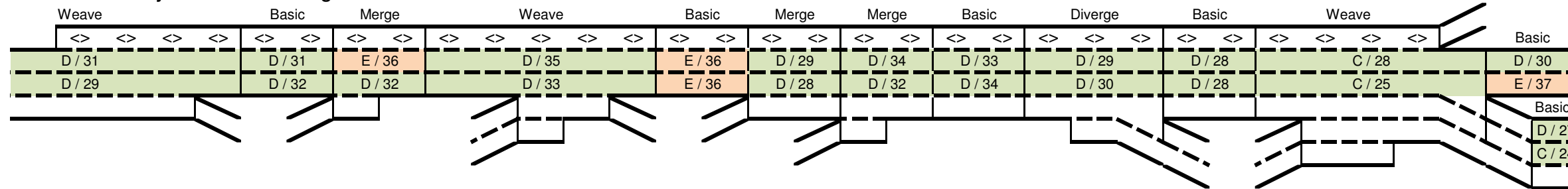
Alternative 1 - Taylor Road Full Access Interchange



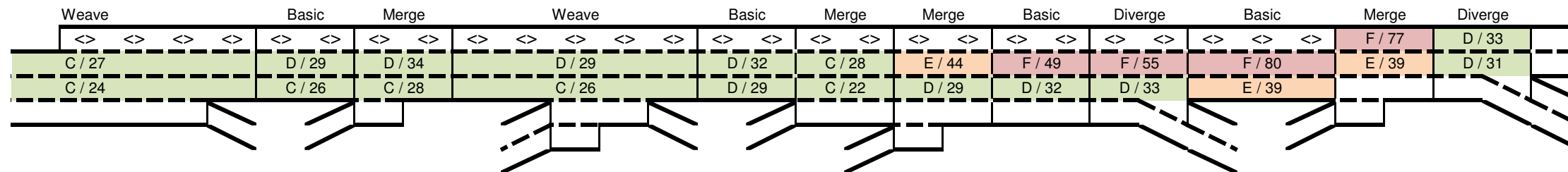
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build



Legend:
 LOS A - D (Green)
 LOS E (Orange)
 LOS F (Red)
 Interchange (Box)
 <> HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)
 AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

TABLE 21A: INTERSECTION OPERATIONS RESULTS – DESIGN YEAR AM PEAK HOUR CONDITIONS				
Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
1. Lincoln Blvd / Sterling Pkwy	B / 16	B / 16	B / 16	<u>F / 88</u>
2. Twelve Bridges Dr / SR 65 SB Ramps	B / 17	B / 16	B / 16	E / 57
3. Twelve Bridges Dr / SR 65 NB Ramps	C / 32	C / 24	C / 27	D / 51
4. Sunset Blvd / SR 65 SB Ramps	B / 13	B / 17	B / 15	C / 29
5. Sunset Blvd / SR 65 NB Ramps	B / 12	B / 11	B / 12	E / 56
6. Blue Oaks Blvd / Washington Blvd / SR 65 SB Ramps	<u>D / 45</u>	<u>D / 49</u>	<u>D / 50</u>	<u>F / 136</u>
7. Blue Oaks Blvd / SR 65 NB Ramps	B / 10	B / 11	B / 12	<u>F / 116</u>
8. Pleasant Grove Blvd / SR 65 SB Ramps	B / 17	A / 7	A / 7	B / 12
9. Pleasant Grove Blvd / SR 65 NB Ramps	B / 14	B / 15	B / 15	C / 30
10. Stanford Ranch Rd / Five Star Blvd	C / 28	C / 26	C / 28	<u>F / 151</u>
11. Stanford Ranch Rd / SR 65 NB Ramps	B / 16	C / 25	B / 19	<u>F / 127</u>
12. Galleria Blvd / SR 65 SB Ramps	C / 24	C / 34	C / 25	D / 38
13. Galleria Blvd / Antelope Creek Dr	A / 10	A / 8	A / 9	B / 11
14. Galleria Blvd / Roseville Pkwy	D / 45	D / 45	D / 46	D / 39
15. Roseville Pkwy / Creekside Ridge Dr	A / 7	A / 7	A / 7	B / 10
16. Roseville Pkwy / Taylor Rd	<u>E / 61</u>	<u>E / 62</u>	<u>F / 95</u>	<u>F / 98</u>
17. Roseville Pkwy / Sunrise Ave	D / 37	C / 31	C / 32	C / 30
18. Atlantic St / Wills Rd	C / 25	B / 16	C / 23	C / 20
19. Atlantic St / I-80 WB Ramps	<u>D / 43</u>	C / 25	<u>D / 38</u>	B / 12
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	C / 32	C / 29	D / 42	E / 55
21. Eureka Rd / Sunrise Ave	<u>D / 38</u>	<u>D / 37</u>	<u>D / 39</u>	C / 29
22. Harding Blvd / Wills Rd	B / 16	B / 15	B / 15	B / 18
23. Douglas Blvd / Harding Blvd	C / 28	C / 29	C / 30	C / 25
24. Douglas Blvd / I-80 WB Ramps	C / 32	<u>D / 37</u>	<u>D / 40</u>	<u>D / 50</u>
25. Douglas Blvd / I-80 EB Ramps	B / 15	C / 21	C / 26	<u>D / 35</u>
26. Douglas Blvd / Sunrise Ave	D / 37	D / 40	D / 47	C / 35
27. Pacific St / Woodside Dr	A / 7	A / 8	A / 7	B / 12
28. Pacific St / Sunset Blvd	C / 27	C / 29	C / 22	C / 32
29. Rocklin Rd / Granite Dr	C / 27	C / 25	D / 42	D / 29
30. Rocklin Rd / I-80 WB Ramps	C / 23	C / 21	D / 46	B / 13
31. Rocklin Rd / I-80 EB Ramps	C / 25	C / 24	C / 23	A / 6
32. Rocklin Rd / Aguilar Rd	A / 10	B / 11	A / 10	A / 5
33. Lincoln Blvd / SR 65 NB Off-ramp	B / 12	B / 12	B / 12	<u>F / 98</u>

TABLE 21A: INTERSECTION OPERATIONS RESULTS – DESIGN YEAR AM PEAK HOUR CONDITIONS

Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
34. Lincoln Blvd / SR 65 SB On-ramp	C / 22	C / 23	C / 23	<u>F / 93</u>
35. Placer Pkwy / SR 65 SB Ramps	B / 17	B / 19	B / 17	<u>D / 35</u>
36. Whitney Ranch Pkwy / SR 65 NB Ramps	B / 14	B / 14	B / 14	B / 17
37. Taylor Rd / I-80 Ramps	C / 21	-	-	-

Note: Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported. The outlined area is shown in the main body of the report.

Source: Fehr & Peers, 2014

**TABLE 22A: MAXIMUM QUEUE LENGTH RESULTS –
DESIGN YEAR AM PEAK HOUR CONDITIONS**

Off-ramp	Storage	Alternative 1	Alternative 2	Alternative 3
Eastbound I-80 at Eastbound Douglas Blvd	1,400	175	25	25
Eastbound I-80 at Westbound Douglas Blvd	1,250	400	650	800
Eastbound I-80 at Eureka Rd	1,700	600	650	900
Eastbound I-80 at Taylor Rd	>1,000	325	25	-
Eastbound I-80 at Rocklin Rd	1,080	275	275	275
Westbound I-80 at Rocklin Rd	1,230	200	175	200
Westbound I-80 at Taylor Rd	>1,000	325	-	-
Westbound I-80 at Westbound Atlantic St	1,430	0	25	0
Westbound I-80 at Eastbound Atlantic St	1,150	0	0	25
Westbound I-80 at Douglas Blvd	1,530	375	375	375
Northbound SR 65 at Northbound Stanford Ranch Rd	1,170	150	200	150
Northbound SR 65 at Southbound Stanford Ranch Rd	1,800	75	75	75
Northbound SR 65 at Pleasant Grove Blvd	1,420	200	175	200
Northbound SR 65 at Blue Oaks Blvd	1,100	250	225	250
Northbound SR 65 at Sunset Blvd	1,400	250	225	225
Northbound SR 65 at Whitney Ranch Pkwy	1,620	325	350	325
Northbound SR 65 at Twelve Bridges Dr	1,500	150	125	100
Northbound SR 65 at Lincoln Blvd	1,940	325	275	325
Southbound SR 65 at Twelve Bridges Dr	1,500	325	250	275
Southbound SR 65 at Placer Pkwy	1,650	325	350	300
Southbound SR 65 at Sunset Blvd	1,330	250	225	250
Southbound SR 65 at Blue Oaks Blvd	2,260	500	475	500
Southbound SR 65 at Pleasant Grove Blvd	1,130	150	150	175
Southbound SR 65 at Southbound Galleria Blvd	1,130	275	300	300
Southbound SR 65 at Northbound Galleria Blvd	1,780	50	75	75

Note: Bold and underline font indicate queues that exceed the ramp length. Shaded cells indicate a project impact. The reported value is the average maximum peak-hour queue length in feet.

Source: Fehr & Peers, 2014

TABLE 23A: INTERSECTION OPERATIONS RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS				
Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
1. Lincoln Blvd / Sterling Pkwy	C / 21	C / 25	C / 24	<u>F / 94</u>
2. Twelve Bridges Dr / SR 65 SB Ramps	B / 15	B / 16	B / 15	C / 26
3. Twelve Bridges Dr / SR 65 NB Ramps	B / 19	B / 18	B / 18	<u>E / 77</u>
4. Sunset Blvd / SR 65 SB Ramps	B / 10	B / 20	A / 9	C / 23
5. Sunset Blvd / SR 65 NB Ramps	B / 12	C / 27	C / 20	C / 23
6. Blue Oaks Blvd / Washington Blvd / SR 65 SB Ramps	<u>F / 165</u>	<u>F / 164</u>	<u>F / 175</u>	<u>F / >240</u>
7. Blue Oaks Blvd / SR 65 NB Ramps	<u>F / 85</u>	<u>E / 69</u>	<u>E / 80</u>	<u>F / 115</u>
8. Pleasant Grove Blvd / SR 65 SB Ramps	A / 9	A / 9	A / 9	A / 9
9. Pleasant Grove Blvd / SR 65 NB Ramps	A / 10	B / 12	B / 12	B / 10
10. Stanford Ranch Rd / Five Star Blvd	<u>E / 56</u>	<u>E / 55</u>	<u>E / 59</u>	<u>D / 36</u>
11. Stanford Ranch Rd / SR 65 NB Ramps	C / 26	C / 22	C / 22	D / 36
12. Galleria Blvd / SR 65 SB Ramps	C / 24	C / 23	C / 25	C / 29
13. Galleria Blvd / Antelope Creek Dr	C / 23	C / 24	C / 24	C / 24
14. Galleria Blvd / Roseville Pkwy	<u>F / 91</u>	<u>F / 131</u>	<u>F / 102</u>	<u>F / 213</u>
15. Roseville Pkwy / Creekside Ridge Dr	<u>E / 77</u>	<u>E / 72</u>	<u>D / 40</u>	C / 24
16. Roseville Pkwy / Taylor Rd	D / 54	D / 53	<u>E / 71</u>	D / 48
17. Roseville Pkwy / Sunrise Ave	D / 46	D / 47	E / 78	<u>F / >240</u>
18. Atlantic St / Wills Rd	C / 26	C / 29	<u>D / 40</u>	<u>D / 49</u>
19. Atlantic St / I-80 WB Ramps	B / 15	B / 18	C / 34	<u>D / 51</u>
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	<u>F / 104</u>	<u>F / 103</u>	<u>F / 104</u>	<u>F / 92</u>
21. Eureka Rd / Sunrise Ave	<u>F / 99</u>	<u>F / 132</u>	<u>F / 113</u>	<u>F / 184</u>
22. Harding Blvd / Wills Rd	B / 19	B / 17	C / 22	C / 27
23. Douglas Blvd / Harding Blvd	<u>F / 81</u>	E / 80	<u>F / 111</u>	<u>F / >240</u>
24. Douglas Blvd / I-80 WB Ramps	C / 25	C / 21	<u>D / 40</u>	<u>F / 237</u>
25. Douglas Blvd / I-80 EB Ramps	C / 30	B / 12	C / 30	<u>F / 124</u>
26. Douglas Blvd / Sunrise Ave	<u>F / 158</u>	<u>F / 240</u>	<u>F / 166</u>	<u>F / >240</u>
27. Pacific St / Woodside Dr	A / 8	A / 9	A / 8	B / 17
28. Pacific St / Sunset Blvd	C / 32	C / 34	C / 29	C / 35
29. Rocklin Rd / Granite Dr	<u>F / 83</u>	<u>F / 97</u>	<u>F / 105</u>	<u>F / >240</u>
30. Rocklin Rd / I-80 WB Ramps	C / 26	C / 26	C / 32	<u>F / 99</u>
31. Rocklin Rd / I-80 EB Ramps	C / 23	C / 23	C / 21	<u>E / 36</u>
32. Rocklin Rd / Aguilar Rd	C / 21	C / 21	B / 19	<u>F / 123</u>
33. Lincoln Blvd / SR 65 NB Off-ramp	B / 10	B / 13	B / 14	<u>F / 98</u>

TABLE 23A: INTERSECTION OPERATIONS RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS

Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
34. Lincoln Blvd / SR 65 SB On-ramp	C / 30	<u>D / 48</u>	<u>D / 41</u>	<u>F / 101</u>
35. Placer Pkwy / SR 65 SB Ramps	C / 24	C / 27	C / 25	C / 28
36. Whitney Ranch Pkwy / SR 65 NB Ramps	C / 22	C / 22	C / 22	<u>E / 75</u>
37. Taylor Rd / I-80 Ramps	C / 25	-	-	-
Note: Bold and underline font indicate unacceptable operations. The LOS and average delay in seconds per vehicle are reported. The outlined area is shown in the main body of the report.				
Source: Fehr & Peers, 2014				

**TABLE 24A: MAXIMUM QUEUE LENGTH RESULTS –
DESIGN YEAR PM PEAK HOUR CONDITIONS**

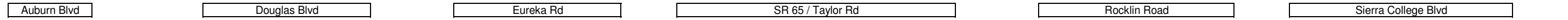
Off-ramp	Storage	Alternative 1	Alternative 2	Alternative 3
Eastbound I-80 at Eastbound Douglas Blvd	1,400	1,000	450	25
Eastbound I-80 at Westbound Douglas Blvd	1,250	375	150	675
Eastbound I-80 at Eureka Rd	1,700	725	450	1,000
Eastbound I-80 at Taylor Rd	>1,000	300	75	-
Eastbound I-80 at Rocklin Rd	1,080	275	275	275
Westbound I-80 at Rocklin Rd	1,230	375	400	450
Westbound I-80 at Taylor Rd	>1,000	300	-	-
Westbound I-80 at Westbound Atlantic St	1,430	0	50	0
Westbound I-80 at Eastbound Atlantic St	1,150	0	175	25
Westbound I-80 at Douglas Blvd	1,530	425	425	450
Northbound SR 65 at Northbound Stanford Ranch Rd	1,170	425	375	400
Northbound SR 65 at Southbound Stanford Ranch Rd	1,800	100	125	125
Northbound SR 65 at Pleasant Grove Blvd	1,420	175	175	200
Northbound SR 65 at Blue Oaks Blvd	1,100	225	200	200
Northbound SR 65 at Sunset Blvd	1,400	250	250	250
Northbound SR 65 at Whitney Ranch Pkwy	1,620	525	475	500
Northbound SR 65 at Twelve Bridges Dr	1,500	150	150	125
Northbound SR 65 at Lincoln Blvd	1,940	400	350	400
Southbound SR 65 at Twelve Bridges Dr	1,500	325	350	300
Southbound SR 65 at Placer Pkwy	1,650	400	400	400
Southbound SR 65 at Sunset Blvd	1,330	225	225	225
Southbound SR 65 at Blue Oaks Blvd	2,260	900	775	975
Southbound SR 65 at Pleasant Grove Blvd	1,130	125	150	150
Southbound SR 65 at Southbound Galleria Blvd	1,130	325	325	350
Southbound SR 65 at Northbound Galleria Blvd	1,780	125	100	125

Note: Bold and underline font indicate queues that exceed the ramp length. Shaded cells indicate a project impact. The reported value is the average maximum peak-hour queue length in feet.

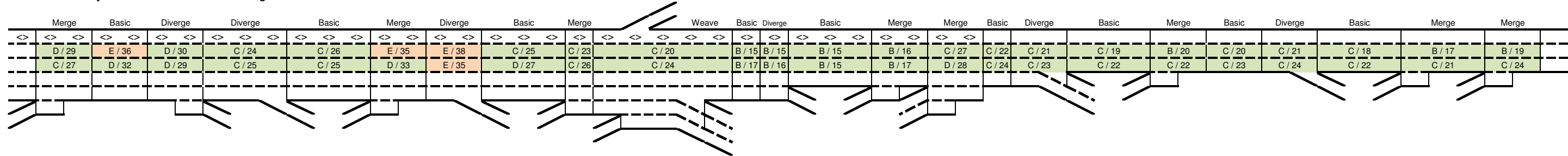
Source: Fehr & Peers, 2014

I-80/SR 65 Interchange
Construction Year
Freeway Operations Results

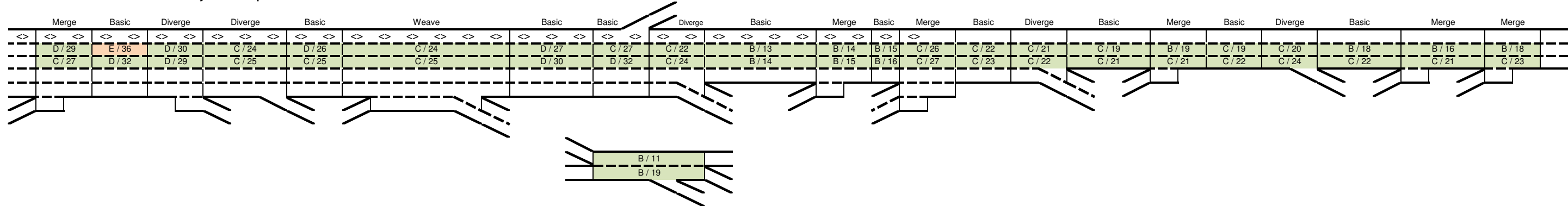
Eastbound I-80



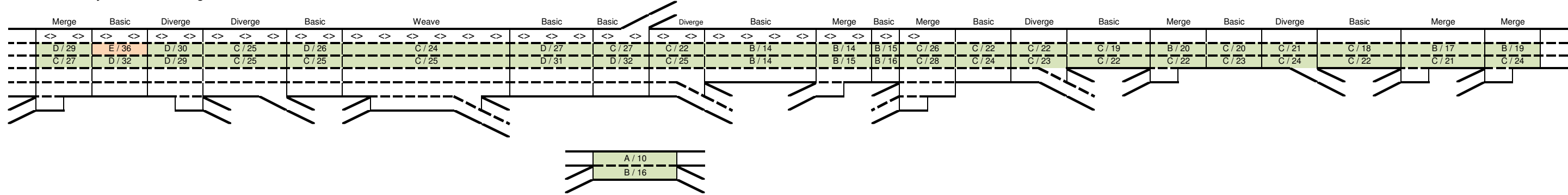
Alternative 1 - Taylor Road Full Access Interchange



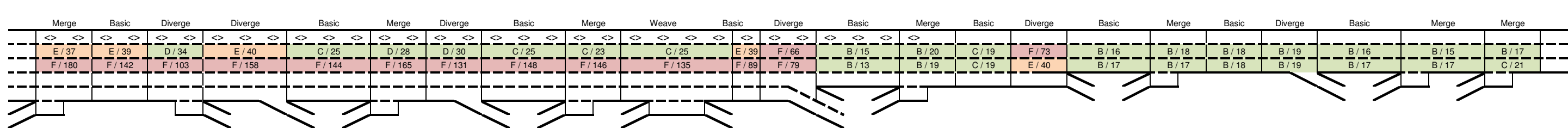
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build

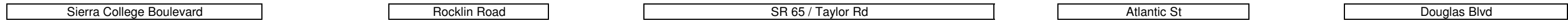


Legend:
 LOS A - D
 LOS E
 LOS F

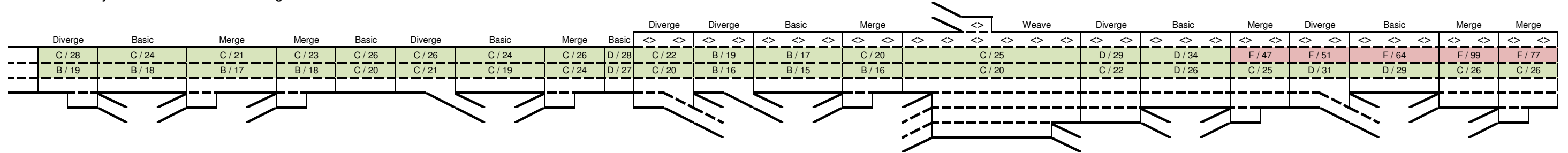
Interchange
 <> HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)

AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

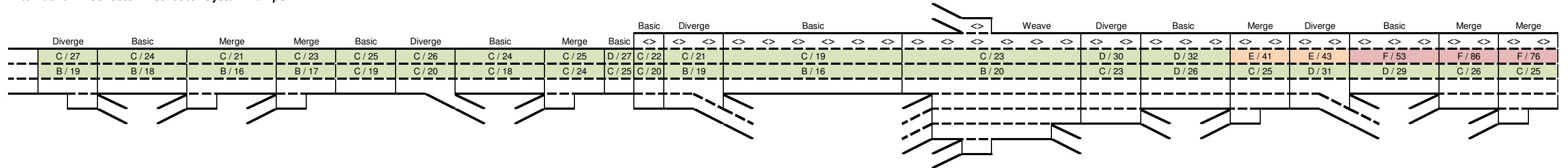
Westbound I-80



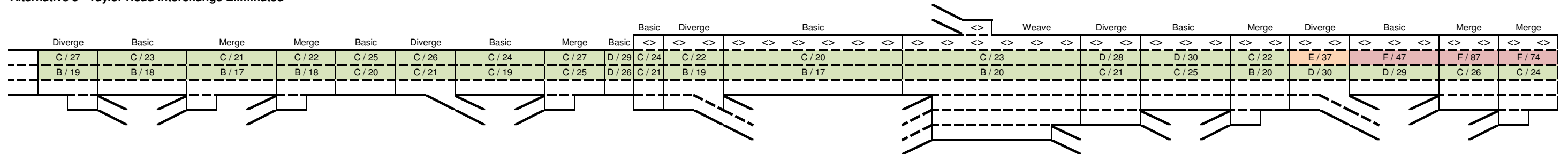
Alternative 1 - Taylor Road Full Access Interchange



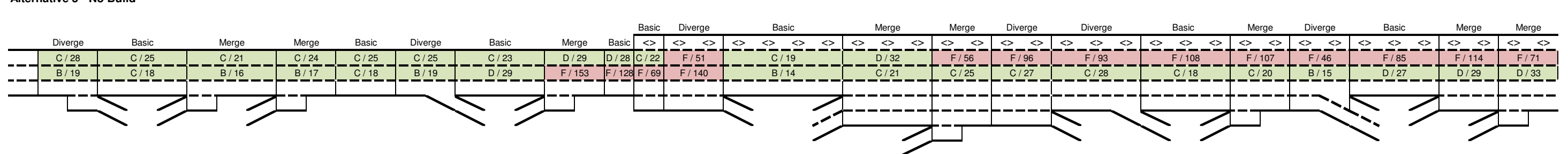
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build

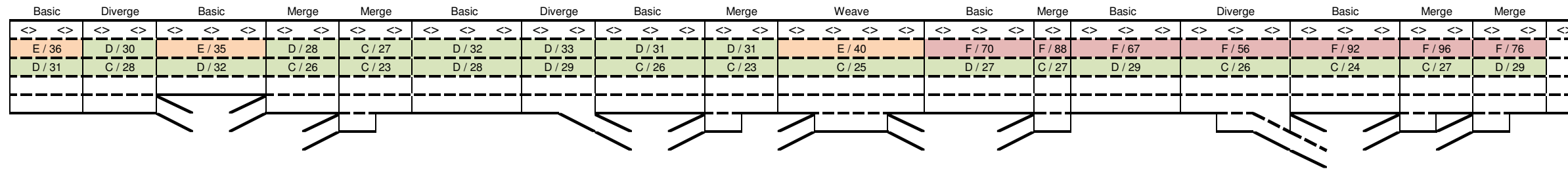


Legend:
 LOS A - D
 LOS E
 LOS F
 Interchange
 HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)
 AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

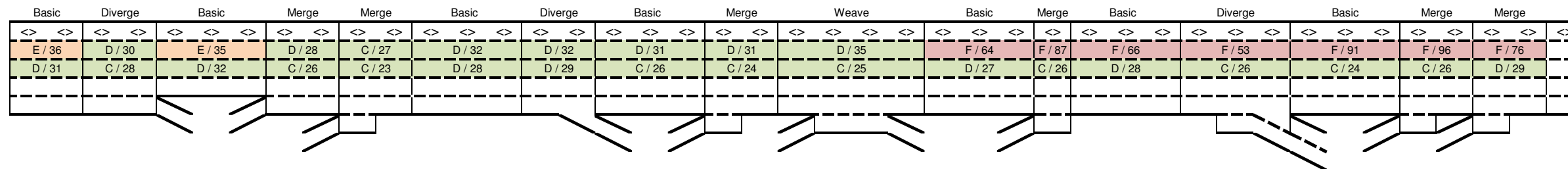
Westbound I-80



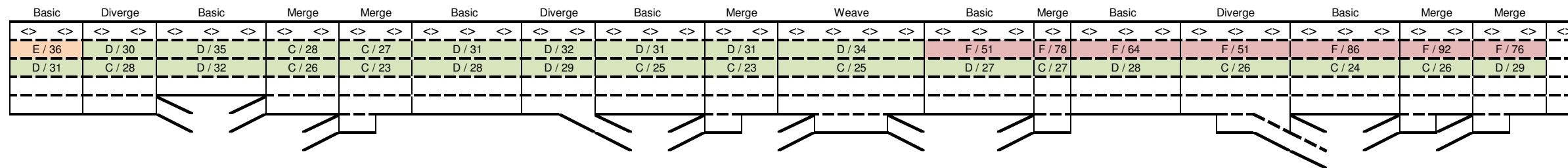
Alternative 1 - Taylor Road Full Access Interchange



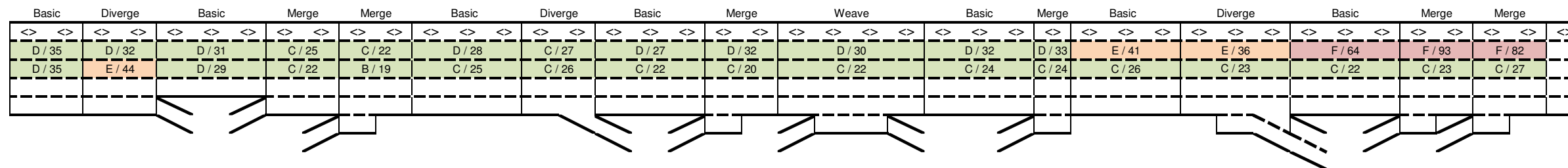
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



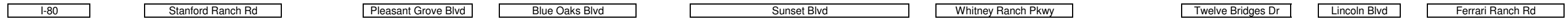
Alternative 5 - No Build



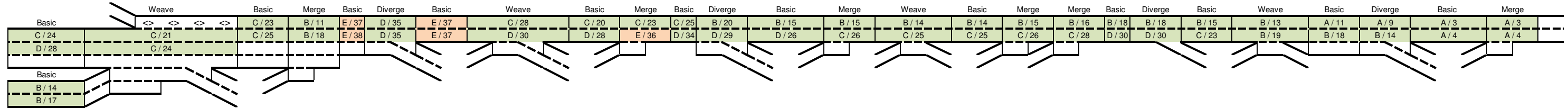
Legend:
 LOS A - D (Green)
 LOS E (Orange)
 LOS F (Red)
 Interchange (Box)
 HOV Lane (Double arrow)
 Facility Type (Basic, Merge, Diverge, or Weave)
 AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

I-80/SR 65 Interchange
Construction Year
Freeway Operations Results

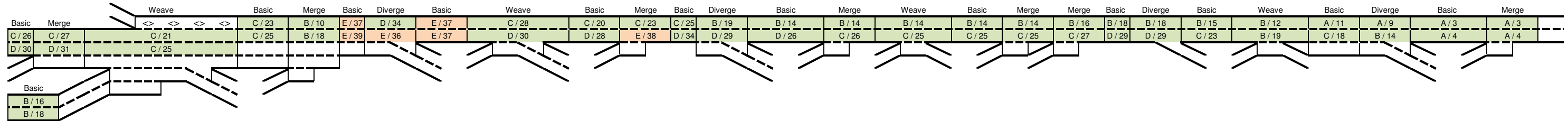
Northbound SR 65



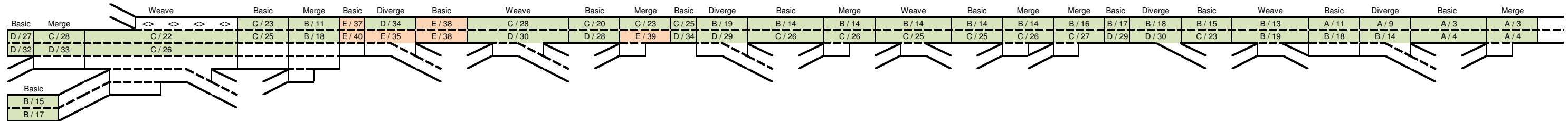
Alternative 1 - Taylor Road Full Access Interchange



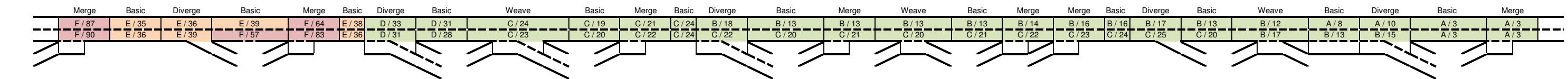
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build

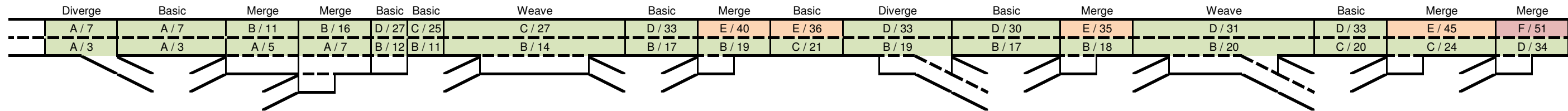


Legend:
 LOS A - D
 LOS E
 LOS F
 Interchange
 HOV Lane
 AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density
 Facility Type (Basic, Merge, Diverge, or Weave)

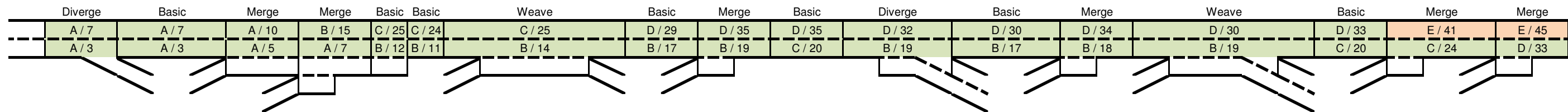
Southbound SR 65



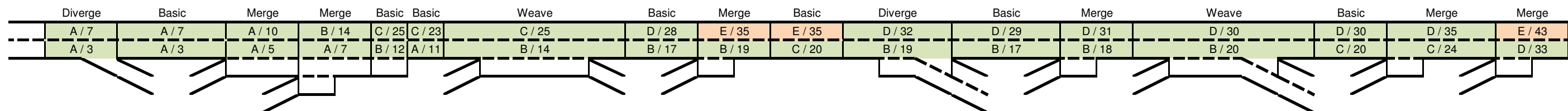
Alternative 1 - Taylor Road Full Access Interchange



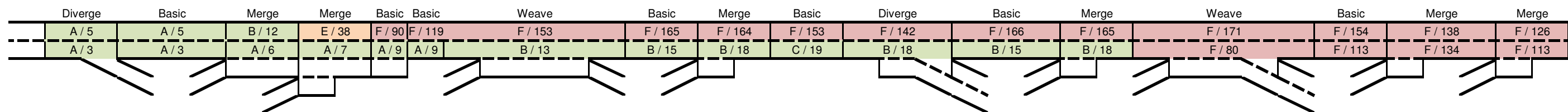
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build

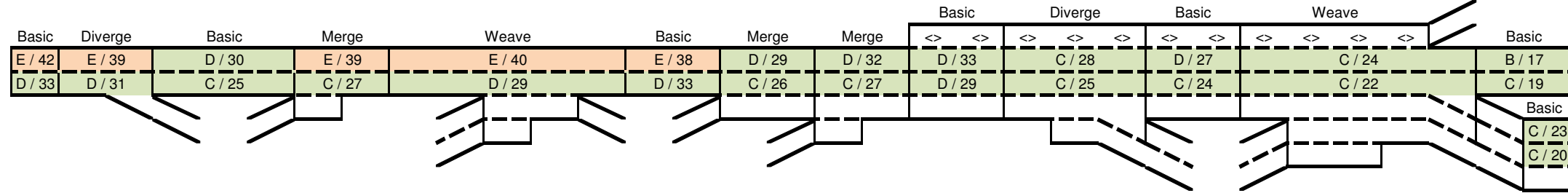


Legend:
 LOS A - D (Green)
 LOS E (Orange)
 LOS F (Red)
 Interchange (Box)
 <> HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)
 AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

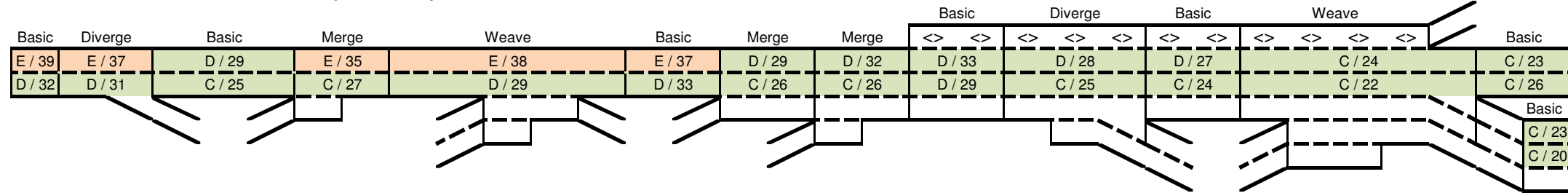
Southbound SR 65



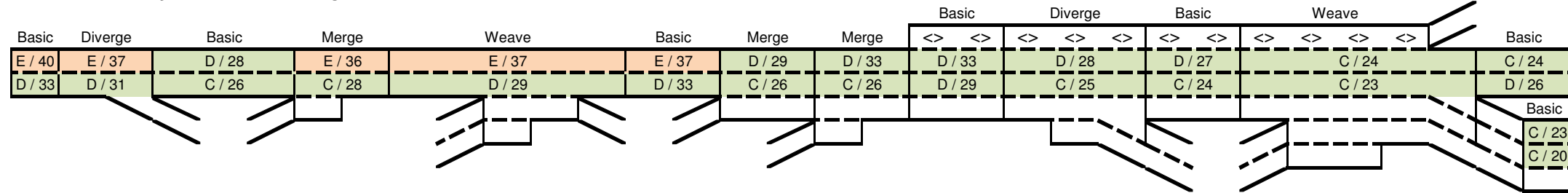
Alternative 1 - Taylor Road Full Access Interchange



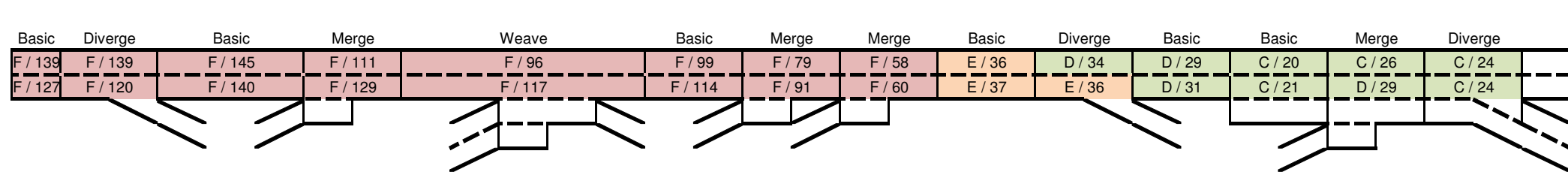
Alternative 2 - Collector-Distributor System Ramps



Alternative 3 - Taylor Road Interchange Eliminated



Alternative 5 - No Build



Legend:
 LOS A - D (Green)
 LOS E (Orange)
 LOS F (Red)
 Interchange (Box)
 <> HOV Lane
 Facility Type (Basic, Merge, Diverge, or Weave)
 AM Peak Hour LOS / Density
 PM Peak Hour LOS / Density

TABLE 30A: INTERSECTION OPERATIONS RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS

Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
1. Lincoln Blvd / Sterling Pkwy	B / 11	B / 11	B / 11	C / 32
2. Twelve Bridges Dr / SR 65 SB Ramps	B / 12	B / 10	A / 10	<u>F / 136</u>
3. Twelve Bridges Dr / SR 65 NB Ramps	B / 10	A / 10	A / 10	<u>F / 89</u>
4. Sunset Blvd / SR 65 SB Ramps	B / 11	B / 12	B / 11	B / 19
5. Sunset Blvd / SR 65 NB Ramps	B / 14	B / 13	B / 12	B / 14
6. Blue Oaks Blvd / Washington Blvd / SR 65 SB Ramps	C / 33	C / 33	C / 33	<u>F / 187</u>
7. Blue Oaks Blvd / SR 65 NB Ramps	B / 12	B / 11	B / 11	B / 12
8. Pleasant Grove Blvd / SR 65 SB Ramps	B / 11	A / 7	A / 7	<u>D / 41</u>
9. Pleasant Grove Blvd / SR 65 NB Ramps	B / 14	B / 14	B / 14	B / 10
10. Stanford Ranch Rd / Five Star Blvd	C / 24	C / 25	C / 24	C / 29
11. Stanford Ranch Rd / SR 65 NB Ramps	A / 7	A / 7	A / 8	C / 27
12. Galleria Blvd / SR 65 SB Ramps	B / 20	B / 19	B / 19	C / 23
13. Galleria Blvd / Antelope Creek Dr	A / 9	B / 11	A / 10	B / 13
14. Galleria Blvd / Roseville Pkwy	C / 31	D / 36	C / 33	D / 36
15. Roseville Pkwy / Creekside Ridge Dr	A / 6	A / 5	A / 6	A / 9
16. Roseville Pkwy / Taylor Rd	D / 47	D / 46	D / 49	<u>F / 130</u>
17. Roseville Pkwy / Sunrise Ave	C / 28	C / 29	C / 30	C / 24
18. Atlantic St / Wills Rd	B / 19	B / 16	B / 19	B / 16
19. Atlantic St / I-80 WB Ramps	C / 29	B / 12	C / 26	B / 16
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	C / 26	C / 28	C / 31	C / 22
21. Eureka Rd / Sunrise Ave	<u>D / 36</u>	C / 34	<u>D / 35</u>	C / 25
22. Harding Blvd / Wills Rd	B / 16	B / 13	B / 14	B / 14
23. Douglas Blvd / Harding Blvd	C / 22	C / 25	C / 23	C / 22
24. Douglas Blvd / I-80 WB Ramps	B / 12	B / 12	B / 12	<u>E / 59</u>
25. Douglas Blvd / I-80 EB Ramps	A / 9	A / 8	A / 9	<u>D / 47</u>
26. Douglas Blvd / Sunrise Ave	D / 35	D / 37	D / 37	C / 30
27. Pacific St / Woodside Dr	A / 7	A / 8	A / 7	A / 9
28. Pacific St / Sunset Blvd	C / 22	C / 22	B / 17	C / 28
29. Rocklin Rd / Granite Dr	B / 18	B / 19	B / 19	C / 21
30. Rocklin Rd / I-80 WB Ramps	C / 29	C / 25	D / 40	D / 37
31. Rocklin Rd / I-80 EB Ramps	D / 39	C / 26	D / 35	<u>E / 70</u>
32. Rocklin Rd / Aguilar Rd	B / 20	B / 11	B / 19	A / 9
33. Lincoln Blvd / SR 65 NB Off-ramp	A / 9	A / 9	A / 9	B / 10

TABLE 30A: INTERSECTION OPERATIONS RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS

Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
34. Lincoln Blvd / SR 65 SB On-ramp	C / 26	C / 26	C / 26	<u>F / 97</u>
35. Placer Pkwy / SR 65 SB Ramps	B / 12	B / 12	B / 12	<u>F / 229</u>
36. Whitney Ranch Pkwy / SR 65 NB Ramps	A / 9	A / 8	A / 8	A / 6
37. Taylor Rd / I-80 Ramps	C / 21	-	-	A / 8

Note: Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported. The outlined area is shown in the main body of the report.

Source: Fehr & Peers, 2014

**TABLE 31A: MAXIMUM QUEUE LENGTH RESULTS –
CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS**

Off-ramp	Storage	Alternative 1	Alternative 2	Alternative 3
Eastbound I-80 at Eastbound Douglas Blvd	1,400	50	125	25
Eastbound I-80 at Westbound Douglas Blvd	1,250	125	125	125
Eastbound I-80 at Eureka Rd	1,700	525	700	825
Eastbound I-80 at Taylor Rd	>1,000	400	25	-
Eastbound I-80 at Rocklin Rd	1,080	275	250	275
Westbound I-80 at Rocklin Rd	1,230	225	200	250
Westbound I-80 at Taylor Rd	>1,000	400	-	-
Westbound I-80 at Westbound Atlantic St	1,430	0	25	0
Westbound I-80 at Eastbound Atlantic St	1,150	0	0	0
Westbound I-80 at Douglas Blvd	1,530	350	400	375
Northbound SR 65 at Northbound Stanford Ranch Rd	1,170	0	0	0
Northbound SR 65 at Southbound Stanford Ranch Rd	1,800	50	75	100
Northbound SR 65 at Pleasant Grove Blvd	1,420	175	150	175
Northbound SR 65 at Blue Oaks Blvd	1,100	125	225	200
Northbound SR 65 at Sunset Blvd	1,400	300	275	300
Northbound SR 65 at Whitney Ranch Pkwy	1,620	175	150	175
Northbound SR 65 at Twelve Bridges Dr	1,500	75	75	75
Northbound SR 65 at Lincoln Blvd	1,940	175	175	175
Southbound SR 65 at Twelve Bridges Dr	1,500	175	175	150
Southbound SR 65 at Placer Pkwy	1,650	225	225	225
Southbound SR 65 at Sunset Blvd	1,330	175	175	175
Southbound SR 65 at Blue Oaks Blvd	2,260	275	275	275
Southbound SR 65 at Pleasant Grove Blvd	1,130	150	150	150
Southbound SR 65 at Southbound Galleria Blvd	1,130	225	250	225
Southbound SR 65 at Northbound Galleria Blvd	1,780	50	25	50

Note: Bold and underline font indicate queues that exceed the ramp length. Shaded cells indicate a project impact. The reported value is the average maximum peak-hour queue length in feet.

Source: Fehr & Peers, 2014

TABLE 32A: INTERSECTION OPERATIONS RESULTS – CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS

Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
1. Lincoln Blvd / Sterling Pkwy	B / 12	B / 15	B / 14	<u>F / 120</u>
2. Twelve Bridges Dr / SR 65 SB Ramps	B / 11	B / 11	B / 11	A / 7
3. Twelve Bridges Dr / SR 65 NB Ramps	B / 12	B / 12	B / 12	A / 8
4. Sunset Blvd / SR 65 SB Ramps	A / 7	A / 6	A / 6	<u>E / 59</u>
5. Sunset Blvd / SR 65 NB Ramps	B / 12	B / 14	B / 14	<u>F / 113</u>
6. Blue Oaks Blvd / Washington Blvd / SR 65 SB Ramps	<u>D / 39</u>	<u>D / 43</u>	<u>D / 40</u>	<u>F / 188</u>
7. Blue Oaks Blvd / SR 65 NB Ramps	B / 11	B / 12	B / 12	C / 26
8. Pleasant Grove Blvd / SR 65 SB Ramps	A / 6	A / 7	A / 8	A / 7
9. Pleasant Grove Blvd / SR 65 NB Ramps	B / 12	B / 13	B / 13	B / 11
10. Stanford Ranch Rd / Five Star Blvd	<u>D / 43</u>	<u>D / 37</u>	<u>D / 37</u>	<u>F / 107</u>
11. Stanford Ranch Rd / SR 65 NB Ramps	B / 11	A / 10	B / 10	D / 45
12. Galleria Blvd / SR 65 SB Ramps	B / 17	B / 16	B / 17	D / 43
13. Galleria Blvd / Antelope Creek Dr	C / 21	C / 20	B / 20	C / 28
14. Galleria Blvd / Roseville Pkwy	E / 61	E / 56	E / 58	<u>F / 227</u>
15. Roseville Pkwy / Creekside Ridge Dr	B / 18	B / 18	B / 17	<u>E / 61</u>
16. Roseville Pkwy / Taylor Rd	D / 48	D / 42	D / 53	D / 37
17. Roseville Pkwy / Sunrise Ave	D / 38	D / 37	D / 37	C / 32
18. Atlantic St / Wills Rd	C / 23	C / 21	C / 29	C / 27
19. Atlantic St / I-80 WB Ramps	B / 17	B / 12	C / 29	<u>D / 36</u>
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	E / 63	E / 77	E / 78	D / 42
21. Eureka Rd / Sunrise Ave	<u>D / 52</u>	<u>E / 63</u>	<u>D / 48</u>	<u>D / 49</u>
22. Harding Blvd / Wills Rd	B / 16	B / 14	B / 16	B / 16
23. Douglas Blvd / Harding Blvd	D / 42	D / 39	D / 49	<u>F / 123</u>
24. Douglas Blvd / I-80 WB Ramps	B / 16	B / 17	B / 18	<u>D / 42</u>
25. Douglas Blvd / I-80 EB Ramps	B / 16	B / 16	B / 10	<u>E / 64</u>
26. Douglas Blvd / Sunrise Ave	D / 50	<u>E / 56</u>	D / 47	<u>F / 203</u>
27. Pacific St / Woodside Dr	A / 8	A / 8	A / 8	A / 10
28. Pacific St / Sunset Blvd	<u>D / 39</u>	<u>D / 43</u>	C / 24	C / 30
29. Rocklin Rd / Granite Dr	<u>F / 101</u>	<u>F / 91</u>	<u>F / 110</u>	<u>F / 170</u>
30. Rocklin Rd / I-80 WB Ramps	D / 40	D / 38	D / 47	<u>F / 82</u>
31. Rocklin Rd / I-80 EB Ramps	D / 38	C / 27	D / 48	<u>F / 115</u>
32. Rocklin Rd / Aguilar Rd	B / 17	B / 18	<u>E / 64</u>	<u>F / 229</u>
33. Lincoln Blvd / SR 65 NB Off-ramp	A / 9	A / 9	A / 9	<u>F / 134</u>

TABLE 32A: INTERSECTION OPERATIONS RESULTS – CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS

Intersection	Alternative 1	Alternative 2	Alternative 3	Alternative 5
34. Lincoln Blvd / SR 65 SB On-ramp	C / 30	C / 27	C / 27	<u>F / 138</u>
35. Placer Pkwy / SR 65 SB Ramps	B / 14	B / 15	B / 15	A / 6
36. Whitney Ranch Pkwy / SR 65 NB Ramps	B / 13	B / 14	B / 14	A / 9
37. Taylor Rd / I-80 Ramps	C / 22	-	-	-
Note: Bold and underline font indicate unacceptable operations. The LOS and average delay in seconds per vehicle are reported. The outlined area is shown in the main body of the report.				
Source: Fehr & Peers, 2014				

**TABLE 33A: MAXIMUM QUEUE LENGTH RESULTS –
CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS**

Off-ramp	Storage	Alternative 1	Alternative 2	Alternative 3
Eastbound I-80 at Eastbound Douglas Blvd	1,400	0	0	0
Eastbound I-80 at Westbound Douglas Blvd	1,250	225	275	275
Eastbound I-80 at Eureka Rd	1,700	900	525	1,325
Eastbound I-80 at Taylor Rd	>1,000	225	125	-
Eastbound I-80 at Rocklin Rd	1,080	400	275	350
Westbound I-80 at Rocklin Rd	1,230	225	250	300
Westbound I-80 at Taylor Rd	>1,000	225	-	-
Westbound I-80 at Westbound Atlantic St	1,430	0	25	0
Westbound I-80 at Eastbound Atlantic St	1,150	0	0	0
Westbound I-80 at Douglas Blvd	1,530	375	350	375
Northbound SR 65 at Northbound Stanford Ranch Rd	1,170	25	125	0
Northbound SR 65 at Southbound Stanford Ranch Rd	1,800	175	200	150
Northbound SR 65 at Pleasant Grove Blvd	1,420	175	175	175
Northbound SR 65 at Blue Oaks Blvd	1,100	200	250	200
Northbound SR 65 at Sunset Blvd	1,400	200	225	225
Northbound SR 65 at Whitney Ranch Pkwy	1,620	250	275	275
Northbound SR 65 at Twelve Bridges Dr	1,500	100	100	125
Northbound SR 65 at Lincoln Blvd	1,940	275	250	250
Southbound SR 65 at Twelve Bridges Dr	1,500	150	150	175
Southbound SR 65 at Placer Pkwy	1,650	200	175	175
Southbound SR 65 at Sunset Blvd	1,330	125	125	125
Southbound SR 65 at Blue Oaks Blvd	2,260	275	250	250
Southbound SR 65 at Pleasant Grove Blvd	1,130	125	125	150
Southbound SR 65 at Southbound Galleria Blvd	1,130	250	225	225
Southbound SR 65 at Northbound Galleria Blvd	1,780	100	125	125

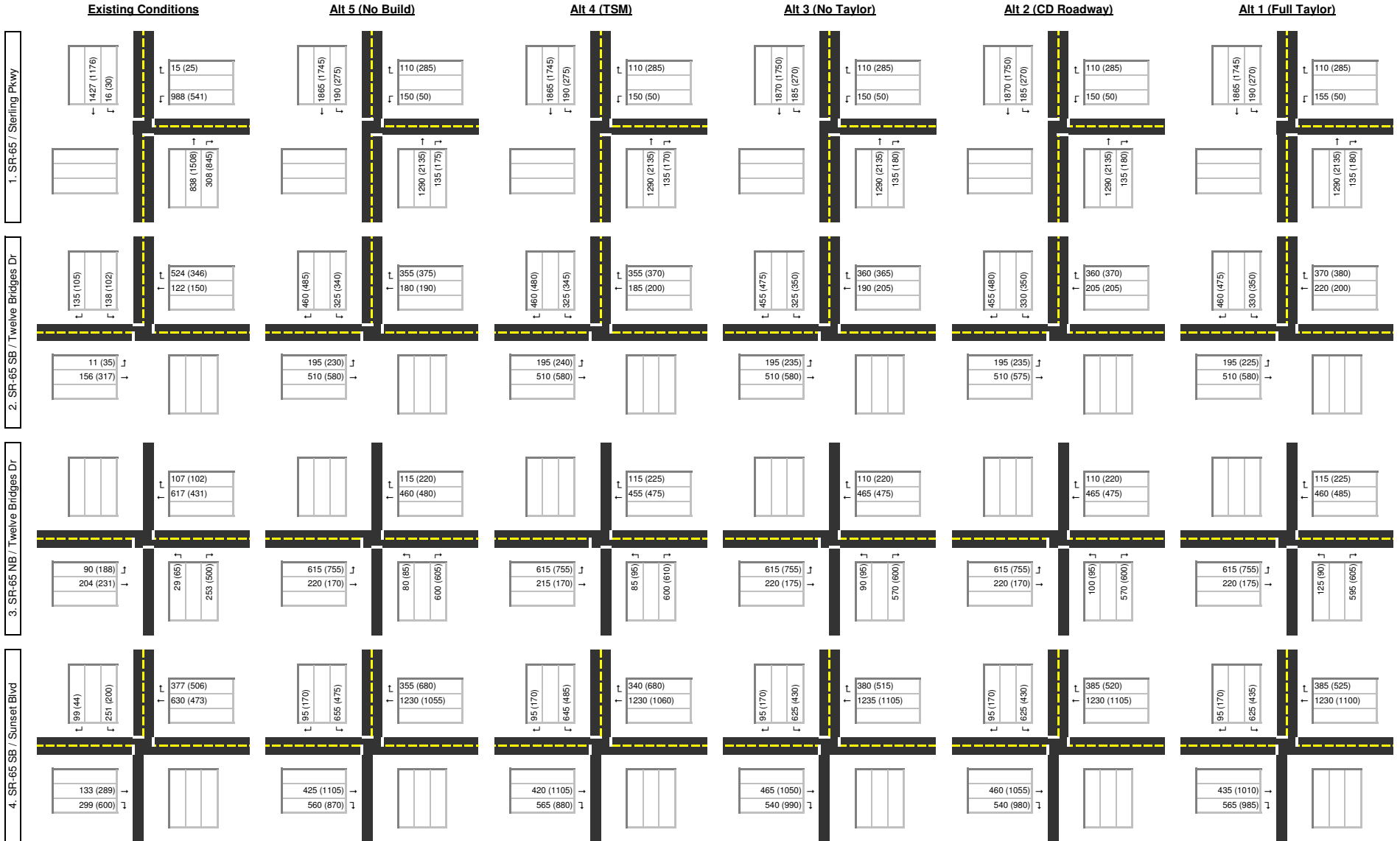
Note: Bold and underline font indicate queues that exceed the ramp length. Shaded cells indicate a project impact. The reported value is the average maximum peak-hour queue length in feet.

Source: Fehr & Peers, 2014

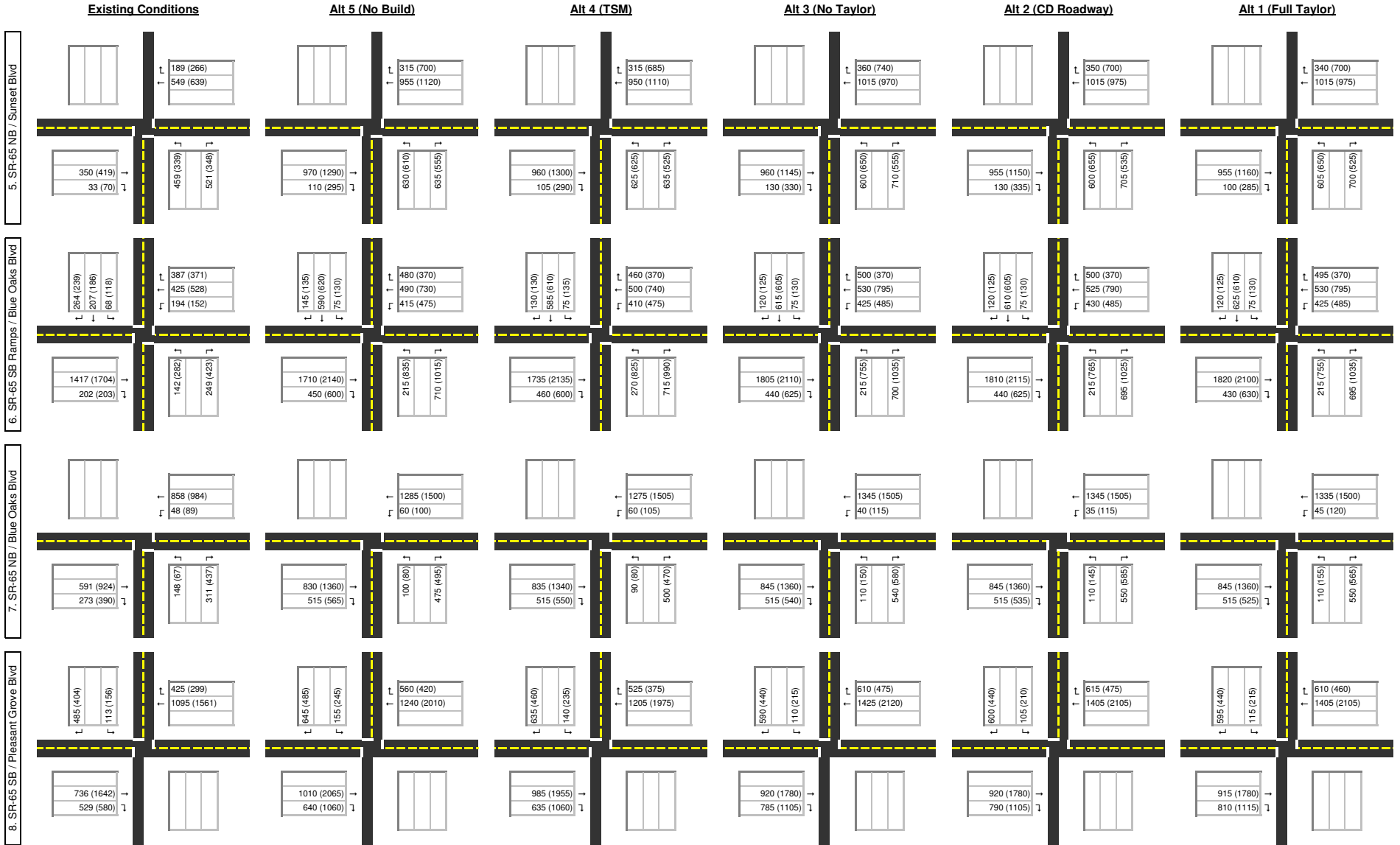
I-80/SR 65 Interchange Improvements

Intersection Volumes – Design Year

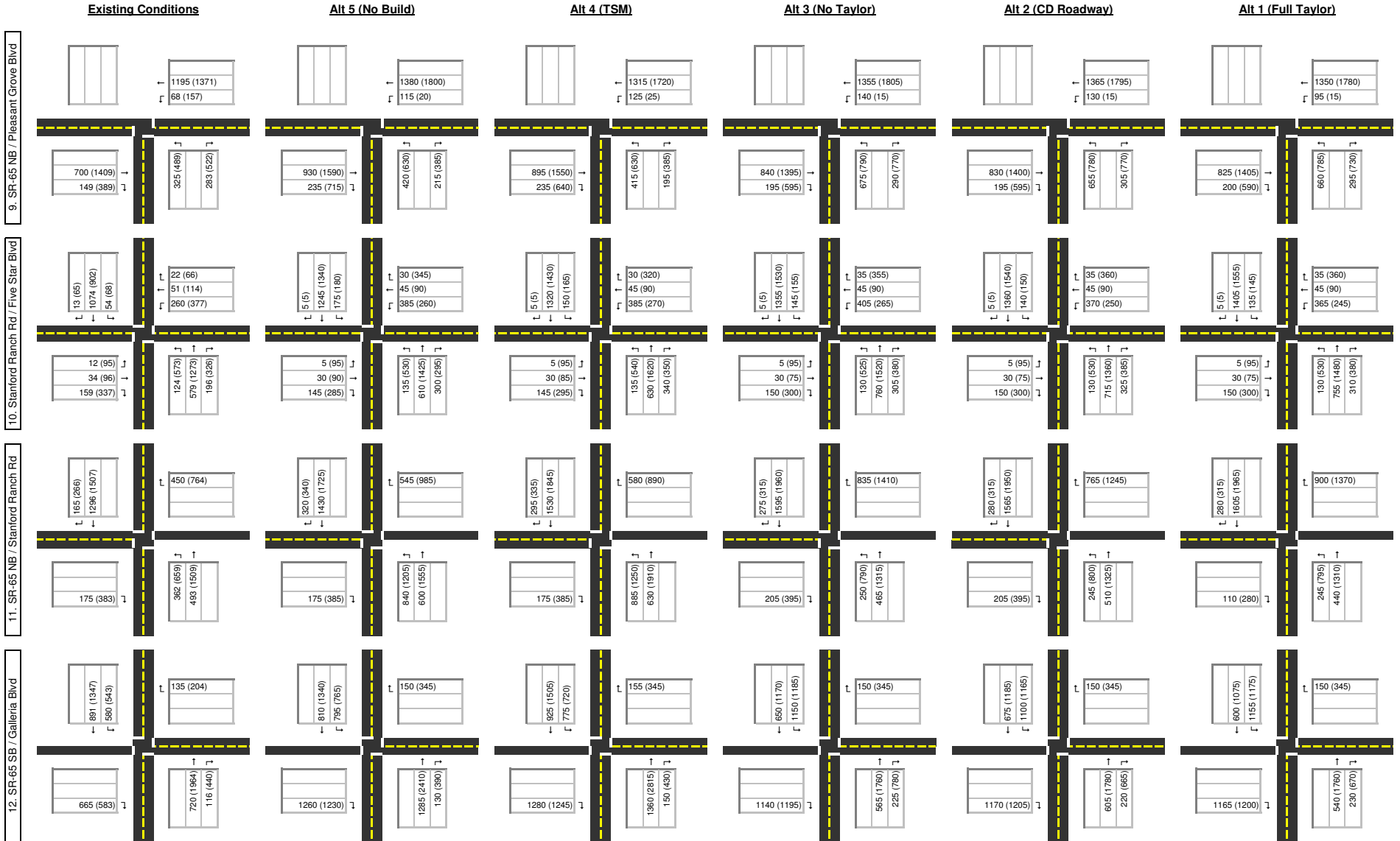
**I-80 / SR-65 Interchange
Design Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Design Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Design Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Design Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Design Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Design Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Design Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Design Year Forecasts
AM (PM) Peak Hour Volumes**



I-80 / SR-65 Interchange
 Design Year Forecasts
 AM (PM) Peak Hour Volumes



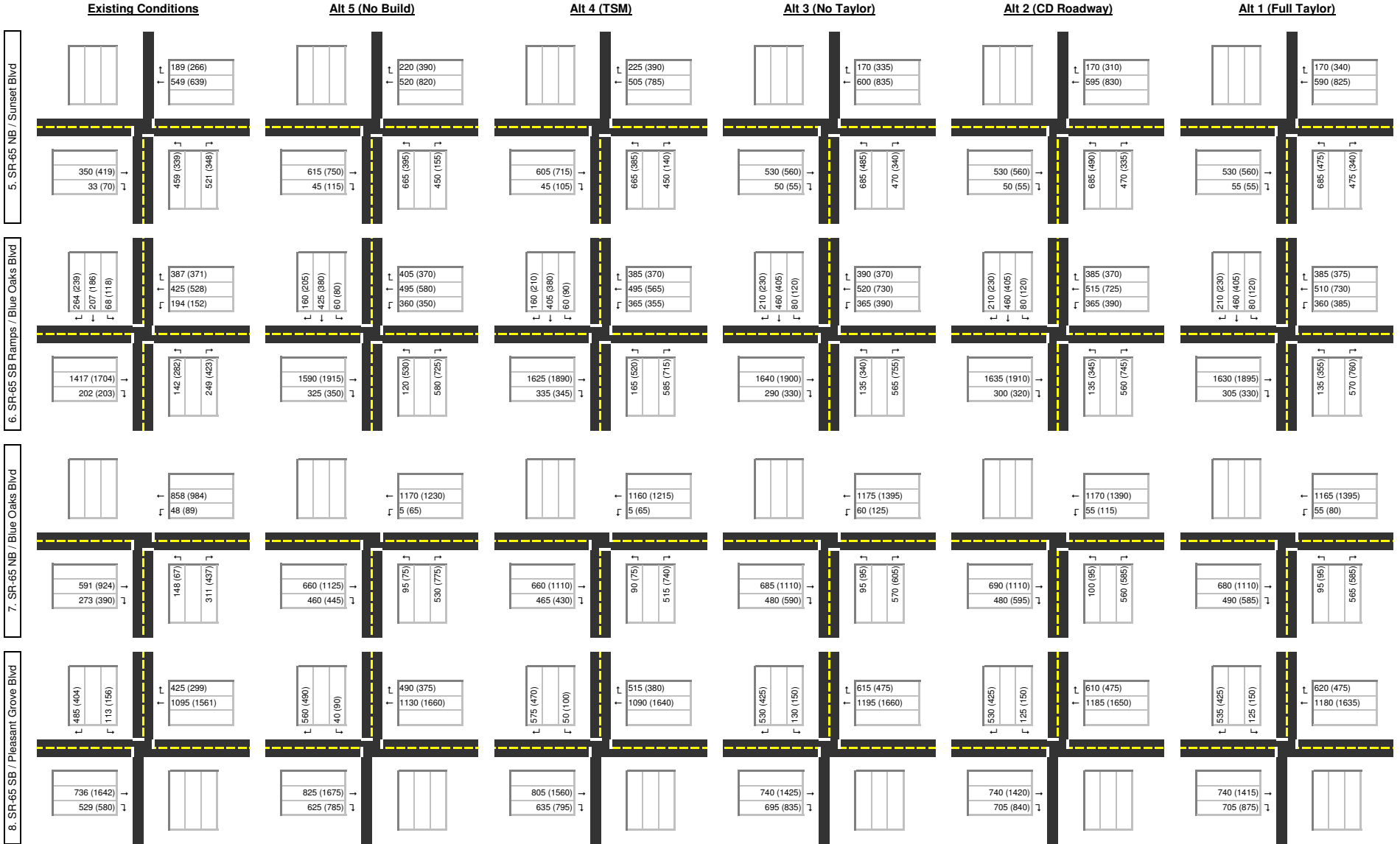
I-80/SR 65 Interchange Improvements

Intersection Volumes – Construction Year

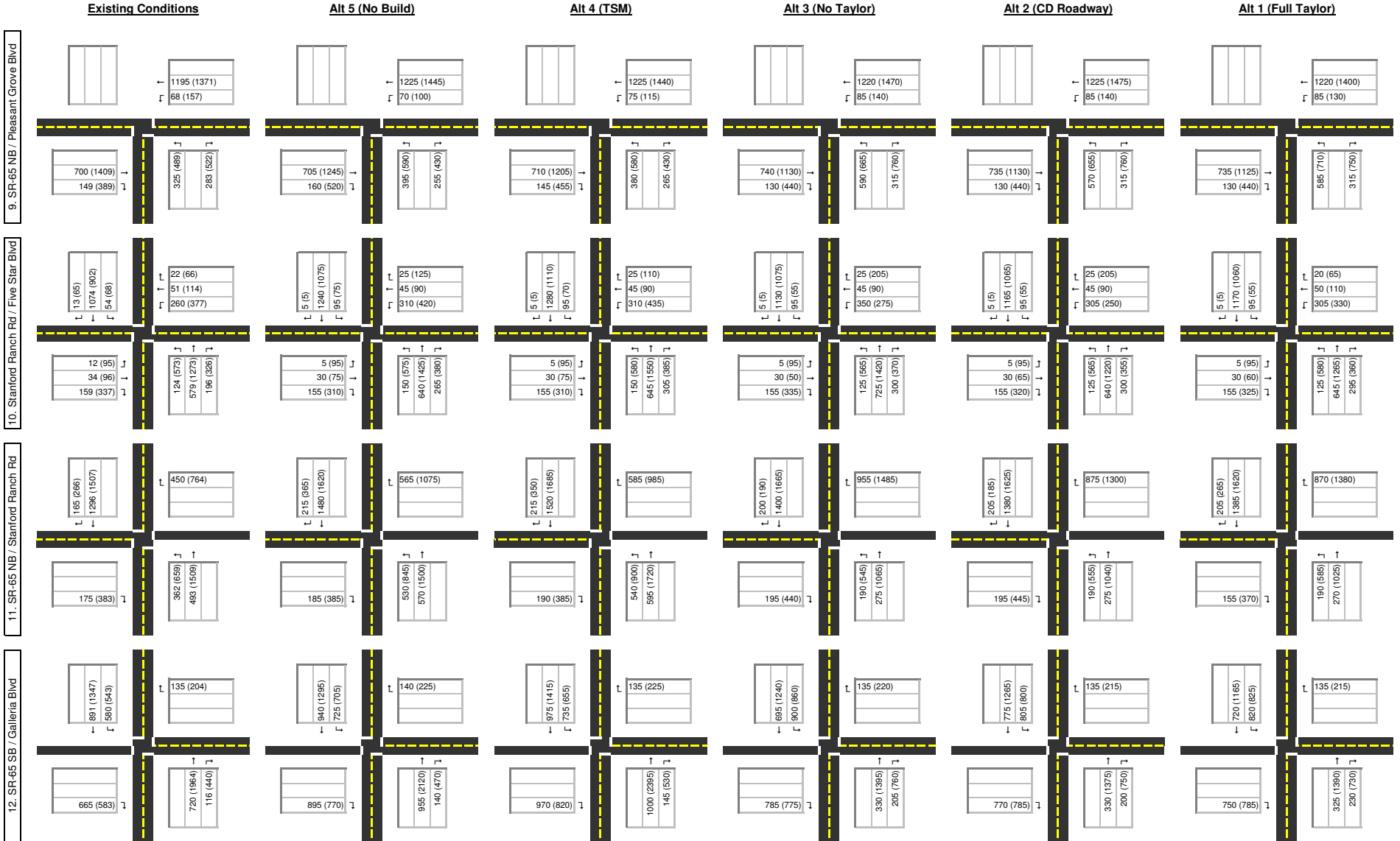
I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes



**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



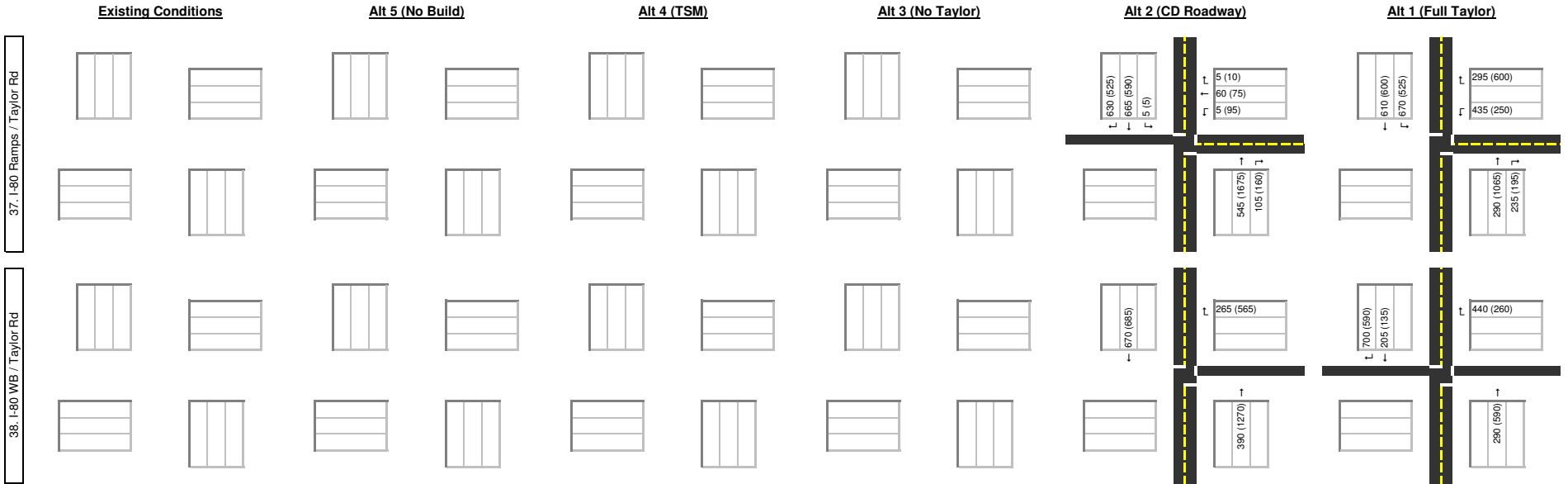
**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



**I-80 / SR-65 Interchange
Construction Year Forecasts
AM (PM) Peak Hour Volumes**



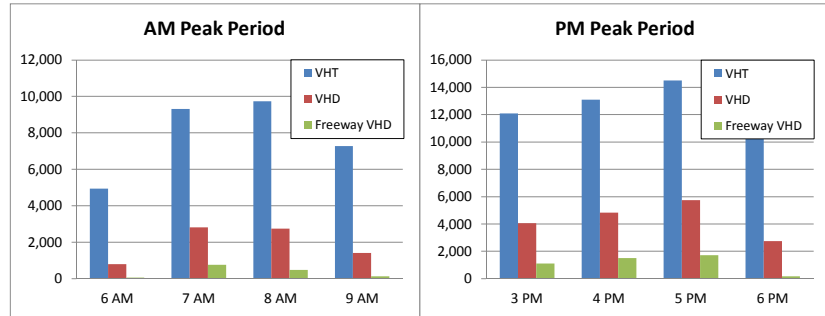
I-80/SR 65 Interchange Improvements

VMT by Speed Bin

I-80/SR-65 Interchange
Existing Conditions

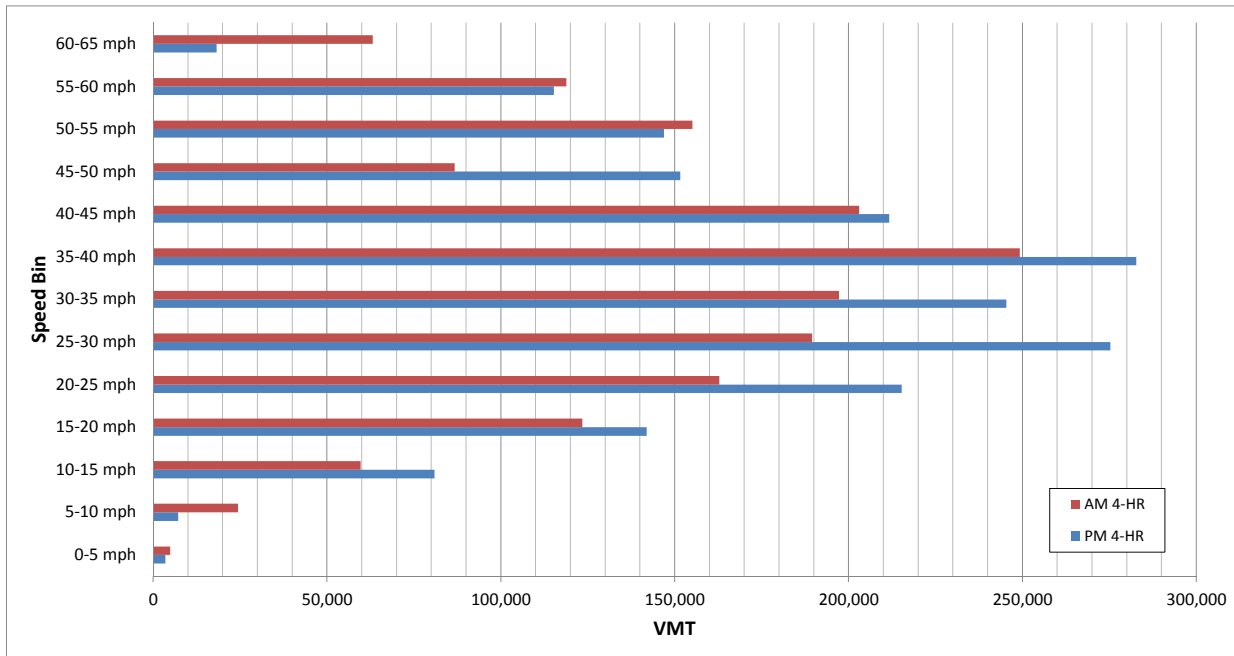
Time	VHT	VHD	Freeway	
			VHD	VMT
6 AM	4,955	815	71	222,524
7 AM	9,325	2,820	768	326,342
8 AM	9,752	2,750	487	342,530
9 AM	7,281	1,422	133	290,677
AM 4-HR	31,314	7,807	1,459	1,182,073
3 PM	12,101	4,072	1,118	388,230
4 PM	13,111	4,838	1,510	399,194
5 PM	14,507	5,760	1,740	418,208
6 PM	10,249	2,753	195	357,162
PM 4-HR	49,967	17,423	4,564	1,562,794
AM & PM	81,281	25,230	6,023	2,744,867

Freeway VHD is delay when speed is less than 35 mph on freeway links



VMT by Speed Bin

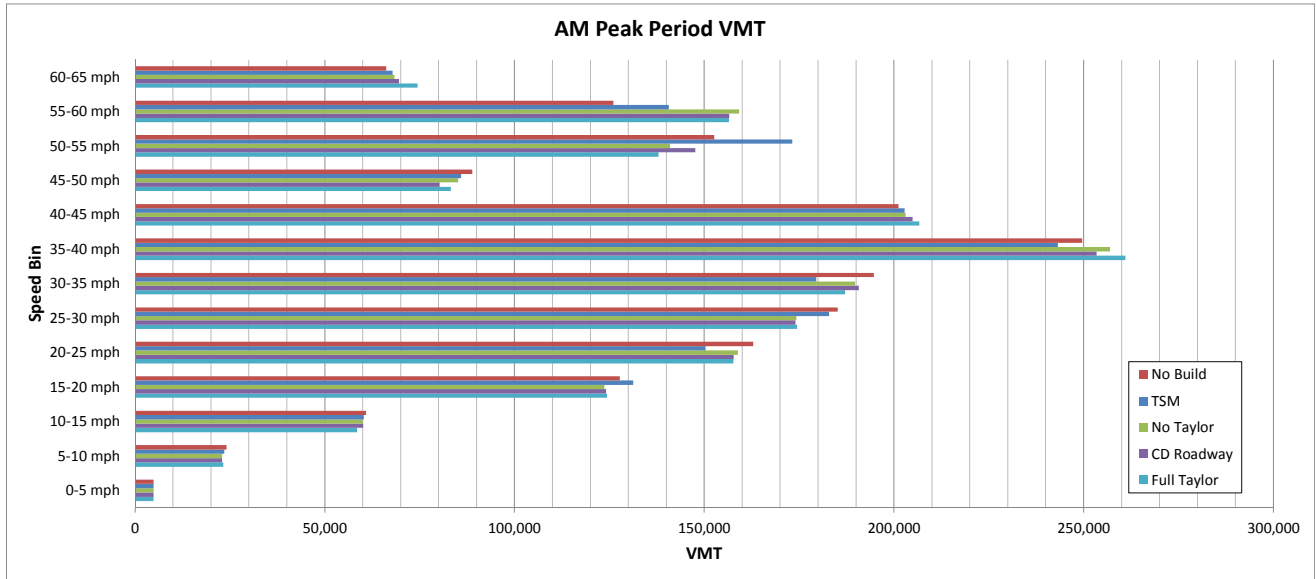
Time	0-5 mph	5-10 mph	10-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph
6 AM	0	20	137	645	19,035	9,907	30,264	43,004	49,530	10,970	19,087	44,052	33,441
7 AM	898	1,734	6,784	46,117	62,160	58,011	67,869	76,657	51,912	24,558	38,864	18,977	5,002
8 AM	2,759	18,713	36,875	47,933	42,238	77,382	52,406	66,414	55,494	35,443	35,724	18,724	10,493
9 AM	1,200	3,910	15,849	28,721	39,373	44,156	46,698	63,137	46,069	15,678	61,416	37,048	14,161
AM 4-HR	4,856	24,377	59,646	123,416	162,806	189,457	197,237	249,212	203,006	86,650	155,092	118,801	63,097
3 PM	986	1,718	10,411	37,741	60,415	71,338	61,776	72,526	58,693	42,953	39,499	23,065	3,348
4 PM	923	2,580	32,375	39,279	61,525	67,866	62,203	82,481	51,583	42,338	34,833	19,799	2,422
5 PM	920	2,593	32,268	32,268	56,983	71,846	70,372	66,839	59,471	41,140	36,252	19,949	2,403
6 PM	652	258	5,883	32,596	36,277	64,218	51,007	60,898	41,940	25,173	36,280	52,444	10,076
PM 4-HR	3,480	7,149	80,936	141,884	215,201	275,268	245,359	282,745	211,688	151,605	146,864	115,257	18,248
AM & PM	8,337	31,526	140,582	265,300	378,006	464,725	442,596	531,956	414,693	238,254	301,955	234,059	81,345



**I-80/SR-65 Interchange
Alternative Comparison
Construction Year**

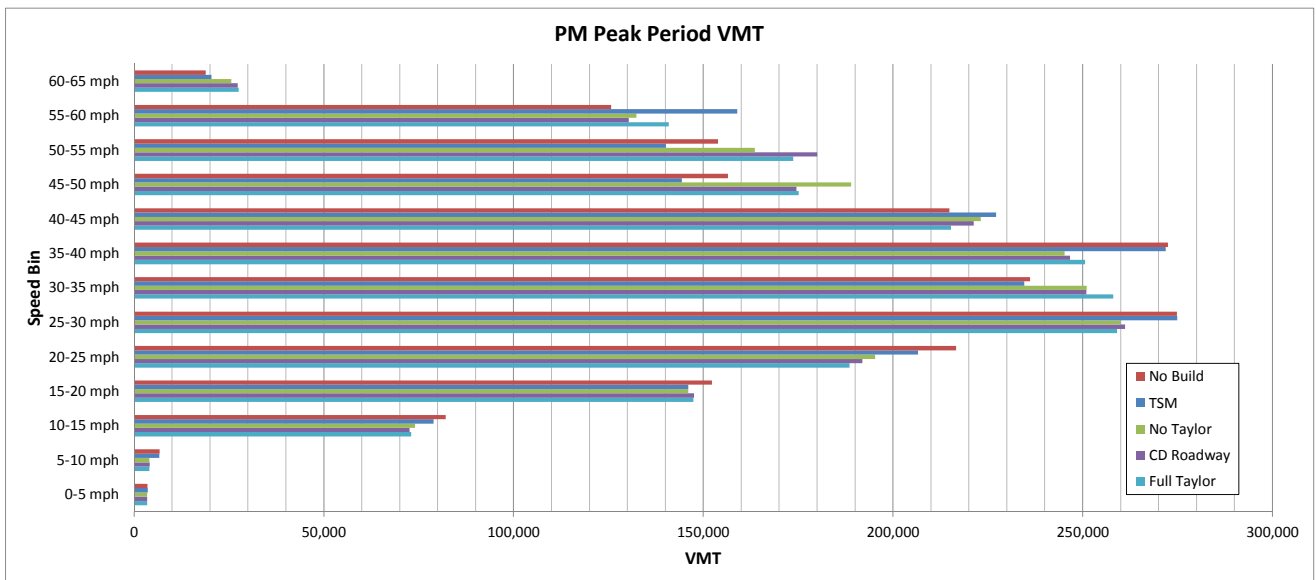
AM Peak Period

Alt	VMT by Speed Bin												
	0-5 mph	5-10 mph	10-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph
No Build	4,841	24,038	60,805	127,677	162,862	185,144	194,696	249,582	201,130	88,817	152,614	125,998	66,170
TSM	4,878	23,438	60,230	131,262	150,318	182,839	179,490	243,147	202,798	85,868	173,197	140,581	67,859
No Taylor	4,860	22,865	59,994	123,686	158,830	174,243	189,737	256,887	202,985	85,137	140,917	159,138	68,360
CD Roadway	4,856	22,870	60,044	124,076	157,707	174,050	190,738	253,409	204,906	80,247	147,575	156,561	69,486
Full Taylor	4,858	23,236	58,508	124,376	157,691	174,429	187,073	260,970	206,664	83,186	137,901	156,430	74,455



PM Peak Period

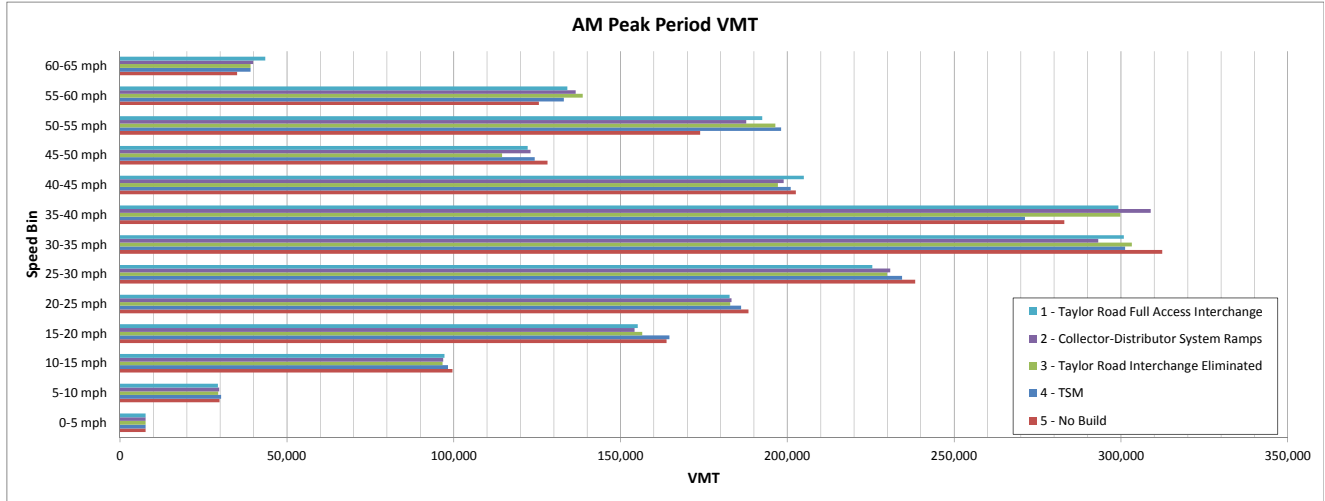
Alt	VMT by Speed Bin												
	0-5 mph	5-10 mph	10-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph
No Build	3,482	6,710	82,122	152,253	216,642	274,749	236,071	272,409	214,814	156,477	153,849	125,648	18,803
TSM	3,546	6,613	78,923	146,014	206,569	274,865	234,568	271,808	227,103	144,324	140,143	158,930	20,366
No Taylor	3,401	3,991	74,021	146,003	195,231	259,997	250,998	245,230	223,102	188,914	163,594	132,347	25,589
CD Roadway	3,402	4,091	72,575	147,555	191,854	261,160	250,896	246,663	221,206	174,501	179,986	130,336	27,294
Full Taylor	3,400	3,968	72,960	147,371	188,528	259,036	258,016	250,623	215,265	175,122	173,671	140,834	27,532



**I-80/SR-65 Interchange
Alternative Comparison
Design Year**

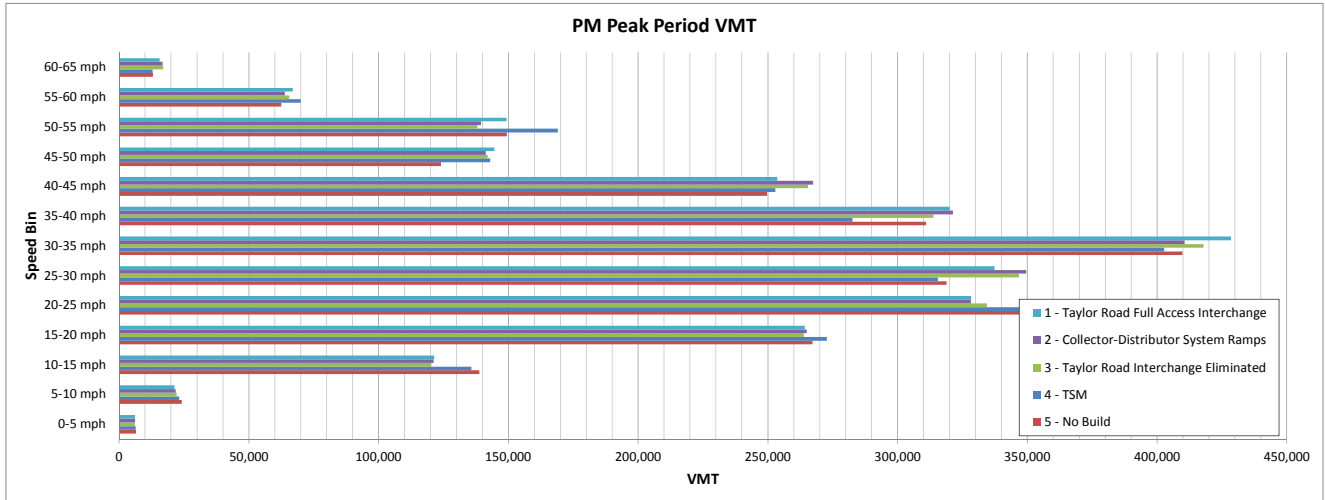
AM Peak Period

Alternative	VMT by Speed Bin												
	0-5 mph	5-10 mph	10-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph
1 - Taylor Road Full Access Interchange	7,647	29,351	97,214	155,117	182,666	225,491	300,842	299,215	204,900	122,169	192,441	134,065	43,514
2 - Collector-Distributor System Ramps	7,646	29,664	96,858	154,223	183,311	230,868	293,179	308,924	198,862	123,032	187,694	136,534	39,849
3 - Taylor Road Interchange Eliminated	7,648	29,406	96,640	156,534	182,891	229,849	303,256	299,788	197,207	114,511	196,443	138,670	39,070
4 - TSM	7,652	30,269	98,305	164,671	186,191	234,440	301,253	271,212	201,015	124,267	198,164	132,962	39,146
5 - No Build	7,658	29,844	99,621	163,772	188,337	238,372	312,358	283,011	202,538	128,147	173,869	125,532	35,049



PM Peak Period

Alternative	VMT by Speed Bin												
	0-5 mph	5-10 mph	10-15 mph	15-20 mph	20-25 mph	25-30 mph	30-35 mph	35-40 mph	40-45 mph	45-50 mph	50-55 mph	55-60 mph	60-65 mph
1 - Taylor Road Full Access Interchange	6,069	21,318	121,469	264,240	328,346	337,386	428,523	320,152	253,612	144,590	149,340	66,871	15,648
2 - Collector-Distributor System Ramps	6,116	21,810	121,160	264,995	328,233	349,576	410,613	321,360	267,412	141,234	139,423	63,855	16,686
3 - Taylor Road Interchange Eliminated	6,002	22,220	120,270	263,891	334,407	346,694	417,930	313,827	265,490	142,070	138,045	65,510	16,978
4 - TSM	6,436	23,086	135,689	272,795	371,521	315,536	402,741	282,660	252,941	142,964	169,001	70,069	12,961
5 - No Build	6,439	24,119	138,866	267,170	384,065	318,886	409,726	310,929	249,654	123,975	149,400	62,470	13,027



I-80/SR 65 Interchange Improvements

Sensitivity Tests

David Stanek

From: David Stanek
Sent: Thursday, September 05, 2013 9:19 AM
To: 'Leo.Heuston@CH2M.com'; jim.calkins@dot.ca.gov; christine_zdunkiewicz@dot.ca.gov; scott_w_mann@dot.ca.gov; william_mack@dot.ca.gov; samuel.jordan@dot.ca.gov; D Michael Smith (d_michael_smith@dot.ca.gov); Ronald Milam; lmcneel-caird@pctpa.net; D Michael Smith (d.michael.smith@dot.ca.gov)
Cc: Chris.Benson@CH2M.com; Lauren.Proctor@ch2m.com; Katie Jackson; Mann, Scott W@DOT
Subject: Material for Sep 11 Traffic Focus Meeting
Attachments: July-August 80-65 Traffic Correspondence.docx; Sensitivity Test 1.pdf; Sensitivity Test 2.pdf; I-80EB_ContourMaps Sens Test 3.pdf

Please review the attached material for the September 11 meeting on the I-80/SR-65 Interchange traffic analysis.

- The memo summarizes the comments and responses among the project team during July and August.
- The pdf files show the sensitivity test results.

The three sensitivity test results are discussed below. We will discuss these results during the meeting next week.

Sensitivity Test 1

This test investigates closing the westbound slip off-ramp to Atlantic Street. With a combined two-lane loop off-ramp, the weaving segment between SR 65 and Atlantic St operates with LOS C during the AM peak hour under design year conditions with the No Taylor Alternative. The Synchro results for the reconfigured westbound I-80 ramp terminal intersection at Atlantic Street show acceptable LOS B conditions. The 95th percentile queue for the off-ramp is about 150 ft for the left turns. The existing free movement for the right turns is assumed to remain.

Sensitivity Test 2

The table shows the Leisch Method analysis results for I-80 weaving segments under the design year for the No Taylor Alternative. For each segment, the LOS is listed along with two failure (LOS F) conditions. The first shows the amount of overall traffic growth needed until LOS F occurs. The second shows the change in the proportion of on-ramp traffic destined for the freeway (as opposed to the downstream on-ramp).

The first segment – Douglas Blvd to Eureka Rd – has LOS F conditions, even with the auxiliary lane and 2-lane off-ramp. In the simulation, this segment is not LOS F due to an upstream constraint at the Douglas Blvd slip off-ramp. A decrease in overall volume by 2% would yield LOS E conditions. Similarly, a change from 91% to 88% of the ramp to mainline proportion would result in LOS E.

The segment of greatest concern – Eureka Rd to SR 65 – has LOS D conditions. The volume would need to grow by 25% to have LOS F according to the Leisch Method. The ramp to mainline percentage would have to increase from 27% (as previously mentioned, 73% of the Eureka Rd on-ramp goes to SR-65) to 63%.

The other segments have LOS E or better conditions. The SR 65 to Atlantic St segment would need significant growth to show LOS F conditions. Given the higher volume on the adjacent loop off-ramp, this segment was calculated two different ways: the second one includes the loop off as part of the “off-ramp” volume.

Sensitivity Test 3

As previously reported, increasing the distance at which vehicles in the model become aware of the SR-65 off-ramp creates more congestion upstream. Drivers that anticipate the off-ramp overload the rightmost lane between the Eureka Rd off-ramp and loop on-ramp. The attached contour map shows the additional congestion, which would only occur around the Eureka Rd interchange.

Decreasing the awareness distance generates more vehicles “diving over” at the last minute to take the SR-65 off-ramp. This test showed similar results in the speed contour map as the original settings. No additional congestion would result.

David Stanek, P.E.

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Leisch Method for Weaving Analysis

Data Input

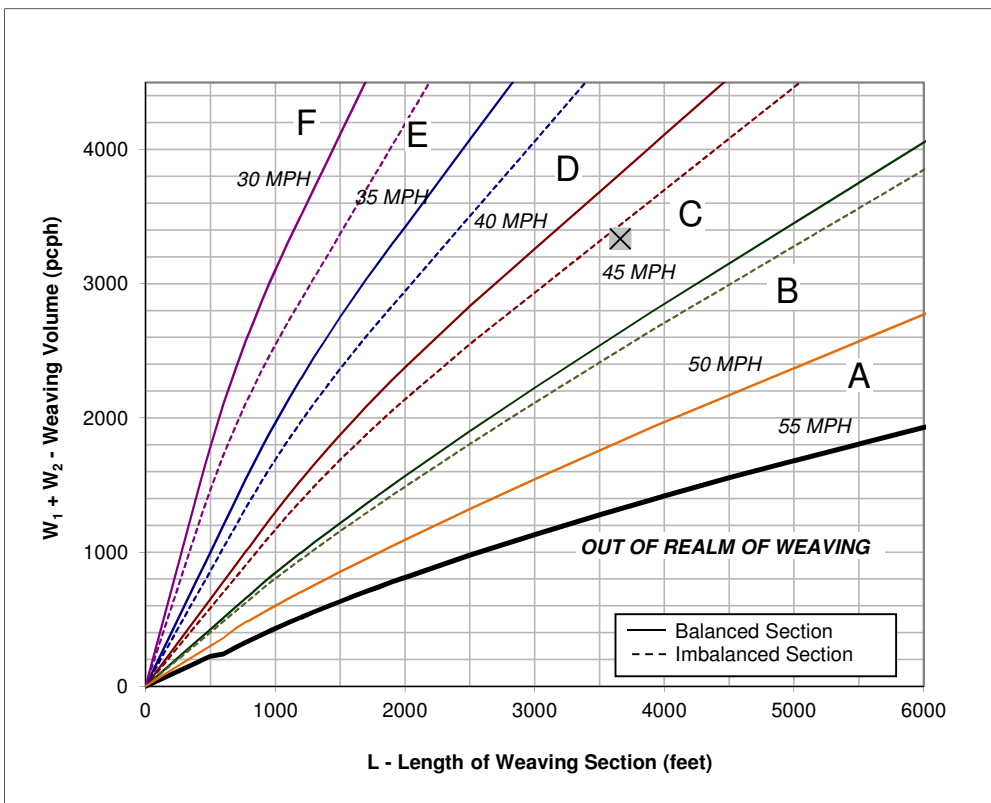
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	3,660

Project Information

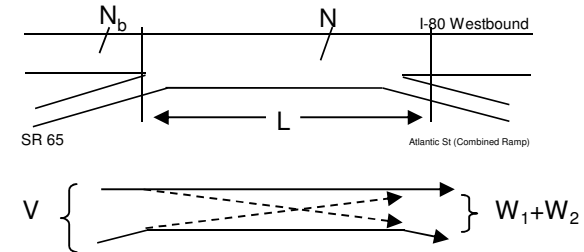
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor PM	
Freeway	I-80 Westbound	
On-ramp	SR 65	
Off-ramp	Atlantic St (Combined Ramp)	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,550	Volume (vph)*	2,660	Volume (vph)*	560
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,779	Volume (pcph)	2,753	Volume (pcph)	580

	Entering Volume	Growth
Mainline	2,830	100%
On-ramp	3,720	<u>Ramp Split</u>
Off-ramp	1,620	72%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

40 MPH and 45 MPH

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 42.1
4. Weaving Intensity Factor (k) 3.10
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 1,333
6. Level of Service (LOS) C

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

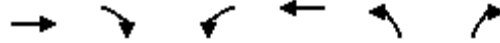
* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Timings

19: Atlantic St & I-80 WB On-Ramp

8/29/2013



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↙↘	↑↑	↙↘	↙
Volume (vph)	874	268	637	536	385	1186
Turn Type		Perm	Prot			Free
Protected Phases	2		1	6	8	
Permitted Phases		2				Free
Detector Phase	2	2	1	6	8	
Switch Phase						
Minimum Initial (s)	8.0	8.0	3.0	8.0	4.0	
Minimum Split (s)	19.7	19.7	7.0	13.7	8.5	
Total Split (s)	28.0	28.0	30.0	58.0	22.0	0.0
Total Split (%)	35.0%	35.0%	37.5%	72.5%	27.5%	0.0%
Yellow Time (s)	4.7	4.7	3.0	4.7	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	-2.0	-2.0	-2.0	2.0	0.0	0.0
Total Lost Time (s)	3.7	3.7	2.0	7.7	4.5	4.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?						
Recall Mode	Max	Max	C-Max	None	None	
Act Effect Green (s)	24.3	24.3	31.1	53.4	14.4	80.0
Actuated g/C Ratio	0.30	0.30	0.39	0.67	0.18	1.00
v/c Ratio	0.60	0.42	0.50	0.24	0.66	0.80
Control Delay	26.9	8.4	21.5	7.9	35.5	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	8.4	21.5	7.9	35.5	4.4
LOS	C	A	C	A	D	A
Approach Delay	22.6			15.3	12.0	
Approach LOS	C			B	B	

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 57 (71%), Referenced to phase 1:WBL, Start of Green

Natural Cycle: 50

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 16.1

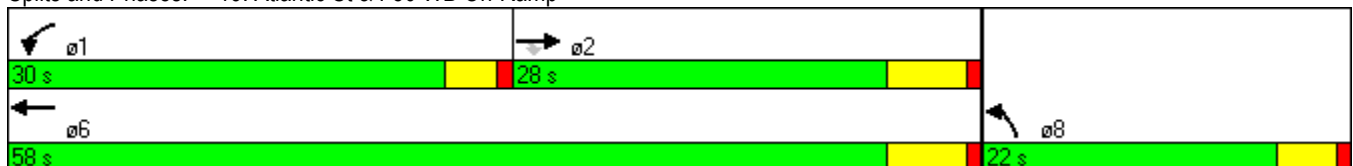
Intersection LOS: B

Intersection Capacity Utilization 56.8%

ICU Level of Service B

Analysis Period (min) 15

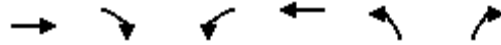
Splits and Phases: 19: Atlantic St & I-80 WB On-Ramp



Queues

19: Atlantic St & I-80 WB On-Ramp

8/29/2013



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Group Flow (vph)	920	282	671	564	405	1248
v/c Ratio	0.60	0.42	0.50	0.24	0.66	0.80
Control Delay	26.9	8.4	21.5	7.9	35.5	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.9	8.4	21.5	7.9	35.5	4.4
Queue Length 50th (ft)	162	14	168	86	97	0
Queue Length 95th (ft)	301	208	m179	m90	136	0
Internal Link Dist (ft)	1051			1192	393	
Turn Bay Length (ft)		255				
Base Capacity (vph)	1545	667	1335	2362	751	1562
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.42	0.50	0.24	0.54	0.80

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

19: Atlantic St & I-80 WB On-Ramp

8/29/2013

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑	↖↗	↑↑	↖↗	↖
Volume (vph)	874	268	637	536	385	1186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	3.7	2.0	7.7	4.5	4.0
Lane Util. Factor	0.91	1.00	0.97	0.95	0.97	1.00
Frpb, ped/bikes	1.00	0.98	1.00	1.00	1.00	0.99
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	5085	1551	3433	3539	3433	1562
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	5085	1551	3433	3539	3433	1562
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	920	282	671	564	405	1248
RTOR Reduction (vph)	0	196	0	0	0	0
Lane Group Flow (vph)	920	86	671	564	405	1248
Confl. Peds. (#/hr)		5				5
Turn Type		Perm	Prot			Free
Protected Phases	2		1	6	8	
Permitted Phases		2				Free
Actuated Green, G (s)	22.3	22.3	29.1	55.4	14.4	80.0
Effective Green, g (s)	24.3	24.3	31.1	53.4	14.4	80.0
Actuated g/C Ratio	0.30	0.30	0.39	0.67	0.18	1.00
Clearance Time (s)	5.7	5.7	4.0	5.7	4.5	
Vehicle Extension (s)	3.4	3.4	2.0	3.0	3.0	
Lane Grp Cap (vph)	1545	471	1335	2362	618	1562
v/s Ratio Prot	0.18		0.20	0.16	0.12	
v/s Ratio Perm		0.06				c0.80
v/c Ratio	0.60	0.18	0.50	0.24	0.66	0.80
Uniform Delay, d1	23.7	20.5	18.6	5.3	30.5	0.0
Progression Factor	1.07	3.09	1.09	1.41	1.00	1.00
Incremental Delay, d2	1.6	0.8	0.6	0.0	2.5	4.4
Delay (s)	26.8	64.1	20.9	7.5	33.0	4.4
Level of Service	C	E	C	A	C	A
Approach Delay (s)	35.6			14.8	11.4	
Approach LOS	D			B	B	

Intersection Summary

HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Weaving Segment Sensitivity Tests

2040 No Taylor Alternative

Freeway	From	To	Peak Hour	LOS	Growth for LOS E	Growth for LOS F	On to ML Percent Modeled	For LOS F
EB 80	Douglas Blvd	Eureka Rd	PM	F	-2%	0% ¹	91%	88%
EB 80	Eureka Rd	SR 65	PM	D	11%	25%	27%	63%
WB 80	SR 65	Atlantic St WB	AM	C	23%	36%	97%	²
WB 80	SR 65	Atlantic St WB & EB*	AM	D	9%	29%	79%	²
WB 80	Douglas Blvd WB & EB*	Riverside Ave	PM	E	0% ³	2%	96%	100%

Notes

* Ramps are combined, but the weaving length does not include distance between ramps

1. Douglas to Eureka segment is at LOS F. A decrease of 2% in volumes would result in LOS E.

Changing from 91 to 88% on-ramp to mainline percentage would result in LOS E.

2. Increasing the on-ramp to mainline percentage to 100% does not result in LOS F.

3. Douglas to Riverside segment is at LOS E.

Leisch Method for Weaving Analysis

Data Input

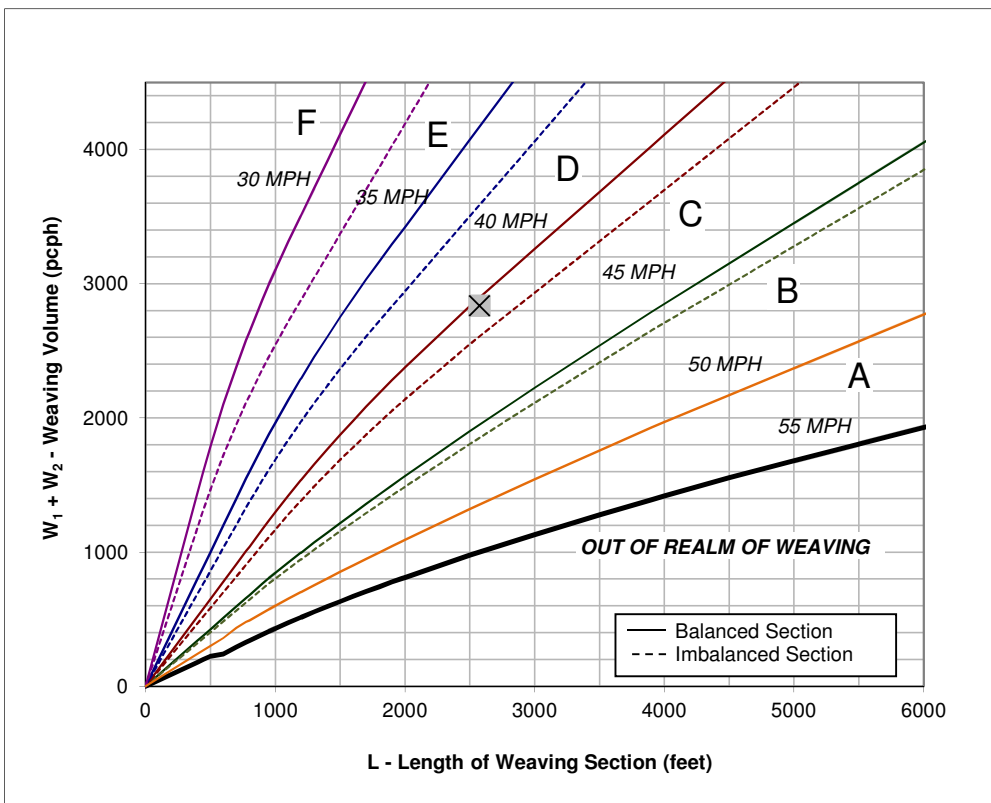
Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,575

Project Information

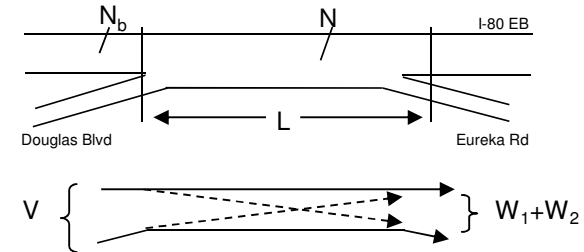
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor PM	
Freeway	I-80 EB	
On-ramp	Douglas Blvd	
Off-ramp	Eureka Rd	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,675	Volume (vph)*	1,640	Volume (vph)*	1,100
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,944	Volume (pcph)	1,697	Volume (pcph)	1,139

	Entering Volume	Growth
Mainline	5,690	100%
On-ramp	1,800	Ramp Split
Off-ramp	1,260	91%
HOV	1,450	13%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

40 MPH and **45 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 40.3
4. Weaving Intensity Factor (k) 2.51
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 1,933
6. Level of Service (LOS) F

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

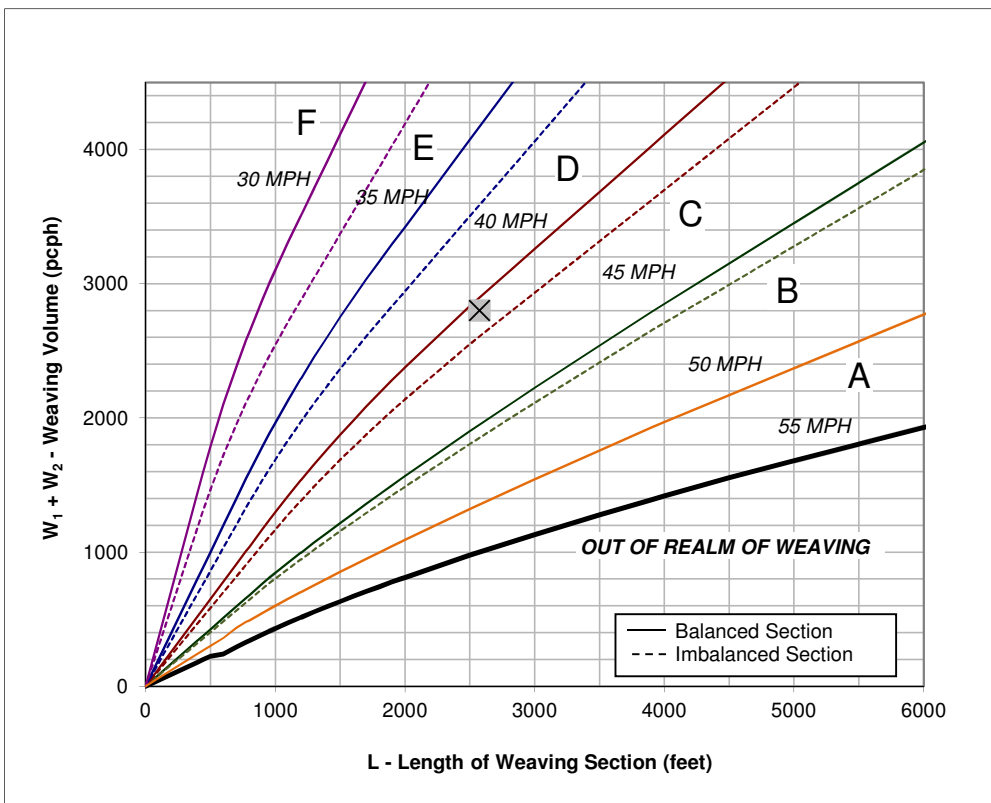
Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,575

Project Information

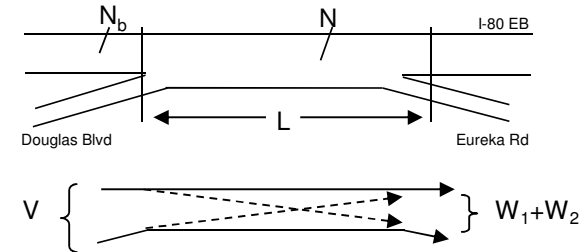
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor PM	
Freeway	I-80 EB	
On-ramp	Douglas Blvd	
Off-ramp	Eureka Rd	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,520	Volume (vph)*	1,605	Volume (vph)*	1,100
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,783	Volume (pcph)	1,661	Volume (pcph)	1,139

	Entering Volume	Growth
Mainline	5,575	98%
On-ramp	1,765	Ramp Split
Off-ramp	1,260	91%
HOV	1,420	13%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

40 MPH and **45 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 40.5
4. Weaving Intensity Factor (k) 2.49
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 1,896
6. Level of Service (LOS) E

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

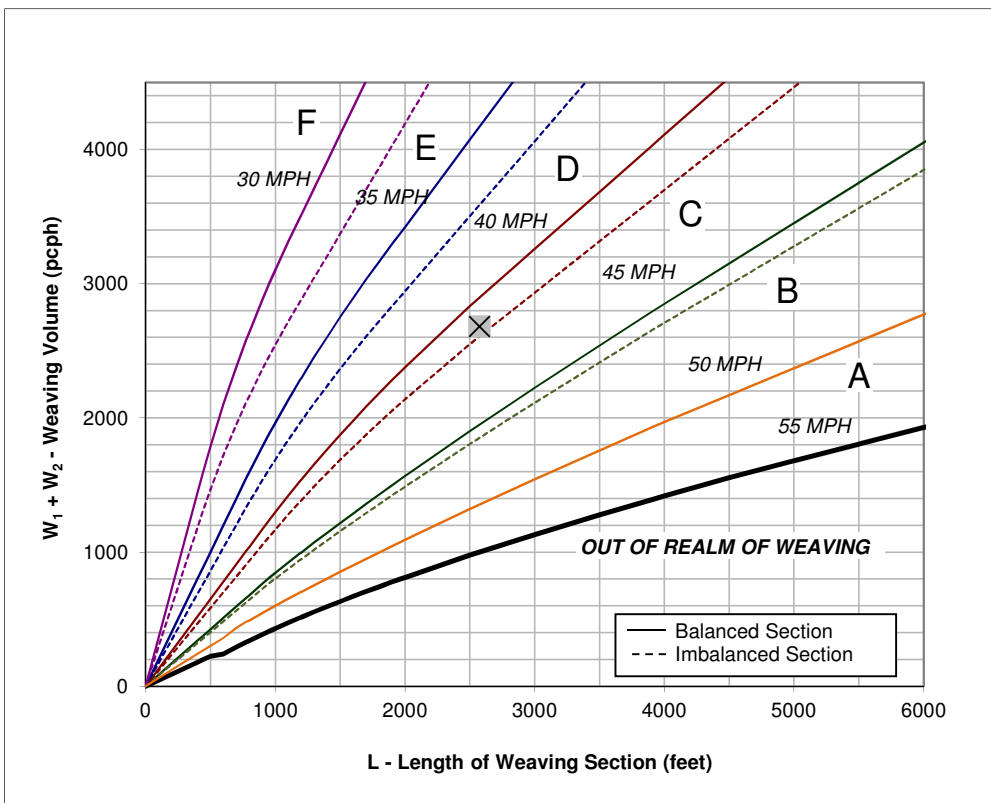
Number of Entering Mainline Lanes	N_b	4
Number of Lanes in Weaving Section	N	5
Length of Weaving Section (feet)	L	2,575

Project Information

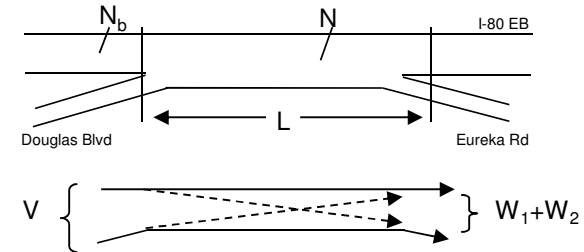
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor PM	
Freeway	I-80 EB	
On-ramp	Douglas Blvd	
Off-ramp	Eureka Rd	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,675	Volume (vph)*	1,565	Volume (vph)*	1,025
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,944	Volume (pcph)	1,620	Volume (pcph)	1,061

	Entering Volume	Growth
Mainline	5,690	100%
On-ramp	1,800	Ramp Split
Off-ramp	1,260	87%
HOV	1,450	13%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

40 MPH and **45 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 41.1
4. Weaving Intensity Factor (k) 2.43
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 1,892
6. Level of Service (LOS) E

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

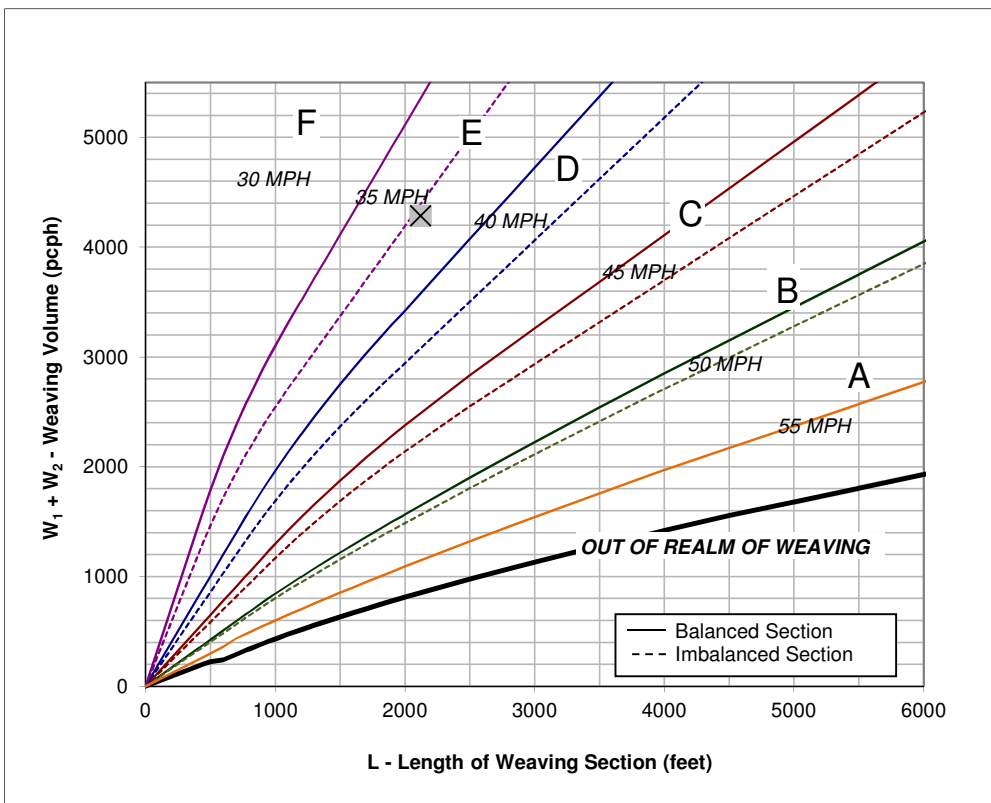
Number of Entering Mainline Lanes	N_b	5
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,120

Project Information

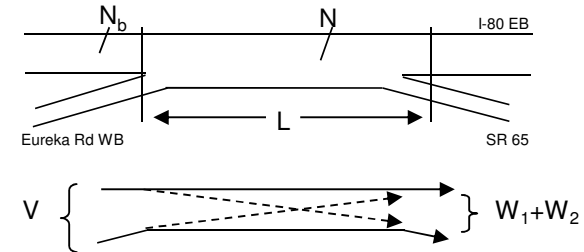
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor PM	
Freeway	I-80 EB	
On-ramp	Eureka Rd WB	
Off-ramp	SR 65	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	7,900	Volume (vph)*	385	Volume (vph)*	3,755
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	8,177	Volume (pcph)	398	Volume (pcph)	3,886

	Entering Volume	Growth
Mainline	6,480	100%
On-ramp	1,420	Ramp Split
Off-ramp	4,790	27%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

30 MPH and 35 MPH

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

- Interpolated Weaving Speed (S_w , mph) 33.0
- Weaving Intensity Factor (k) 3.00
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 1,496
- Level of Service (LOS) D

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

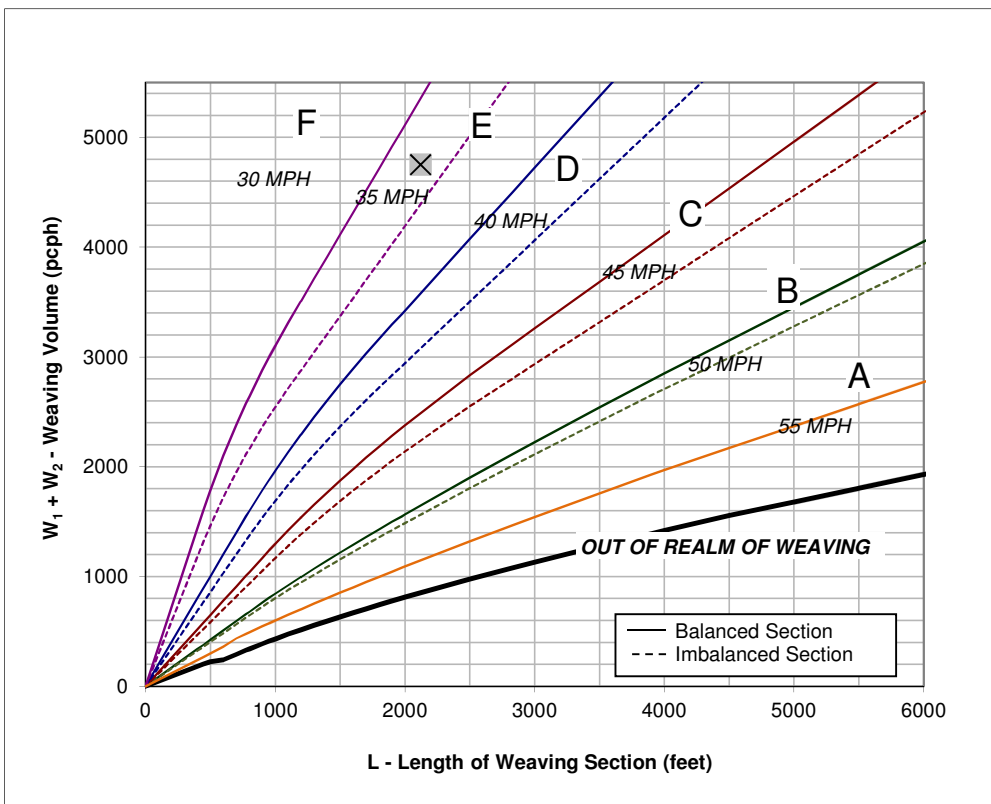
Number of Entering Mainline Lanes	N_b	5
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,120

Project Information

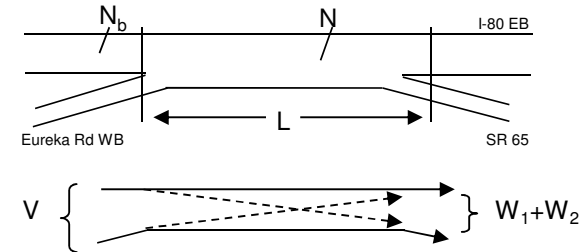
Project	I-80/SR-65 Interchange
Scenario	2040 Design Year No Taylor PM
Freeway	I-80 EB
On-ramp	Eureka Rd WB
Off-ramp	SR 65

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	8,770	Volume (vph)*	425	Volume (vph)*	4,165
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	9,077	Volume (pcph)	440	Volume (pcph)	4,311

	Entering Volume	Growth
Mainline	7,195	111%
On-ramp	1,575	Ramp Split
Off-ramp	5,315	27%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? **Y**
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

30 MPH and **35 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

- Interpolated Weaving Speed (S_w , mph) **31.7**
- Weaving Intensity Factor (k) **3.00**
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ **1,659**
- Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

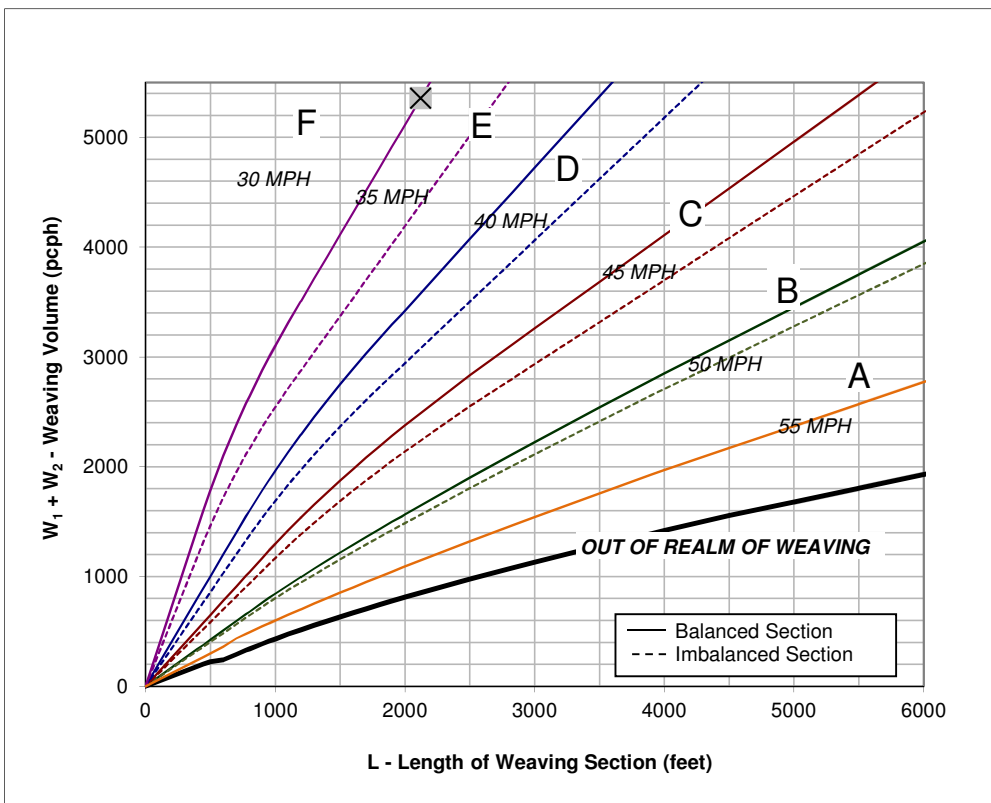
Number of Entering Mainline Lanes	N_b	5
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,120

Project Information

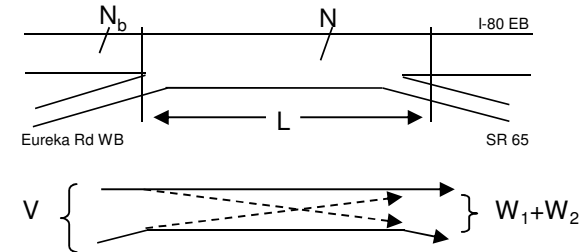
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor PM	
Freeway	I-80 EB	
On-ramp	Eureka Rd WB	
Off-ramp	SR 65	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	9,875	Volume (vph)*	480	Volume (vph)*	4,695
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	10,221	Volume (pcph)	497	Volume (pcph)	4,859

	Entering Volume	Growth
Mainline	8,100	125%
On-ramp	1,775	Ramp Split
Off-ramp	5,990	27%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
30 MPH and 30 MPH -
If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.
- Interpolated Weaving Speed (S_w , mph) -
- Weaving Intensity Factor (k) -
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ -
- Level of Service (LOS) F

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

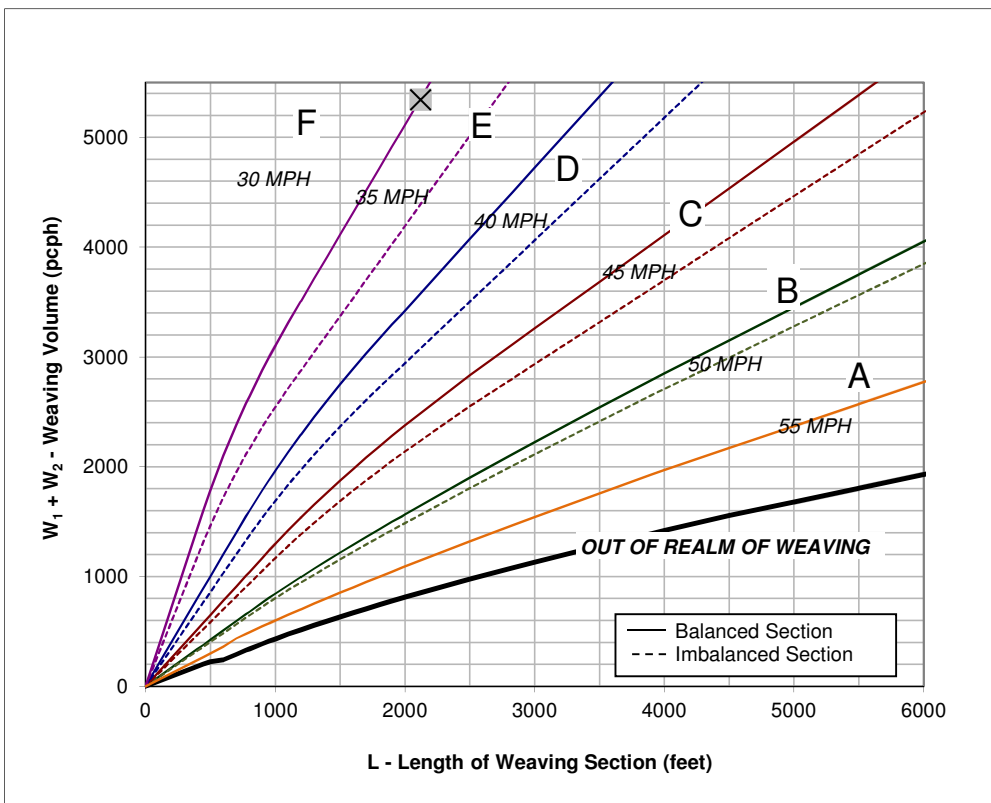
Number of Entering Mainline Lanes	N_b	5
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,120

Project Information

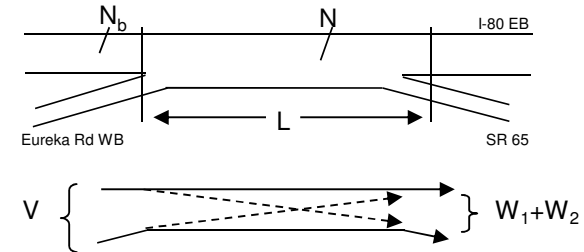
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor PM	
Freeway	I-80 EB	
On-ramp	Eureka Rd WB	
Off-ramp	SR 65	

	Total Weaving Section (V)	On-ramp to Mainline (W_1)	Mainline to Off-ramp (W_2)
Volume (vph)*	7,900	895	4,265
Truck Percentage	7%	7%	7%
PCE for Trucks	1.5	1.5	1.5
Volume (pcph)	8,177	926	4,414

	Entering Volume	Growth
Mainline	6,480	100%
On-ramp	1,420	Ramp Split
Off-ramp	4,790	63%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? **Y**
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
30 MPH and **30 MPH** -
If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.
- Interpolated Weaving Speed (S_w , mph) -
- Weaving Intensity Factor (k) -
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ -
- Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

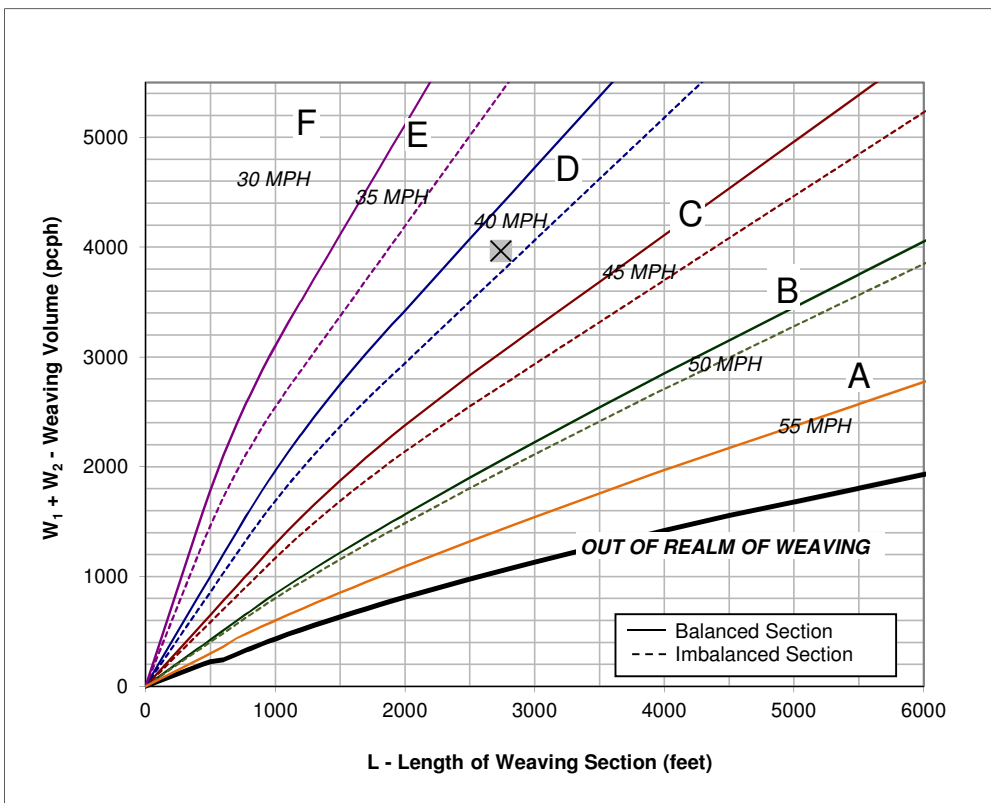
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,740

Project Information

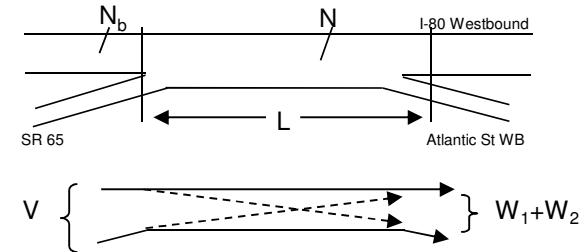
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor AM	
Freeway	I-80 Westbound	
On-ramp	SR 65	
Off-ramp	Atlantic St WB	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,990	Volume (vph)*	3,550	Volume (vph)*	280
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,235	Volume (pcph)	3,674	Volume (pcph)	290

	Entering Volume	Growth
Mainline	3,330	100%
On-ramp	3,660	<u>Ramp Split</u>
Off-ramp	390	97%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? N
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

30 MPH and 35 MPH

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 34.4
4. Weaving Intensity Factor (k) 3.00
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 1,302
6. Level of Service (LOS) C

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

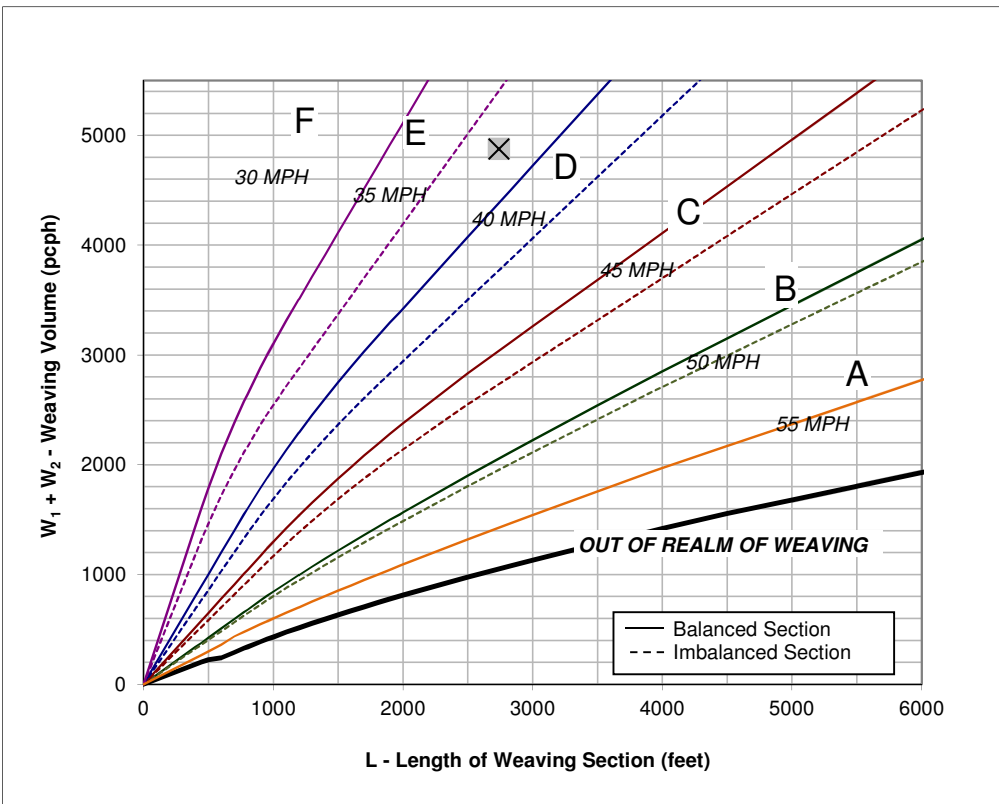
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,740

Project Information

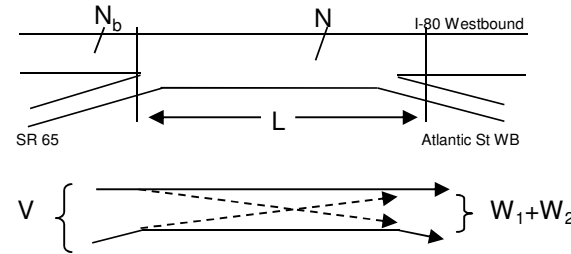
Project	I-80/SR-65 Interchange
Scenario	2040 Design Year No Taylor AM
Freeway	I-80 Westbound
On-ramp	SR 65
Off-ramp	Atlantic St WB

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	8,595	Volume (vph)*	4,365	Volume (vph)*	345
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	8,896	Volume (pcph)	4,518	Volume (pcph)	357

	Entering Volume	Growth
Mainline	4,095	123%
On-ramp	4,500	Ramp Split
Off-ramp	480	97%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? N
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
30 MPH and 35 MPH
- If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.
- Interpolated Weaving Speed (S_w , mph) 31.6
- Weaving Intensity Factor (k) 3.00
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 1,602
- Level of Service (LOS) E

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

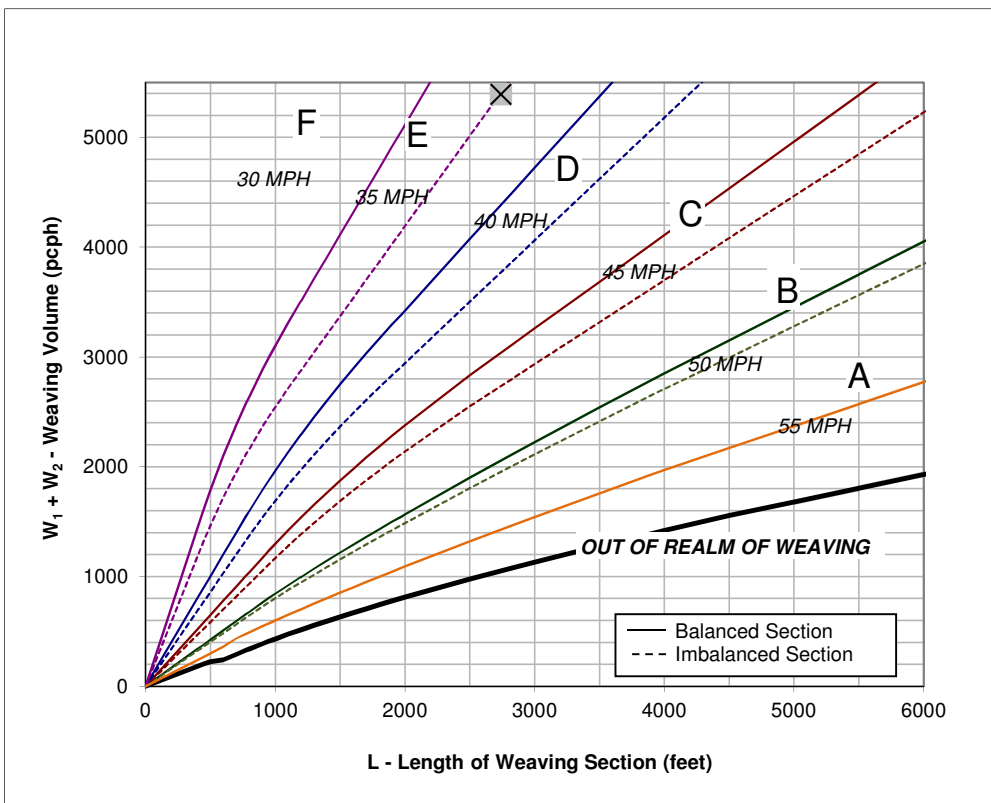
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,740

Project Information

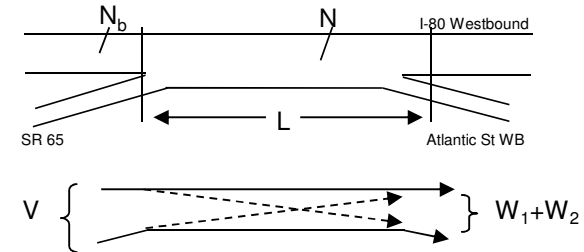
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor AM	
Freeway	I-80 Westbound	
On-ramp	SR 65	
Off-ramp	Atlantic St WB	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	9,510	Volume (vph)*	4,830	Volume (vph)*	380
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	9,843	Volume (pcph)	4,999	Volume (pcph)	393

	Entering Volume	Growth
Mainline	4,530	136%
On-ramp	4,980	Ramp Split
Off-ramp	530	97%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? N
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
30 MPH and 30 MPH -
If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.
- Interpolated Weaving Speed (S_w , mph) -
- Weaving Intensity Factor (k) -
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ -
- Level of Service (LOS) F

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

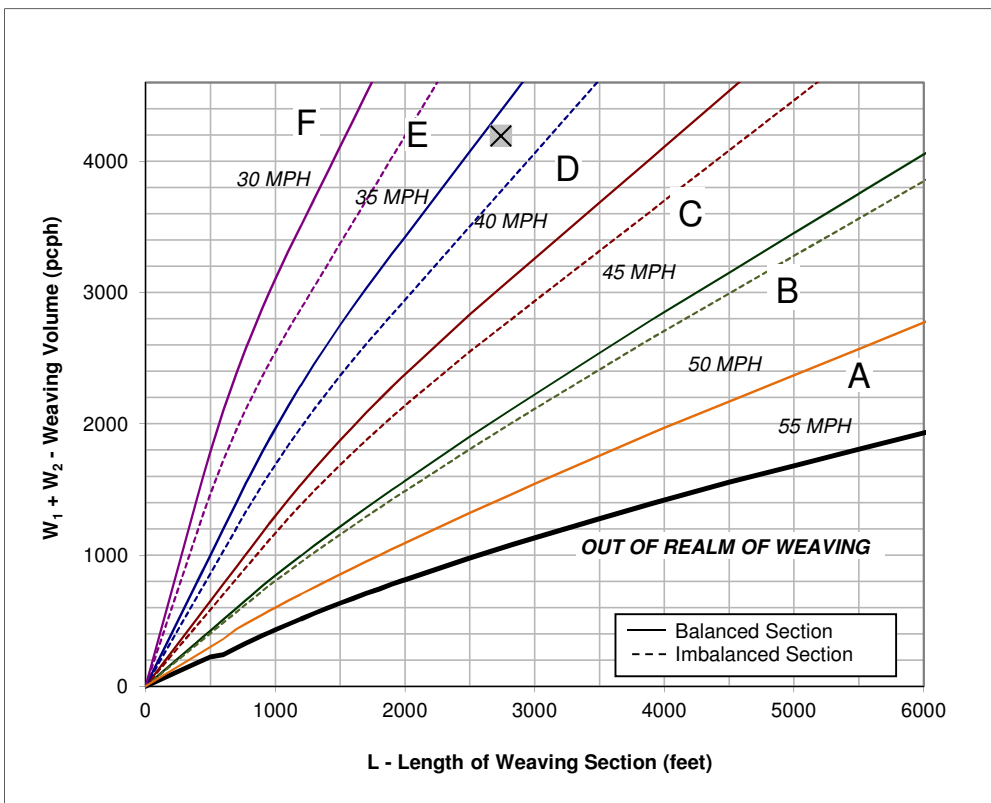
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,740

Project Information

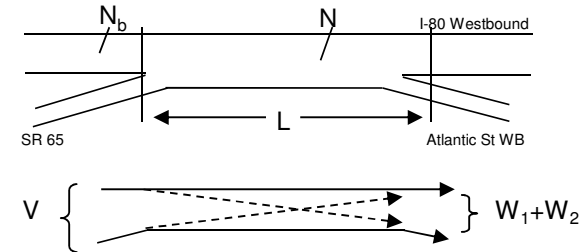
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor AM	
Freeway	I-80 Westbound	
On-ramp	SR 65	
Off-ramp	Atlantic St WB	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,990	Volume (vph)*	3,660	Volume (vph)*	390
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,235	Volume (pcph)	3,788	Volume (pcph)	404

	Entering Volume	Growth
Mainline	3,330	100%
On-ramp	3,660	Ramp Split
Off-ramp	390	100%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? N
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

30 MPH and **35 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 33.7
4. Weaving Intensity Factor (k) 3.00
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 1,340
6. Level of Service (LOS) C

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

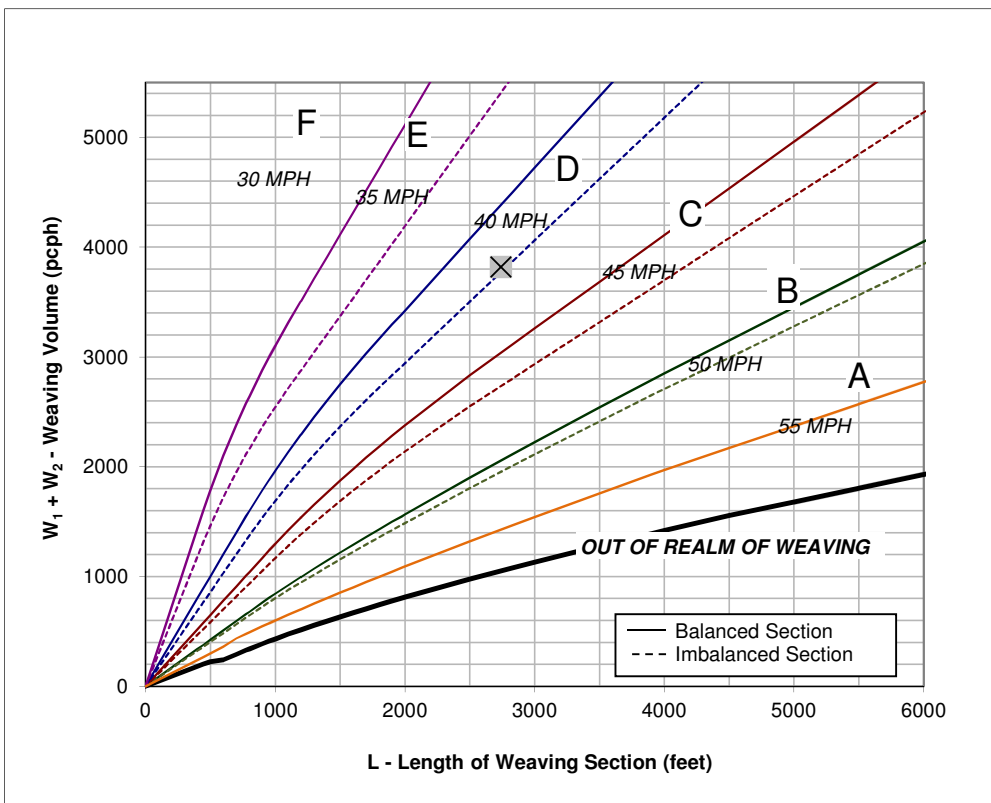
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,740 <small>*does not count slip to loop off distance</small>

Project Information

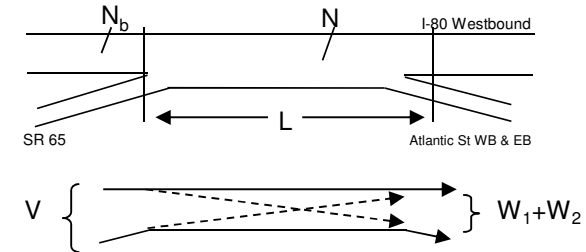
Project	I-80/SR-65 Interchange	
Scenario	2040 Design Year No Taylor AM	
Freeway	I-80 Westbound	
On-ramp	SR 65	
Off-ramp	Atlantic St WB & EB	

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,990	Volume (vph)*	2,890	Volume (vph)*	800
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,235	Volume (pcph)	2,991	Volume (pcph)	828

	Entering Volume	Growth
Mainline	3,330	100%
On-ramp	3,660	Ramp Split
Off-ramp	1,570	79%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **Y**
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

35 MPH and **40 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) **37.1**
4. Weaving Intensity Factor (k) **2.85**
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ **1,461**
6. Level of Service (LOS) **D**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

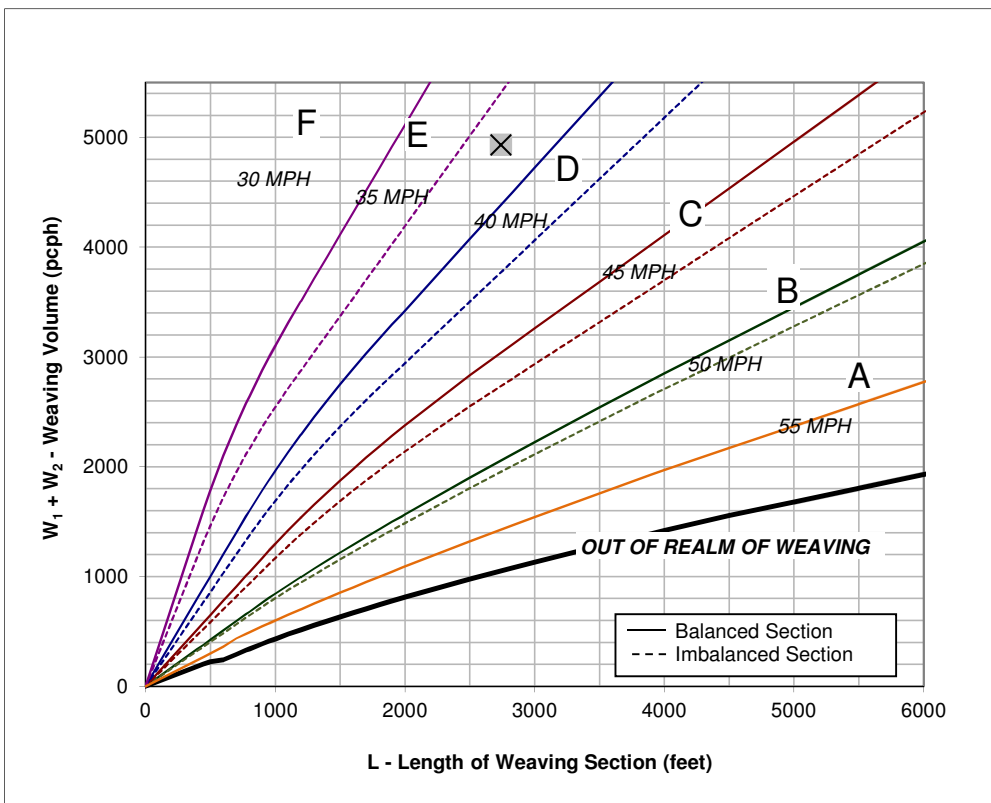
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,740 <small>*does not count slip to loop off distance</small>

Project Information

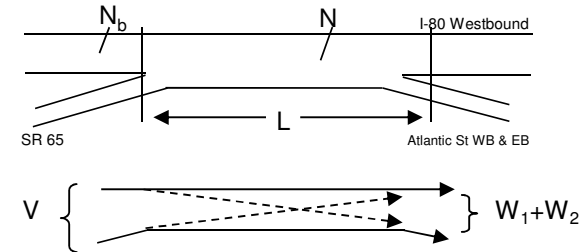
Project	I-80/SR-65 Interchange
Scenario	2040 Design Year No Taylor AM
Freeway	I-80 Westbound
On-ramp	SR 65
Off-ramp	Atlantic St WB & EB

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	9,015	Volume (vph)*	3,730	Volume (vph)*	1,035
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	9,331	Volume (pcph)	3,861	Volume (pcph)	1,071

	Entering Volume	Growth
Mainline	4,295	129%
On-ramp	4,720	Ramp Split
Off-ramp	2,025	79%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

30 MPH and **35 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

- Interpolated Weaving Speed (S_w , mph) 33.8
- Weaving Intensity Factor (k) 2.97
- Service Volume (SV, pcph)
 $SV = (1/N)[V + (k - 1) \cdot \min(W_1, W_2)]$ 1,906
- Level of Service (LOS) F

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

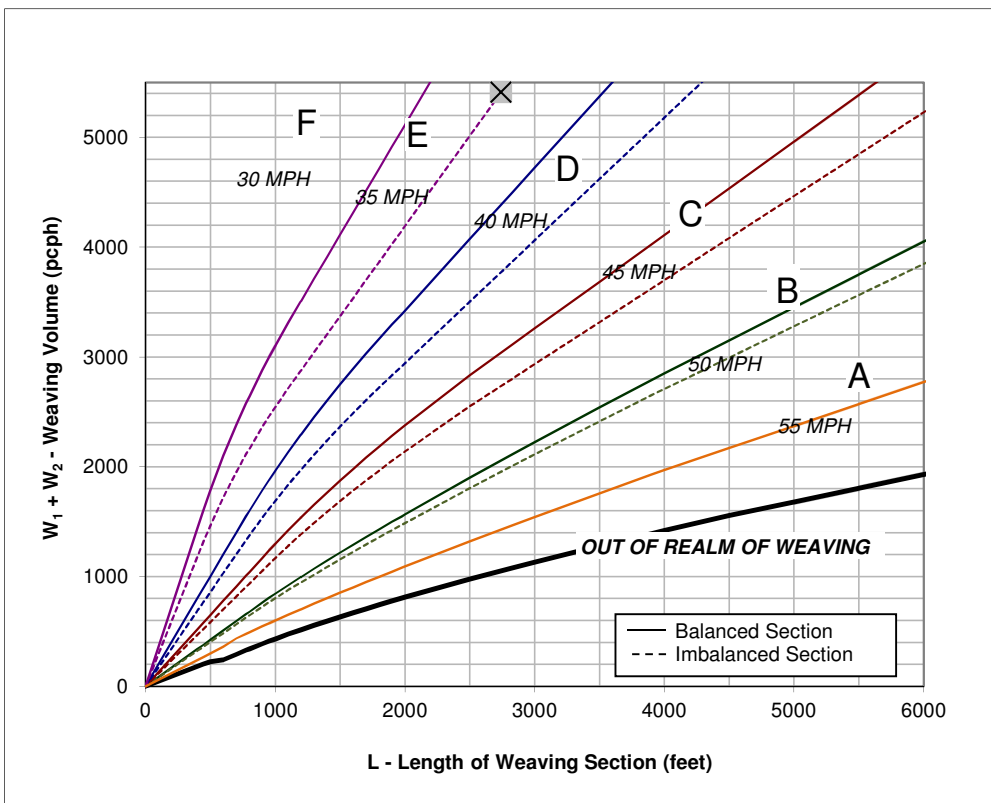
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	6
Length of Weaving Section (feet)	L	2,740

Project Information

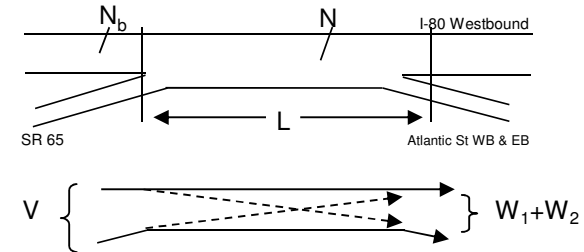
Project	I-80/SR-65 Interchange
Scenario	2040 Design Year No Taylor AM
Freeway	I-80 Westbound
On-ramp	SR 65
Off-ramp	Atlantic St WB & EB

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,990	Volume (vph)*	3,660	Volume (vph)*	1,570
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,235	Volume (pcph)	3,788	Volume (pcph)	1,625

	Entering Volume	Growth
Mainline	3,330	100%
On-ramp	3,660	Ramp Split
Off-ramp	1,570	100%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? **Y**
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

30 MPH and **35 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

- Interpolated Weaving Speed (S_w , mph) **32.7**
- Weaving Intensity Factor (k) **2.99**
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ **1,744**
- Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

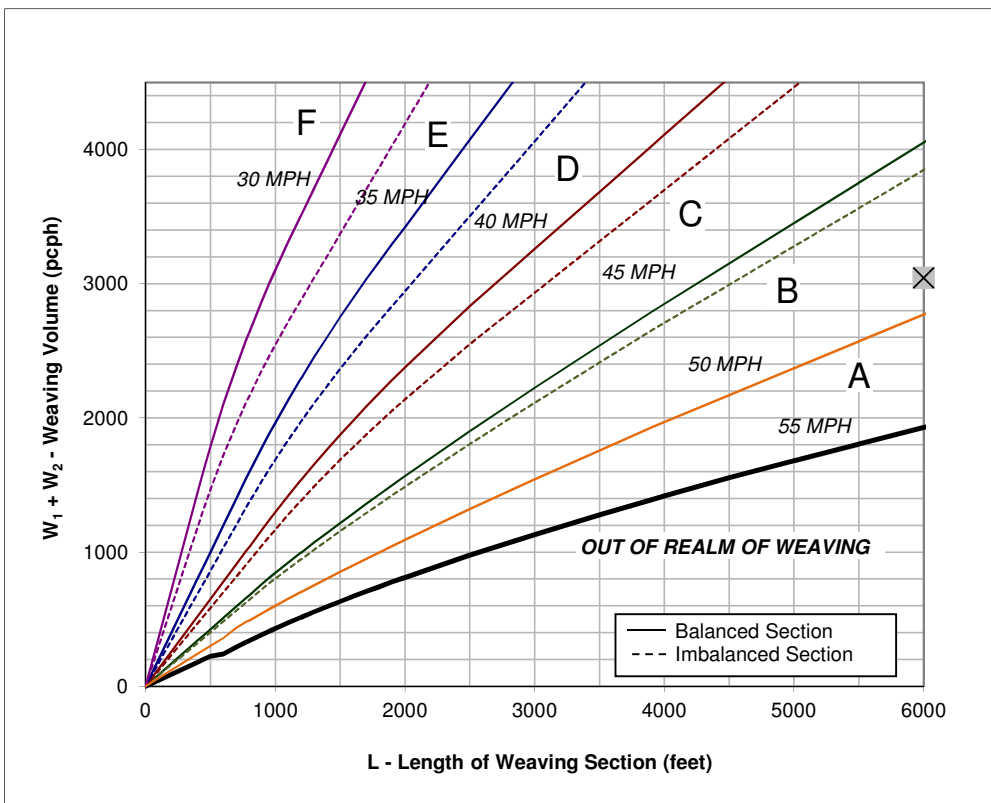
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	4
Length of Weaving Section (feet)	L	6,000 <small>*does not count loop to slip distance</small>

Project Information

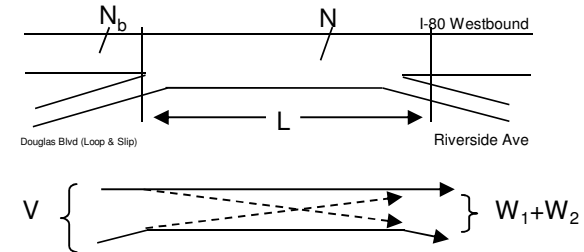
Project	I-80/SR-65 Interchange
Scenario	2040 Design Year No Taylor PM
Freeway	I-80 Westbound
On-ramp	Douglas Blvd (Loop & Slip)
Off-ramp	Riverside Ave

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,750	Volume (vph)*	1,870	Volume (vph)*	1,070
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,986	Volume (pcph)	1,935	Volume (pcph)	1,107

	Entering Volume	Growth
Mainline	4,615	100%
On-ramp	1,950	Ramp Split
Off-ramp	1,150	96%
HOV	1,395	16%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

45 MPH and **50 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) **48.7**
4. Weaving Intensity Factor (k) **1.40**
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ **1,859**
6. Level of Service (LOS) **E**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

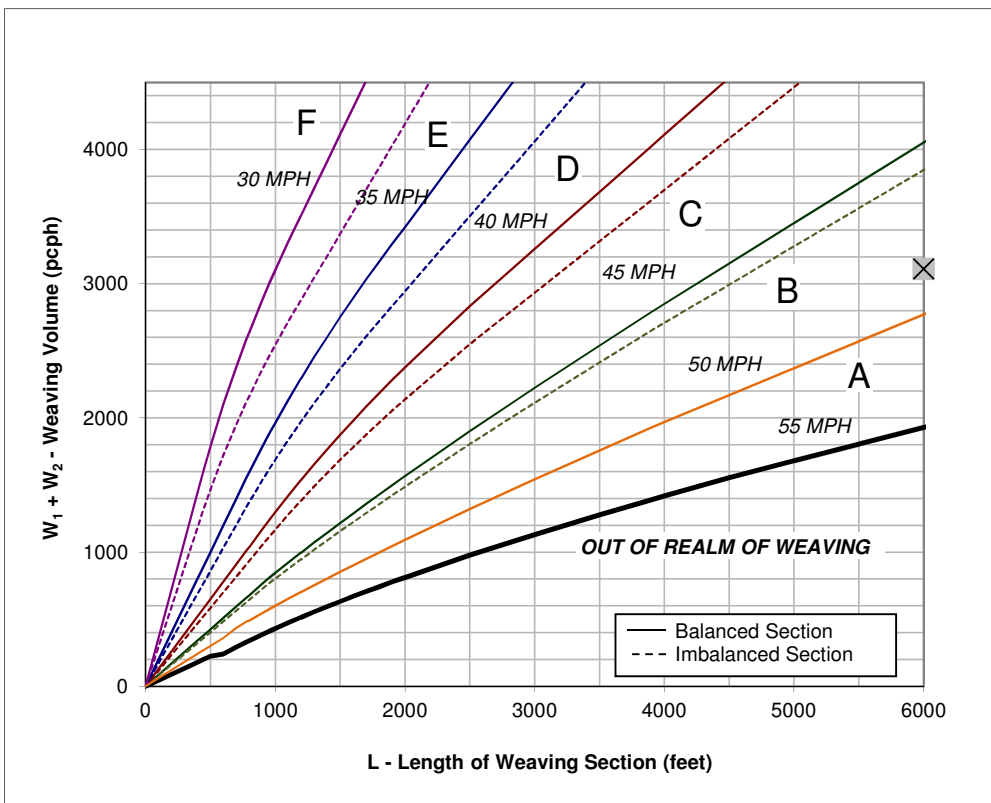
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	4
Length of Weaving Section (feet)	L	6,000 *does not count loop to slip distance

Project Information

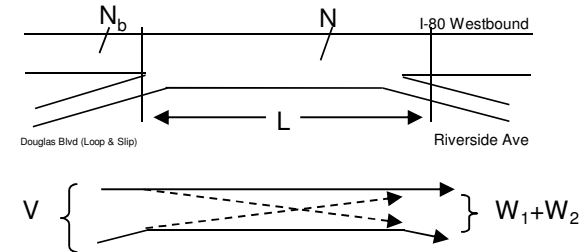
Project	I-80/SR-65 Interchange
Scenario	2040 Design Year No Taylor PM
Freeway	I-80 Westbound
On-ramp	Douglas Blvd (Loop & Slip)
Off-ramp	Riverside Ave

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,885	Volume (vph)*	1,910	Volume (vph)*	1,095
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,126	Volume (pcph)	1,977	Volume (pcph)	1,133

	Entering Volume	Growth
Mainline	4,705	102%
On-ramp	1,990	Ramp Split
Off-ramp	1,175	96%
HOV	1,425	16%



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **N**
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

45 MPH and **50 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) **48.4**
4. Weaving Intensity Factor (k) **1.45**
5. Service Volume (SV, pcph)
 $SV = (1/N)[V + (k - 1) \cdot \min(W_1, W_2)]$ **1,910**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

Data Input

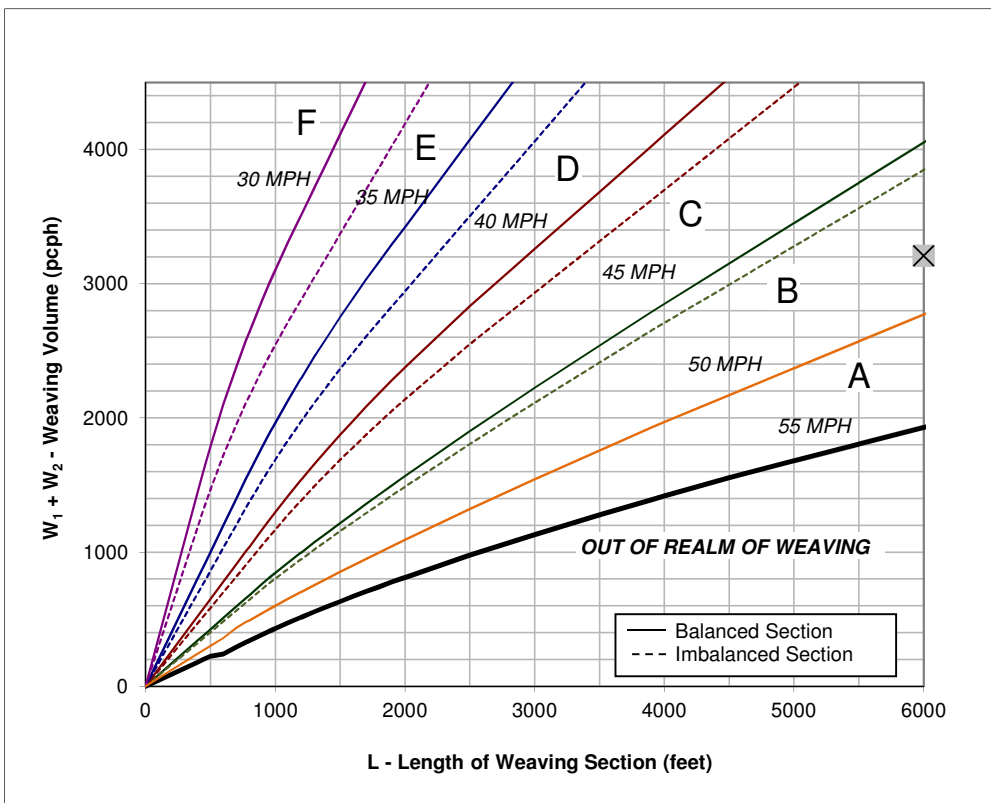
Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	4
Length of Weaving Section (feet)	L	6,000 *does not count loop to slip distance

Project Information

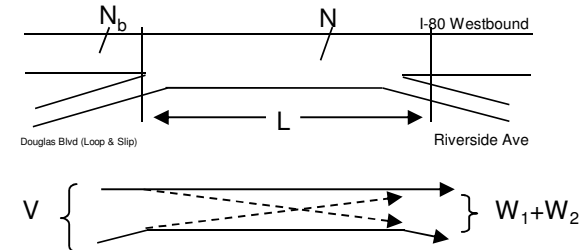
Project	I-80/SR-65 Interchange
Scenario	2040 Design Year No Taylor PM
Freeway	I-80 Westbound
On-ramp	Douglas Blvd (Loop & Slip)
Off-ramp	Riverside Ave

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,750	Volume (vph)*	1,950	Volume (vph)*	1,150
Truck Percentage	7%	Truck Percentage	7%	Truck Percentage	7%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,986	Volume (pcph)	2,018	Volume (pcph)	1,190

	Entering Volume	Growth
Mainline	4,615	100%
On-ramp	1,950	Ramp Split
Off-ramp	1,150	100%
HOV	1,395	16%



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? **N**
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

45 MPH and **50 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

- Interpolated Weaving Speed (S_w , mph) **48.0**
- Weaving Intensity Factor (k) **1.52**
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ **1,901**
- Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor) with EB Aux
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	300,466	266
Travel Distance [mi]	All Vehicles	1,113,874	1,573
Travel Time [h]	All Vehicles	29,788	385.8
Average Speed [mph]	All Vehicles	37.4	0.5
Total Delay [h]	All Vehicles	10,122	378.9
Average Delay per Vehicle [s]	All Vehicles	119	4.5
VHD/VMT [min/mile]	All Vehicles	0.55	0.02
Number of Vehicles Served	HOV	53,141	79
Travel Distance [mi]	HOV	217,959	848
Travel Time [h]	HOV	5,339	52
Average Speed [mph]	HOV	40.8	0.3
Total Delay [h]	HOV	1,535	47
Average Delay per Vehicle [s]	HOV	102	3
VHD/VMT [min/mile]	HOV	0.42	0.01
Number of Vehicles Served	Truck	5,473	12
Travel Distance [mi]	Truck	26,245	220
Travel Time [h]	Truck	662	17
Average Speed [mph]	Truck	39.6	1
Total Delay [h]	Truck	208	14
Average Delay per Vehicle [s]	Truck	134	9
VHD/VMT [min/mile]	Truck	0.47	0.03

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	53,140	5,470	300,470
Demand Volume	53,990	6,030	300,030
Percent Demand Served	98.4%	90.7%	100.1%
Vehicle Miles of Travel	217,960	26,250	1,113,870
Person Miles of Travel	457,710	27,560	1,354,930
Vehicle Hours of Travel	5,340	660	29,790
Vehicle Hours of Delay	1,540	210	10,120
VHD % of VHT	28.8%	31.8%	34.0%
Average Delay per Vehicle (min)	1.74	2.30	2.02
Person Hours of Delay	3,230	220	11,820
Average Travel Speed	40.8	39.6	37.4

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor) with EB Aux
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,971	47	102.1%	971	22	96.2%				62.1	0.3	27.9	0.3	C
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,934	68	101.3%							61.4	1.0	33.0	0.8	D
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,927	80	101.2%				1,132	64	98.4%	55.2	6.7	37.5	9.3	E
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,767	137	101.3%				395	45	101.2%	60.2	6.4	28.8	8.4	D
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	7,374	153	101.3%							62.6	0.9	26.9	0.5	D
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	7,378	151	101.3%	1,799	57	96.7%	945	60	99.5%	62.2	0.4	29.4	0.8	D
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	8,232	146	100.5%							62.5	0.9	28.7	0.7	D
9 I-80 EB - Eureka Rd EB On-ramp	Merge	8,229	146	100.5%	322	34	103.8%				59.3	3.4	29.2	1.5	D
10 I-80 EB - Eureka Rd to SR-65	Weave	8,551	138	100.6%	1,391	56	96.0%	6,024	163	100.1%	58.9	1.9	27.5	1.2	C
11 I-80 EB - SR-65 Off-ramp to Taylor Rd Off-ramp	Basic	3,916	94	99.6%							63.6	0.2	17.5	0.4	B
12 I-80 EB - Taylor Rd Off-ramp	Diverge	3,915	94	99.6%				591	41	98.5%	63.7	0.2	16.6	0.4	B
13 I-80 EB - Taylor Rd Off to On-ramp	Basic	3,324	100	99.8%							63.9	0.2	16.5	0.4	B
18 I-80 EB - Taylor Rd On-ramp	Merge	3,324	102	99.8%	180	25	82.0%				64.0	0.1	17.7	0.5	B
19 I-80 EB - SR-65 On-ramp	Merge	3,503	101	98.7%	2,531	90	97.7%				60.0	0.6	32.9	0.7	D
20 I-80 EB - SR-65 to Rocklin Rd	Basic	6,034	121	98.3%							62.0	0.3	27.7	0.7	D
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	6,024	142	98.1%				1,445	67	99.0%	63.2	0.2	26.2	0.6	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	4,569	150	97.6%							63.0	0.2	26.4	0.8	D
24 I-80 EB - Rocklin Rd On-ramp	Merge	4,567	149	97.6%	263	14	101.2%				58.7	1.1	27.3	0.9	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	4,826	150	97.7%							62.8	0.2	27.6	0.8	D
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	4,826	155	97.7%				692	53	92.3%	60.9	1.3	29.2	1.0	D
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	4,125	129	98.4%							62.9	0.4	23.9	0.6	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	4,123	141	98.4%	334	10	98.2%				60.4	0.8	22.7	0.7	C
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	4,452	132	98.3%	854	25	101.6%				59.2	1.0	27.9	1.1	C
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,077	24	105.9%				745	53	104.9%	60.3	0.6	21.9	0.5	C
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,329	57	106.0%							63.3	0.4	20.5	0.4	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,329	58	106.0%	406	12	104.1%				62.2	0.3	19.3	0.4	B
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,735	60	105.8%	422	13	103.0%				60.8	0.7	22.3	0.4	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,149	66	105.3%							63.1	0.2	24.1	0.4	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,150	68	105.3%				308	41	102.7%	62.3	0.7	25.2	0.7	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,841	81	105.5%							63.3	0.3	22.5	0.5	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,840	81	105.5%	1,648	77	106.3%				57.6	1.8	29.5	1.4	D
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,486	119	105.7%							51.6	7.1	38.0	6.2	E
47 I-80 WB - SR-65 Off-ramp	Diverge	5,483	123	105.6%				2,034	81	104.3%	63.2	0.2	23.0	0.7	C
48 I-80 WB - Taylor Rd Off-ramp	Diverge	3,446	105	106.4%				326	35	105.0%	63.5	0.3	17.0	0.7	B
49 I-80 WB - Taylor Rd Off to On-ramp	Basic	3,116	91	106.3%							63.9	0.2	17.2	0.6	B
50 I-80 WB - Taylor Rd On-ramp	Merge	3,116	91	106.3%	656	47	99.4%				63.1	0.4	17.7	0.6	B
60 I-80 WB - SR-65 to Atlantic St	Weave	3,775	99	105.1%	4,164	138	99.6%	492	46	104.6%	58.5	4.4	25.5	7.2	C
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	7,427	144	101.7%				1,081	70	101.0%	43.1	16.2	46.5	30.9	F
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	6,290	148	101.0%							28.1	14.8	84.8	31.3	F
64 I-80 WB - Atlantic St On-ramp	Merge	6,244	163	100.2%	1,183	71	97.0%				23.0	9.6	76.4	16.5	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,336	180	98.5%				1,079	69	97.2%	31.3	2.0	72.7	4.3	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,204	137	97.9%							24.3	0.7	98.8	4.0	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,174	148	97.4%	1,301	51	96.4%				21.7	0.5	111.9	3.3	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,419	117	96.5%	653	25	89.5%				27.4	0.3	73.9	0.8	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,072	172	95.9%							60.0	0.4	32.4	0.5	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	8,066	104	95.8%				1,186	61	94.9%	62.4	0.1	28.1	0.4	D
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,879	105	95.9%							62.4	0.1	32.8	0.5	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,881	105	96.0%	195	11	92.7%				62.9	0.1	26.3	0.4	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,074	113	95.8%	599	16	107.0%				62.0	0.6	22.6	0.6	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	7,670	122	96.6%							62.4	0.2	28.2	0.5	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	7,665	121	96.5%				1,112	62	95.8%	61.7	0.9	29.3	0.5	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	6,555	127	96.7%							62.8	0.3	25.2	0.6	C
77 I-80 WB - Antelope Rd WB On-ramp	Merge	6,555	128	96.7%	347	9	99.1%				61.2	0.8	22.4	0.7	C
78 I-80 WB - Antelope Rd to Truck Scales	Weave	6,901	118	96.8%	528	16	99.7%	53	13	59.1%	62.3	0.4	24.3	0.4	C
79 I-80 WB - Truck Scales Off to On-ramp	Basic	7,376	134	97.4%							62.9	0.1	26.9	0.4	D
80 I-80 WB - Truck Scales On-ramp	Merge	7,373	134	97.4%	53	13	59.0%				62.6	0.2	26.8	0.7	C
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	7,431	109	97.0%							61.5	0.5	28.7	0.6	D
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	7,429	112	97.0%				1,196	72	95.7%	61.8	0.5	26.8	0.4	C
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	6,242	124	97.4%							62.8	0.3	23.8	0.4	C
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	6,244	127	97.4%	897	5	99.7%				56.6	1.7	26.0	1.2	C
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	7,140	127	97.7%	600	21	103.5%				62.0	0.6	28.7	0.5	D

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

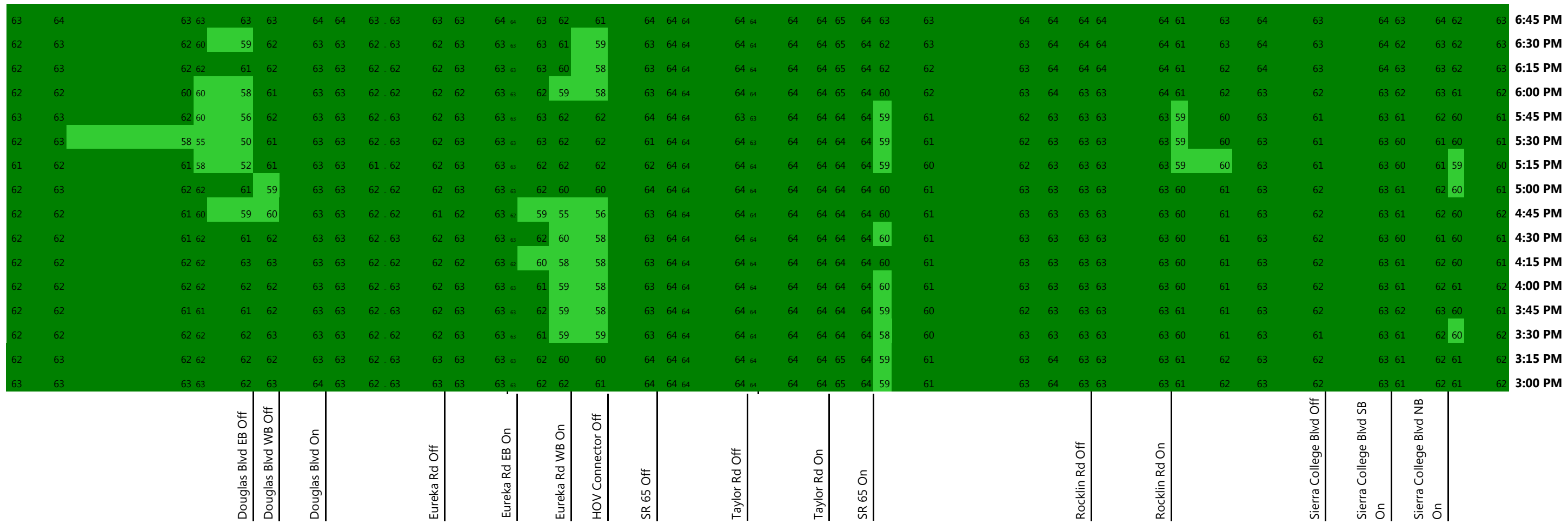
VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor) with EB Aux
PM Peak Period

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,127	10	101.6%				129	19	107.3%	64.5	0.2	10.1	0.1	B
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	998	24	100.8%							64.5	0.2	8.6	0.2	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	999	24	100.9%	690	16	100.1%				61.3	0.1	10.3	0.2	B
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,688	28	100.5%	644	15	94.8%				61.1	0.3	12.5	0.2	B
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,333	35	98.9%							63.1	0.5	21.3	0.3	C
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	2,334	35	98.9%							63.2	0.4	20.4	0.4	C
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	2,334	34	98.9%	1,450	62	100.7%	831	48	100.2%	60.5	0.6	22.1	0.5	C
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,957	79	99.6%							63.1	0.3	24.1	0.8	C
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,959	77	99.6%	582	46	95.5%				60.3	0.8	27.3	0.6	C
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	3,540	91	98.9%							62.4	0.2	29.1	0.7	D
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	3,539	96	98.9%				982	58	97.2%	62.7	0.1	26.1	0.7	C
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,554	85	99.4%							63.3	0.2	21.0	0.7	C
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,555	85	99.4%	466	31	103.5%				61.0	1.4	23.7	0.6	C
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	3,022	89	100.1%	728	40	99.7%	596	47	97.7%	61.7	0.4	25.1	0.8	C
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,164	86	100.8%							62.6	0.2	26.4	0.9	D
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,164	87	100.8%	559	40	105.4%				59.7	1.4	28.8	1.0	D
104 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	3,721	95	101.4%	1,001	46	101.1%	859	43	98.7%	61.5	0.4	28.6	0.9	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,857	100	101.8%							62.3	0.2	31.3	1.0	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,860	97	101.8%	336	26	88.5%				58.9	1.8	32.2	1.6	D
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	4,194	106	100.6%	1,356	47	98.3%	648	52	98.2%	60.2	0.3	31.7	0.6	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,902	111	100.2%							62.3	0.2	35.3	0.8	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,900	107	100.2%	462	39	100.4%				61.8	0.3	27.6	0.6	C
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	5,363	111	100.2%	1,109	43	99.0%				60.4	0.7	30.6	0.7	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	6,474	110	100.1%							58.7	1.1	33.5	0.9	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	6,474	110	100.1%				1,557	62	100.4%	61.2	0.6	29.2	0.5	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,915	127	99.9%							62.5	0.3	27.6	0.5	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,917	132	99.9%	1,774	83	95.9%	4,157	137	99.4%	60.6	0.6	25.0	0.5	C
120 SR-65 SB to EB I-80 Connector	Basic	2,531	90	97.7%							55.1	0.3	24.2	0.6	C
121 SR-65 SB to WB I-80 Connector	Basic	3,453	121	96.7%							55.6	0.5	23.6	0.5	C
123 SR-65 NB from WB I-80 Connector	Basic	2,032	84	104.2%							53.2	5.5	22.4	3.1	C
125 SR-65 NB from EB I-80 Connector	Basic	4,901	155	99.8%							46.6	14.5	41.2	25.7	E
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,880	157	99.4%	3,141	98	102.6%	1,621	91	97.6%	46.5	15.5	44.7	22.8	E
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	6,318	116	100.1%							27.4	6.8	98.2	22.6	F
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	6,289	114	99.7%	1,042	56	93.8%				30.8	0.6	73.2	1.3	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	7,318	93	98.6%							52.6	1.0	39.0	1.3	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	7,318	93	98.6%				1,523	78	100.2%	57.5	0.8	33.9	0.8	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	5,793	97	98.2%							61.8	0.4	37.3	0.7	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	5,794	99	98.2%	608	40	99.6%	2,216	87	98.5%	61.1	1.1	32.2	0.6	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	4,189	132	98.3%							61.8	1.0	30.7	0.9	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	4,189	129	98.3%	616	62	94.8%				57.6	2.9	32.8	1.9	D
136 SR-65 NB - Blue Oaks Blvd to HOV Lane End	Basic	4,806	146	97.9%							62.2	0.5	33.1	1.2	D
162 SR-65 NB - HOV Lane End to Sunset Blvd	Basic	4,808	140	97.9%							61.8	0.4	29.9	0.9	D
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	4,808	137	97.9%				1,161	72	98.4%	62.7	0.2	27.9	0.7	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	3,645	131	97.7%							62.6	0.2	29.6	1.1	D
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	3,644	132	97.7%	294	29	101.3%				60.6	3.4	30.9	3.4	D
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	3,939	143	98.0%	750	40	105.7%	1,235	72	100.4%	61.9	0.3	28.3	1.0	D
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	3,453	129	98.6%							62.8	0.2	27.9	1.2	D
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	3,454	134	98.7%	384	35	98.3%				60.3	1.6	30.3	1.2	D
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,838	129	98.7%	492	39	102.6%				57.1	6.0	35.9	4.1	E
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	4,329	128	99.1%							58.8	0.7	37.9	1.0	E
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	4,329	130	99.1%				717	52	102.4%	60.4	1.0	37.1	0.9	E
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	3,606	127	98.2%							62.4	0.2	31.0	1.1	D
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	3,602	122	98.1%	951	47	97.1%	1,495	73	97.1%	62.4	0.2	27.2	0.9	C
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	3,056	126	98.3%							63.2	0.1	25.0	1.0	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	3,054	126	98.2%				1,860	100	97.9%	63.8	0.1	19.5	0.7	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	1,192	73	98.5%							64.2	0.2	10.1	0.7	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	1,192	69	98.5%	127	8	97.3%				63.1	0.2	10.2	0.6	B

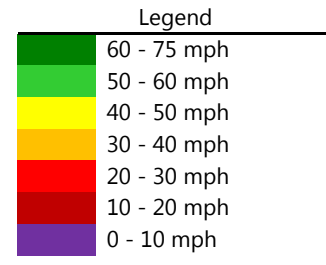
Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Average Link Speed for Mixed Flow Lanes - Alternative 1 (Full Taylor) with Eastbound Aux Lane
I-80 Eastbound - Design Year

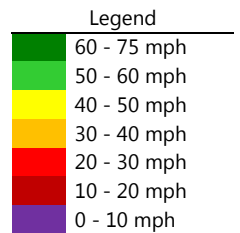
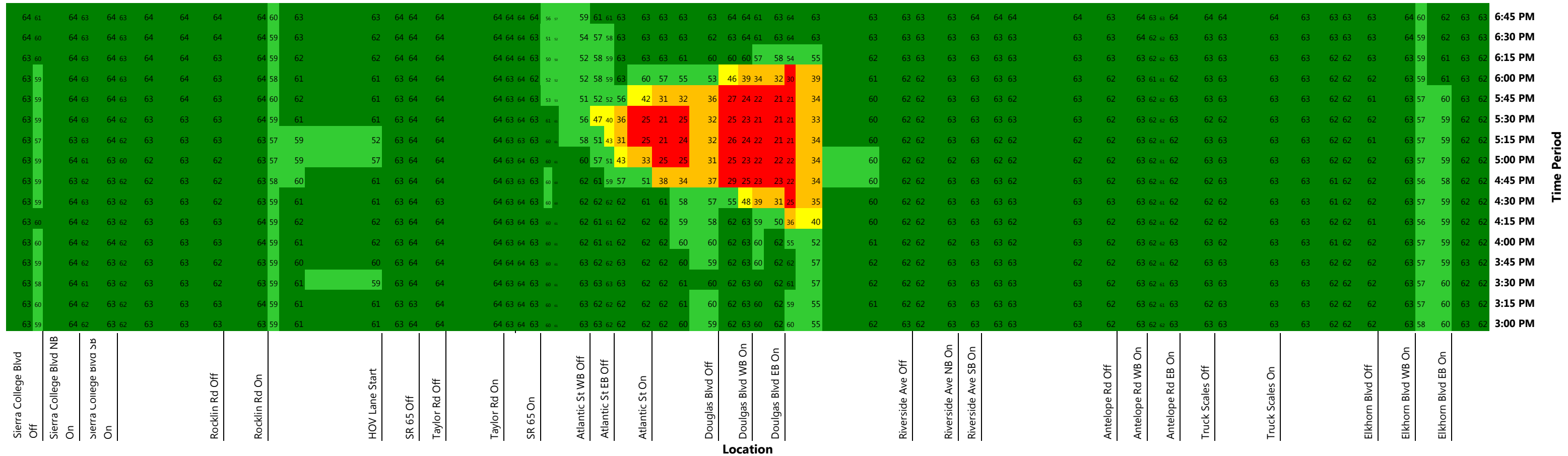


Time Period

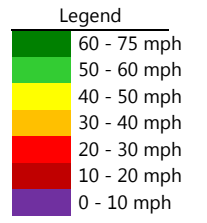
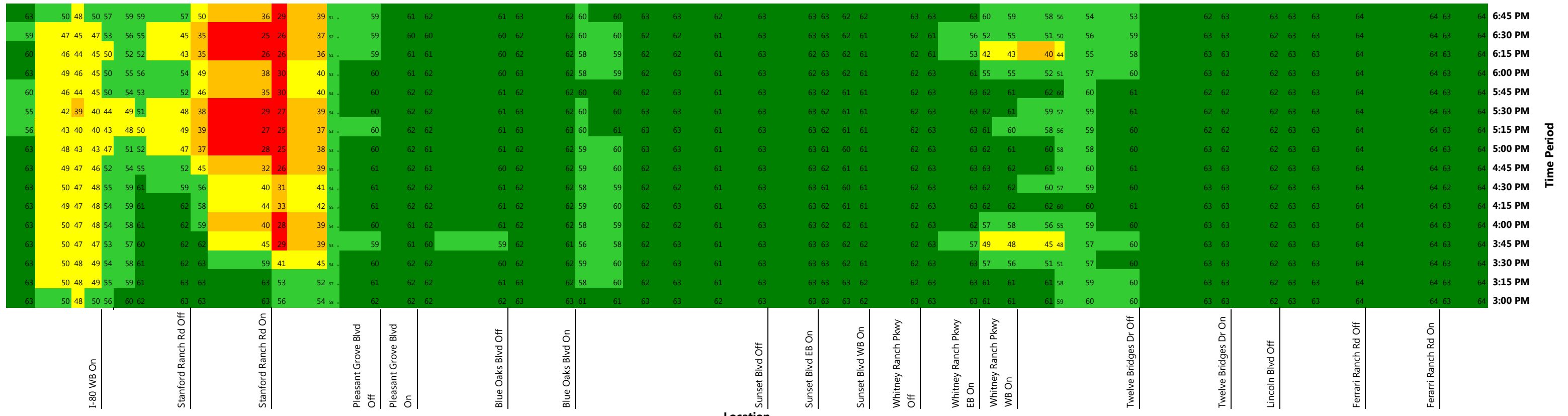
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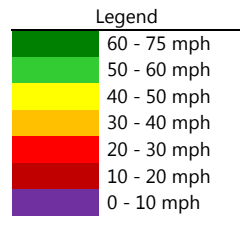
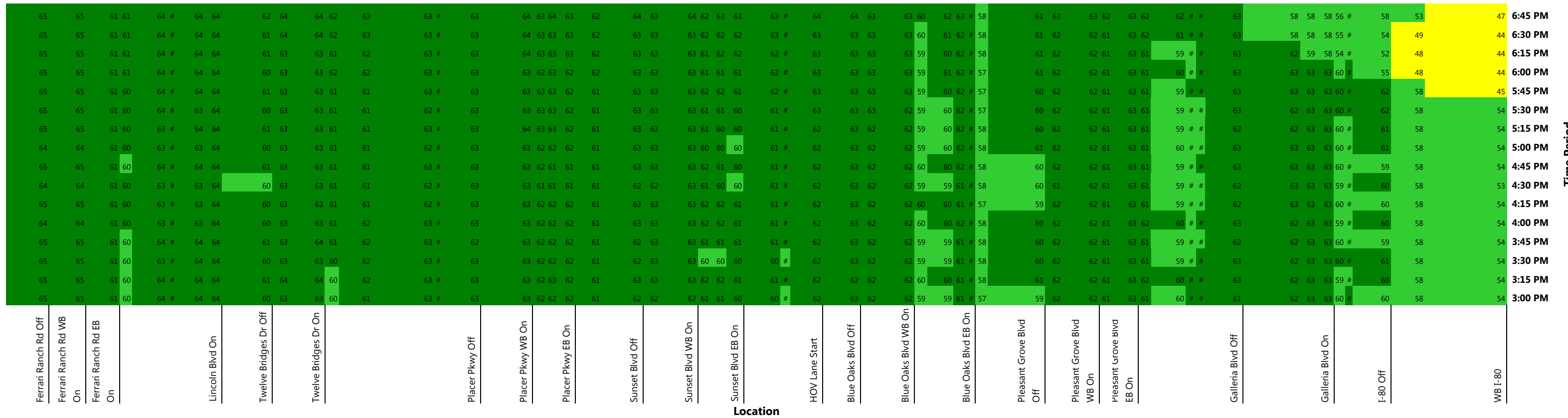
Average Link Speed for Mixed Flow Lanes - Full Taylor Alternative
I-80 Westbound - Design Year



**Average Link Speed for Mixed Flow Lanes - Full Taylor Alternative
SR 65 Northbound-Design Year**



**Average Link Speed for Mixed Flow Lanes - Full Taylor Alternative
SR 65 Southbound-Design Year**



VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor) with EB Aux
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	4,665	4,621	99.1%	21.7	1.6	C
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	2,210	2,175	98.4%	14.5	0.9	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	2,335	2,311	99.0%	19.1	2.3	B
4	SR-65 SB Ramps/Sunset Blvd	Signal	4,225	4,308	102.0%	10.2	0.7	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	4,295	4,425	103.0%	11.4	0.4	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	7,035	6,906	98.2%	169.0	20.8	F
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	4,225	4,232	100.2%	83.5	31.3	F
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	6,115	6,442	105.4%	8.2	0.7	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	5,305	5,310	100.1%	10.3	0.5	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	5,260	5,175	98.4%	53.9	10.0	D
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	6,035	5,960	98.8%	22.8	3.3	C
12	SR-65 SB Ramps/Galleria Blvd	Signal	6,225	6,055	97.3%	23.5	1.6	C
13	Galleria Blvd/Antelope Creek Dr	Signal	4,215	3,808	90.3%	21.9	2.5	C
14	Galleria Blvd/Roseville Pkwy	Signal	8,125	7,644	94.1%	99.2	20.2	F
15	Creekside Ridge Dr/Roseville Pkwy	Signal	4,796	4,509	94.0%	64.5	26.5	E
16	Taylor Rd/East Roseville Pkwy	Signal	7,130	6,966	97.7%	53.7	6.6	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	6,405	6,484	101.2%	49.6	11.5	D
18	Wills Rd/Atlantic St	Signal	3,350	3,417	102.0%	28.1	2.5	C
19	I-80 WB Ramps/Atlantic St	Signal	4,770	4,768	100.0%	14.4	5.7	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	6,495	6,420	98.8%	105.1	15.6	F
21	North Sunrise Ave/Eureka Rd	Signal	6,760	6,874	101.7%	102.2	24.0	F
22	Harding Blvd/Wills Rd	Signal	3,005	3,074	102.3%	19.2	0.9	B
23	Harding Blvd/Douglas Blvd	Signal	3,875	3,774	97.4%	77.1	15.3	E
24	I-80 WB Ramps/Douglas Blvd	Signal	4,640	4,533	97.7%	26.3	7.1	C

Network Summary	
Total Demand Volume (veh/hr)	121,496
Total Volume Served (veh/hr)	120,191
Percent Served	98.9%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor) with EB Aux
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
25	I-80 EB Ramps/Douglas Blvd	Signal	5,430	5,264	96.9%	31.0	18.5	C
26	North Sunrise Ave/Douglas Blvd	Signal	6,285	6,054	96.3%	169.3	26.7	F
27	Pacific St/Woodside Dr	Signal	3,350	3,351	100.0%	8.2	1.1	A
28	Pacific St/Sunset Blvd	Signal	5,310	5,344	100.6%	32.5	2.0	C
29	Granite Dr/Rocklin Rd	Signal	3,980	4,181	105.1%	83.9	21.4	F
30	I-80 WB Ramps/Rocklin Rd	Signal	3,800	3,967	104.4%	30.9	14.3	C
31	I-80 EB Ramps/Rocklin Rd	Signal	3,650	3,726	102.1%	23.4	5.4	C
32	Aguilar Rd/Rocklin Rd	Signal	2,940	2,998	102.0%	19.8	1.8	B
33	Lincoln Blvd/SR-65 NB Off-Ramp	Signal	4,115	4,084	99.2%	10.4	0.6	B
34	Lincoln Blvd/SR-65 SB On-Ramp	Signal	2,580	2,589	100.3%	30.6	1.2	C
35	SR-65 SB Ramps/Placer Pkwy	Signal	4,815	4,888	101.5%	23.7	3.1	C
36	SR-65 NB Ramps/Whitney Ranch Pkwy	Signal	4,465	4,504	100.9%	20.2	3.5	C
37	Taylor Rd/I-80 Ramps	Signal	3,805	3,811	100.2%	25.1	1.9	C
40	Galleria Blvd/Berry St	Signal	2,980	2,979	100.0%	11.3	0.9	B

Network Summary	
Total Demand Volume (veh/hr)	57,505
Total Volume Served (veh/hr)	57,739
Percent Served	100.4%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	66	8	313	76	NO
	Through						
	Right Turn	1500	66	8	314	76	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	23	9	131	42	NO
	Through						
	Right Turn	1500	23	9	131	42	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	59	7	200	37	NO
	Through						
	Right Turn	1330	61	7	203	37	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	60	4	234	34	NO
	Through						
	Right Turn	1400	15	2	126	36	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	94	32	631	396	MAX
	Through	2260	146	81	858	312	NO
	Right Turn	200	28	37	584	312	MAX

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	45	5	208	29	NO
	Through						
	Right Turn	1100	45	5	207	29	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	26	3	144	22	NO
	Through						
	Right Turn	1130	28	3	146	22	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	45	2	159	22	NO
	Through						
	Right Turn	1420	45	2	159	22	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	10	1	83	23	NO
WB	Left Turn						
	Through						
	Right Turn	1170	76	9	405	126	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	75	2	323	42	NO
WB	Left Turn						
	Through						
	Right Turn	1780	11	4	100	13	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	11	21	166	524	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 1 (Full Taylor) with EB Aux
 PM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	114	21	427	109	MAX
	Through	1700	29	16	195	93	NO
	Right Turn	1700	4	3	117	112	NO
SB	Left Turn	550	75	7	260	108	NO
	Through						
	Right Turn	550	59	10	321	54	NO
EB	Left Turn	1120	55	3	192	29	NO
	Through	1120	159	38	759	145	NO
	Right Turn	810	28	20	344	145	NO
WB	Left Turn						
	Through	1370	615	447	1515	11	MAX
	Right Turn	280	8	8	201	206	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	82	78	418	104	NO
	Through	1530	82	78	418	104	NO
	Right Turn	730	82	78	419	104	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor) with EB Aux
PM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	142	282	1151	795	NO
SB	Left Turn						
	Through						
	Right Turn	1250	84	51	372	486	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	73	42	334	120	NO
	Through						
	Right Turn	1230	85	43	354	120	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	69	11	272	65	NO
	Through						
	Right Turn	1080	47	9	282	71	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	91	5	429	89	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	97	13	394	54	NO
	Through						
	Right Turn	1650	97	13	394	54	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	129	28	502	121	NO
	Through						
	Right Turn	1620	129	28	502	121	NO

Intersection 37

Taylor Rd/I-80 Ramps

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	700	57	6	281	75	NO
	Through						
	Right Turn	700	27	10	215	57	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Leisch Method for Weaving Analysis

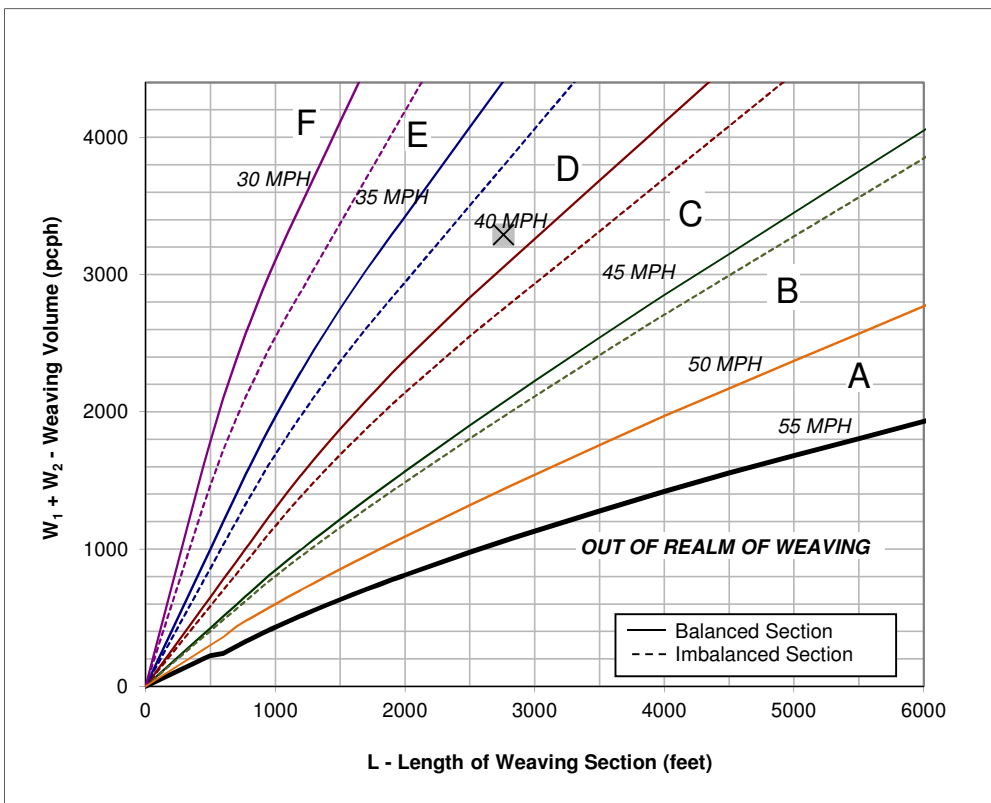
Data Input

Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	4
Length of Weaving Section (feet)	L	2,760

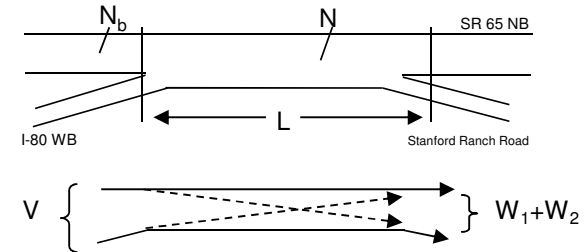
Project Information

Project	I-80/SR 65 Interchange
Scenario	Alt 1 - Design Year PM
Freeway	SR 65 NB
On-ramp	I-80 WB
Off-ramp	Stanford Ranch Road

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,860	Volume (vph)*	1,759	Volume (vph)*	1,468
Truck Percentage	5.0%	Truck Percentage	3.0%	Truck Percentage	5.0%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,032	Volume (pcph)	1,785	Volume (pcph)	1,505



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

35 MPH and **40 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 39.1
4. Weaving Intensity Factor (k) 2.62
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 2,367
6. Level of Service (LOS) F

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

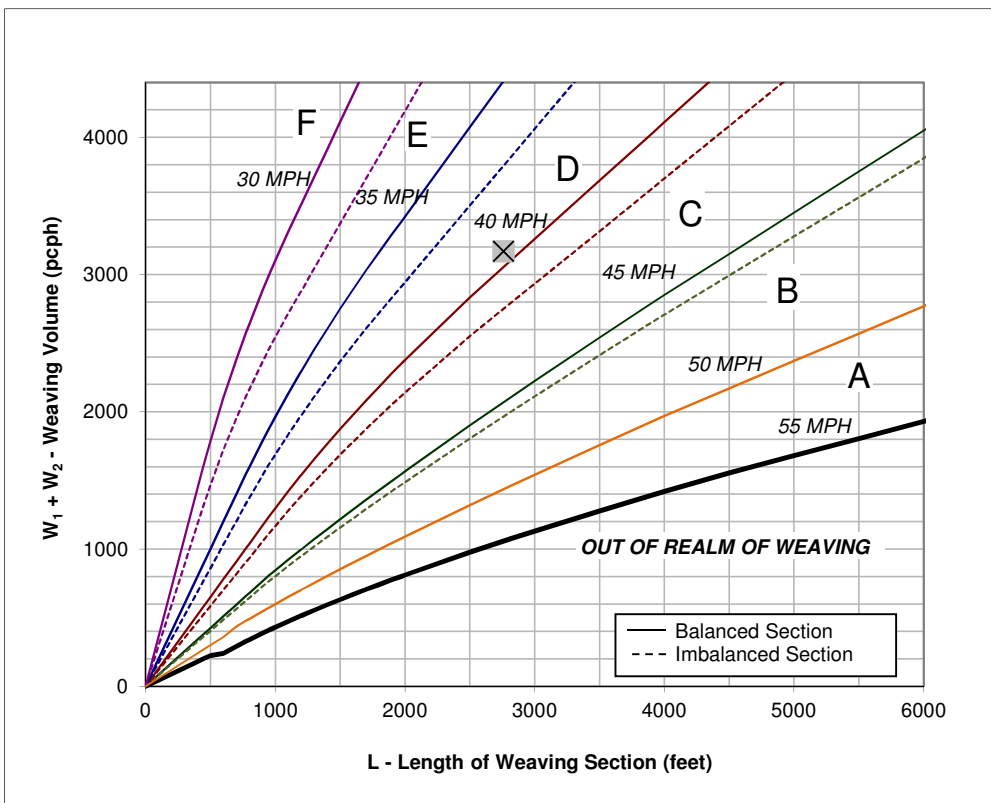
Data Input

Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	4
Length of Weaving Section (feet)	L	2,760

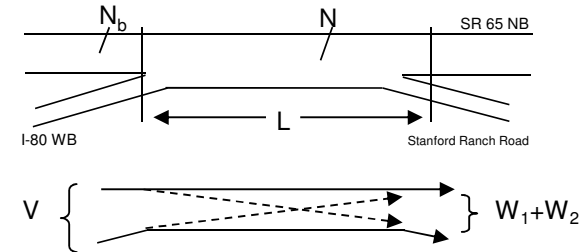
Project Information

Project	I-80/SR 65 Interchange
Scenario	Alt 2 - Design Year PM
Freeway	SR 65 NB
On-ramp	I-80 WB
Off-ramp	Stanford Ranch Road

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,820	Volume (vph)*	1,764	Volume (vph)*	1,344
Truck Percentage	5.0%	Truck Percentage	3.0%	Truck Percentage	5.0%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,991	Volume (pcph)	1,790	Volume (pcph)	1,378



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? **Y**
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

35 MPH and **40 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) **39.6**
4. Weaving Intensity Factor (k) **2.57**
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ **2,290**
6. Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

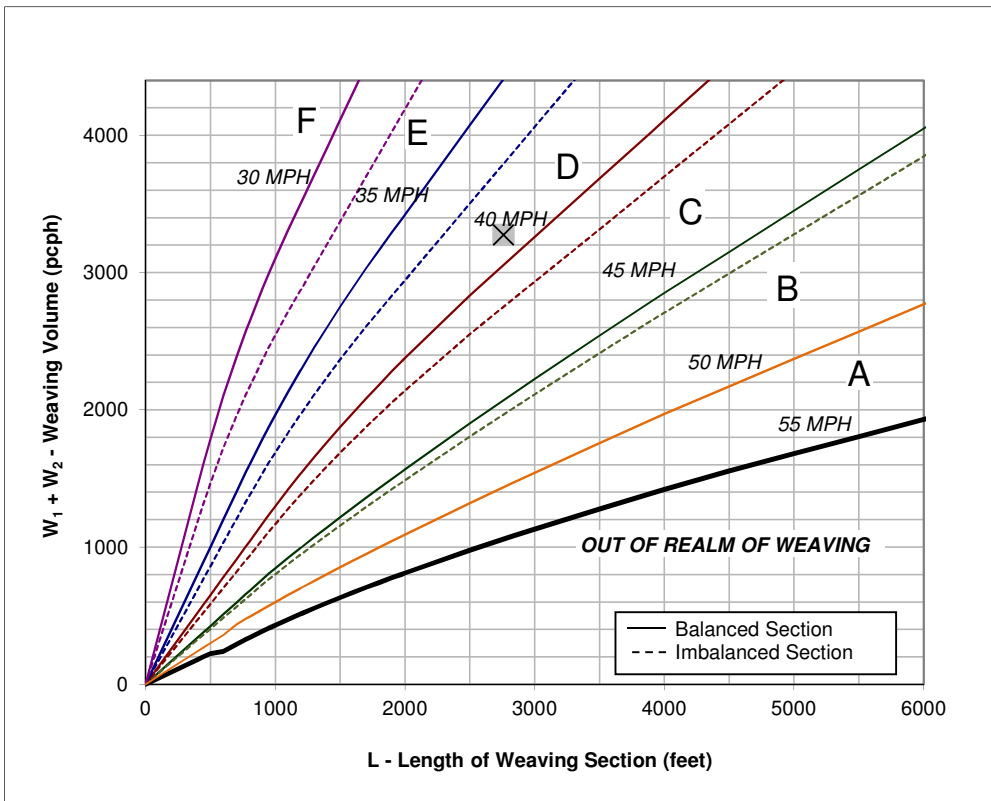
Data Input

Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	4
Length of Weaving Section (feet)	L	2,760

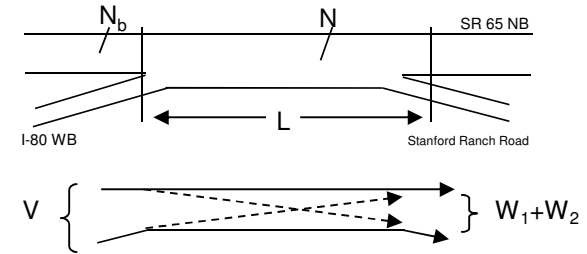
Project Information

Project	I-80/SR 65 Interchange
Scenario	Alt 3 - Design Year PM
Freeway	SR 65 NB
On-ramp	I-80 WB
Off-ramp	Stanford Ranch Road

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,980	Volume (vph)*	1,695	Volume (vph)*	1,516
Truck Percentage	5.0%	Truck Percentage	3.0%	Truck Percentage	5.0%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	7,155	Volume (pcph)	1,720	Volume (pcph)	1,554



Figure



Capacity Analysis

- Is the weaving section balanced (Y / N)? **Y**
[If optional exit lane, then "Y". Otherwise "N".]
- In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?
35 MPH and **40 MPH**
If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.
- Interpolated Weaving Speed (S_w , mph) **39.2**
- Weaving Intensity Factor (k) **2.61**
- Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ **2,414**
- Level of Service (LOS) **F**

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

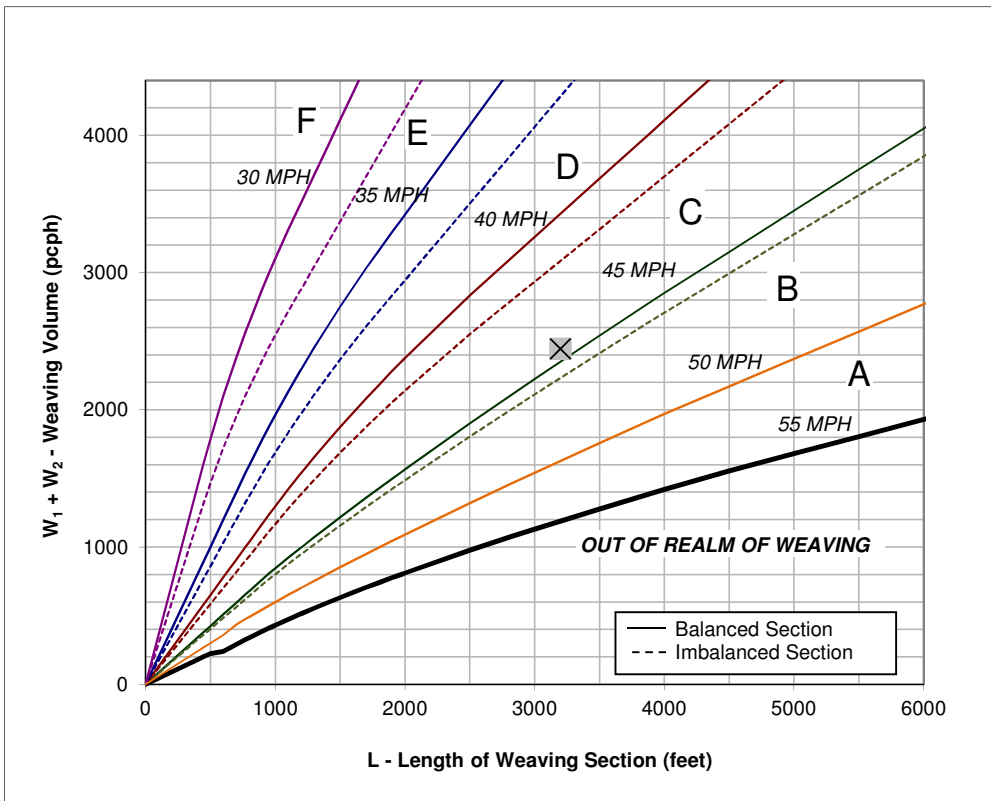
Data Input

Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	3
Length of Weaving Section (feet)	L	3,200

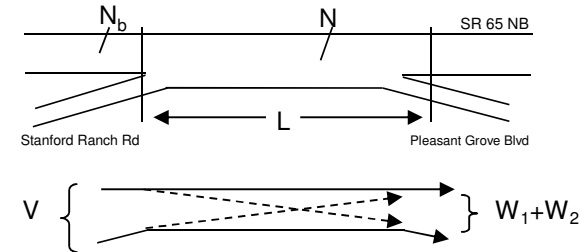
Project Information

Project	I-80/SR 65 Interchange
Scenario	Alt 1 - Design Year PM
Freeway	SR 65 NB
On-ramp	Stanford Ranch Rd
Off-ramp	Pleasant Grove Blvd

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,189	Volume (vph)*	994	Volume (vph)*	1,418
Truck Percentage	3.5%	Truck Percentage	2.0%	Truck Percentage	3.0%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,297	Volume (pcph)	1,004	Volume (pcph)	1,439



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

40 MPH and **45 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 44.6
4. Weaving Intensity Factor (k) 2.02
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 2,440
6. Level of Service (LOS) F

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

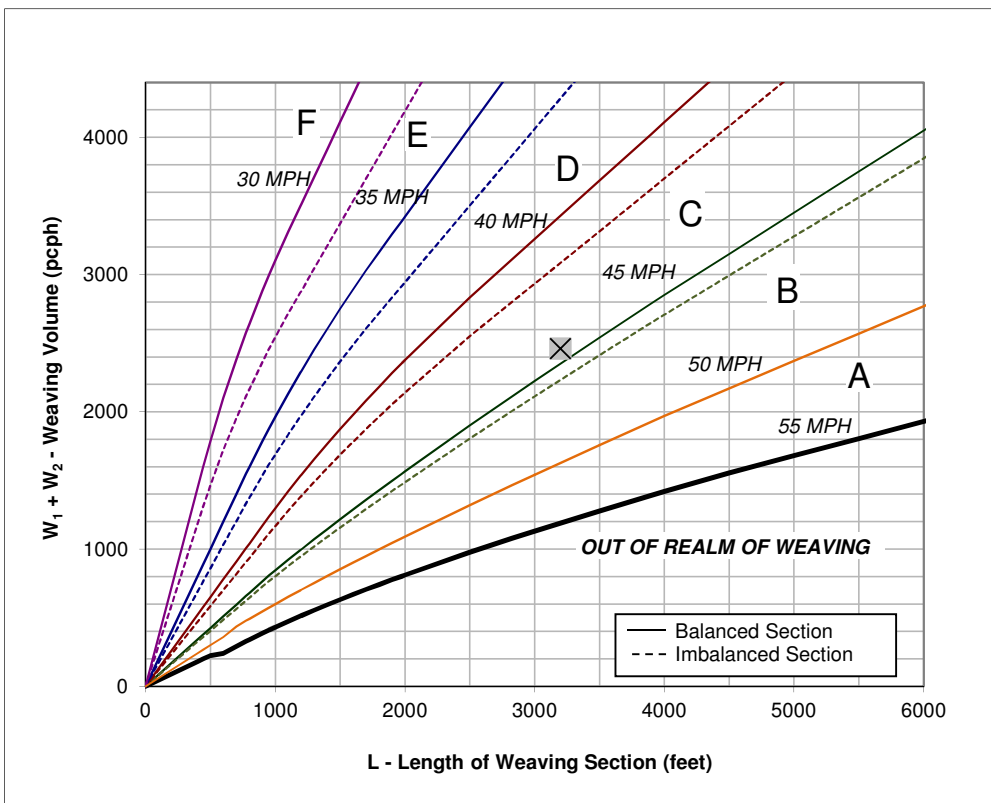
Data Input

Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	3
Length of Weaving Section (feet)	L	3,200

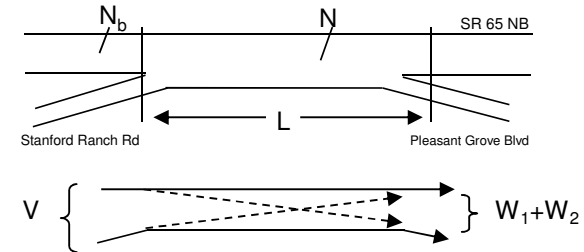
Project Information

Project	I-80/SR 65 Interchange
Scenario	Alt 2 - Design Year PM
Freeway	SR 65 NB
On-ramp	Stanford Ranch Rd
Off-ramp	Pleasant Grove Blvd

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,117	Volume (vph)*	1,003	Volume (vph)*	1,425
Truck Percentage	3.5%	Truck Percentage	2.0%	Truck Percentage	3.0%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,224	Volume (pcph)	1,013	Volume (pcph)	1,446



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

40 MPH and **45 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 44.5
4. Weaving Intensity Factor (k) 2.03
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 2,424
6. Level of Service (LOS) F

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

Leisch Method for Weaving Analysis

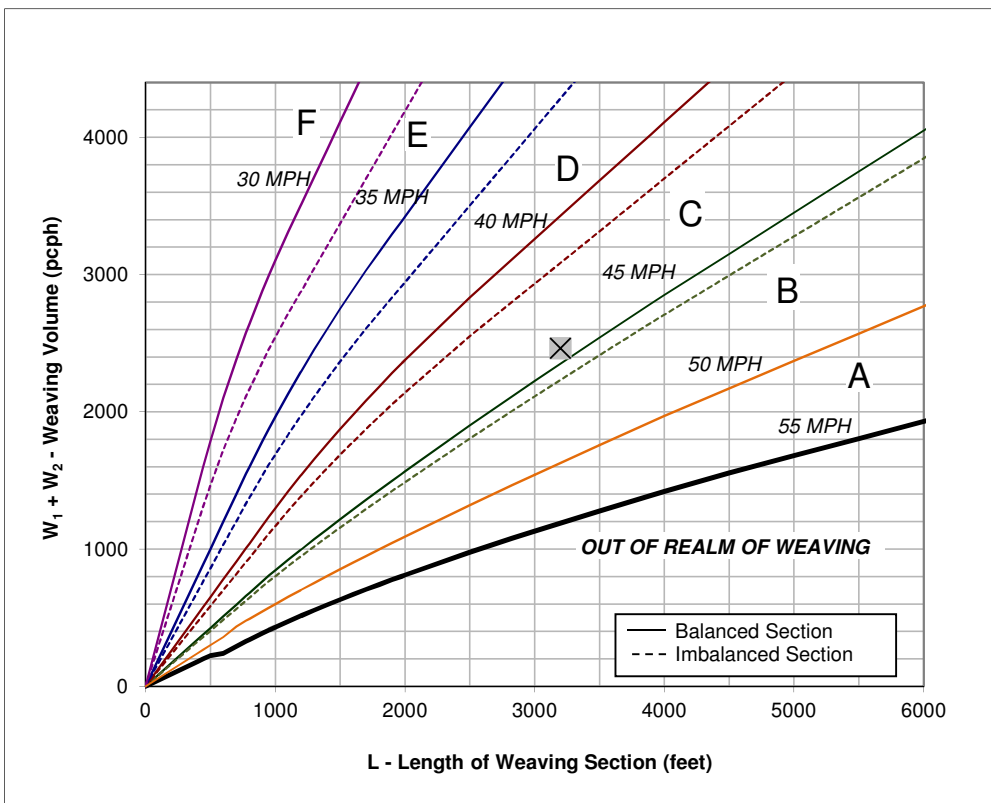
Data Input

Number of Entering Mainline Lanes	N_b	3
Number of Lanes in Weaving Section	N	3
Length of Weaving Section (feet)	L	3,200

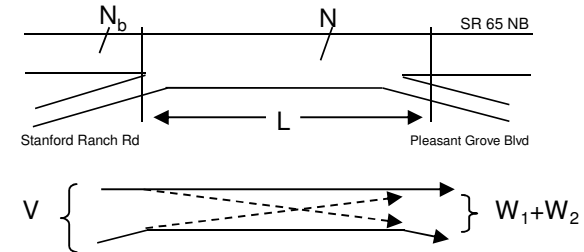
Project Information

Project	I-80/SR 65 Interchange
Scenario	Alt 3 - Design Year PM
Freeway	SR 65 NB
On-ramp	Stanford Ranch Rd
Off-ramp	Pleasant Grove Blvd

Total Weaving Section (V)		On-ramp to Mainline (W_1)		Mainline to Off-ramp (W_2)	
Volume (vph)*	6,117	Volume (vph)*	995	Volume (vph)*	1,437
Truck Percentage	3.5%	Truck Percentage	2.0%	Truck Percentage	3.0%
PCE for Trucks	1.5	PCE for Trucks	1.5	PCE for Trucks	1.5
Volume (pcph)	6,224	Volume (pcph)	1,005	Volume (pcph)	1,459



Figure



Capacity Analysis

1. Is the weaving section balanced (Y / N)? Y
[If optional exit lane, then "Y". Otherwise "N".]
2. In the Weaving Speed Chart to the left, which two speed curves is the black "x" between?

40 MPH and **45 MPH**

If below the 55 MPH curve, out of the realm of weaving.
If left of the 30 MPH curve, LOS is F.

3. Interpolated Weaving Speed (S_w , mph) 44.5
4. Weaving Intensity Factor (k) 2.03
5. Service Volume (SV, pcph)
 $SV = (1/N) * [V + (k - 1) * \min(W_1, W_2)]$ 2,421
6. Level of Service (LOS) F

The LOS in the chart above refers to the capacity of weaving traffic only; through and ramp to ramp traffic is not included.

* Note: **Do not adjust by a Peak Hour Factor (PHF)**. The methodology incorporates the PHF in the Service Volume tables.

Sources: *Completion of Procedures for Analysis and Design of Traffic Weaving Sections*, Jack E. Leisch & Associates, September 1983 and *Highway Design Manual*, California Department of Transportation, July 24, 2009

I-80/SR 65 Interchange Improvements

Vissim Model Results – Existing Conditions

VISSIM Metrics
 Calibration Comparison
 I-80 / SR-65 Interchange
 Fehr & Peers
 Link Volumes
 February 15, 2013

AM Peak Period

Fwy	Link Location	Measured Volumes		Modeled Conditions			Link Flow Criteria		Link GEH Criteria	
		Demand Volume (vph)	Served Volume (vph)	vph	%	GEH	Measure	Meets Target?	Target	Meets Target?
Interstate 80	EB - Auburn Blvd Off to On-ramp	18,390	18,521	131	1%	1.0	+/- 400 vph	Yes	< 5	Yes
	EB - Auburn Blvd On-ramp	2,374	2,405	31	1%	0.6	+/- 15%	Yes	< 5	Yes
	EB - Auburn Blvd to Douglas Blvd	20,764	20,898	134	1%	0.9	+/- 400 vph	Yes	< 5	Yes
	EB - Douglas Blvd EB Off-Ramp	4,053	4,035	-18	0%	0.3	+/- 400 vph	Yes	< 5	Yes
	EB - Douglas Blvd EB to WB Off-ramp	16,711	16,832	121	1%	0.9	+/- 400 vph	Yes	< 5	Yes
	EB - Douglas Blvd WB Off-Ramp	940	972	32	3%	1.0	+/- 15%	Yes	< 5	Yes
	EB - Douglas Blvd Off to On-Ramp	15,771	15,848	77	0%	0.6	+/- 400 vph	Yes	< 5	Yes
	EB - Douglas Blvd On-Ramp	2,981	2,951	-30	-1%	0.5	+/- 400 vph	Yes	< 5	Yes
	EB - Douglas Blvd to Eureka Rd	18,752	18,783	31	0%	0.2	+/- 400 vph	Yes	< 5	Yes
	EB - Eureka Rd Off-Ramp	3,572	3,754	182	5%	3.0	+/- 400 vph	Yes	< 5	Yes
	EB - Eureka Rd Off to On-ramp	15,180	15,015	-166	-1%	1.3	+/- 400 vph	Yes	< 5	Yes
	EB - Eureka Rd EB On-Ramp	494	516	22	4%	1.0	+/- 100 vph	Yes	< 5	Yes
	EB - Eureka Rd EB to WB On-Ramp	15,674	15,526	-148	-1%	1.2	+/- 400 vph	Yes	< 5	Yes
	EB - Eureka Rd WB On-Ramp	1,475	1,384	-91	-6%	2.4	+/- 15%	Yes	< 5	Yes
	EB - Eureka Rd to Taylor Rd	17,149	16,903	-246	-1%	1.9	+/- 400 vph	Yes	< 5	Yes
	EB - Taylor Rd Off-Ramp	744	814	70	9%	2.5	+/- 15%	Yes	< 5	Yes
	EB - Taylor Rd to SR-65	16,405	16,074	-332	-2%	2.6	+/- 400 vph	Yes	< 5	Yes
	EB - SR-65 Off-Ramp	8,324	7,693	-631	-8%	7.1	+/- 400 vph	No	< 5	No
	EB - SR-65 Off to On-Ramp	8,081	8,365	284	4%	3.1	+/- 400 vph	Yes	< 5	Yes
	EB - SR-65 On-Ramp	3,601	3,595	-6	0%	0.1	+/- 400 vph	Yes	< 5	Yes
	EB - SR-65 to Rocklin Rd	11,682	11,947	265	2%	2.4	+/- 400 vph	Yes	< 5	Yes
	EB - Rocklin Rd Off-Ramp	3,709	3,797	88	2%	1.4	+/- 400 vph	Yes	< 5	Yes
	EB - Rocklin Rd Off to On-ramp	7,973	8,128	155	2%	1.7	+/- 400 vph	Yes	< 5	Yes
	EB - Rocklin Rd On-Ramp	612	592	-20	-3%	0.8	+/- 100 vph	Yes	< 5	Yes
	EB - Rocklin Rd to Sierra College Blvd	8,585	8,713	128	1%	1.4	+/- 400 vph	Yes	< 5	Yes
	EB - Sierra College Rd Off-Ramp	960	988	28	3%	0.9	+/- 15%	Yes	< 5	Yes
	EB - Sierra College Blvd Off to On-Ramp	7,625	7,716	91	1%	1.0	+/- 400 vph	Yes	< 5	Yes
	EB - Sierra College Blvd SB On-Ramp	411	402	-9	-2%	0.5	+/- 100 vph	Yes	< 5	Yes
	EB - Sierra College Blvd SB to NB On-Ramp	8,036	8,117	81	1%	0.9	+/- 400 vph	Yes	< 5	Yes
	EB - Sierra College Blvd NB On-Ramp	876	835	-41	-5%	1.4	+/- 15%	Yes	< 5	Yes
	EB - Sierra College Blvd to Horseshoe Bar Rd	8,912	8,947	35	0%	0.4	+/- 400 vph	Yes	< 5	Yes
	WB - Horseshoe Bar Rd to Sierra College Blvd	13,864	13,940	76	1%	0.6	+/- 400 vph	Yes	< 5	Yes
	WB - Sierra College Blvd Off-Ramp	2,282	2,259	-23	-1%	0.5	+/- 15%	Yes	< 5	Yes
	WB - Sierra College Blvd Off to On-ramp	11,582	11,672	90	1%	0.8	+/- 400 vph	Yes	< 5	Yes
	WB - Sierra College Blvd NB On-Ramp	194	196	2	1%	0.1	+/- 100 vph	Yes	< 5	Yes
	WB - Sierra College Blvd NB to SB On-Ramp	11,776	11,864	88	1%	0.8	+/- 400 vph	Yes	< 5	Yes
	WB - Sierra College Blvd SB On-Ramp	945	971	26	3%	0.8	+/- 15%	Yes	< 5	Yes
	WB - Sierra College Blvd to Rocklin Rd	12,721	12,828	107	1%	1.0	+/- 400 vph	Yes	< 5	Yes
	WB - Rocklin Rd Off-Ramp	686	686	0	0%	0.0	+/- 100 vph	Yes	< 5	Yes
	WB - Rocklin Rd Off to On-Ramp	12,035	12,130	95	1%	0.9	+/- 400 vph	Yes	< 5	Yes
	WB - Rocklin Rd On-Ramp	2,695	2,765	70	3%	1.3	+/- 400 vph	Yes	< 5	Yes
	WB - Rocklin Rd to SR-65	14,730	14,881	151	1%	1.2	+/- 400 vph	Yes	< 5	Yes
	WB - SR-65 Off-Ramp	3,865	4,072	207	5%	3.3	+/- 400 vph	Yes	< 5	Yes
	WB - SR-65 Off to On-Ramp	10,865	10,789	-76	-1%	0.7	+/- 400 vph	Yes	< 5	Yes
	WB - SR-65 On-Ramp	11,253	11,211	-42	0%	0.4	+/- 400 vph	Yes	< 5	Yes
WB - SR-65 to Taylor Rd	22,118	21,631	-487	-2%	3.3	+/- 400 vph	No	< 5	Yes	
WB - Taylor Rd On-Ramp	1,837	1,864	27	1%	0.6	+/- 15%	Yes	< 5	Yes	
WB - Taylor Rd to Atlantic St	23,955	23,855	-100	0%	0.6	+/- 400 vph	Yes	< 5	Yes	
WB - Atlantic St WB Off-Ramp	1,039	1,041	2	0%	0.0	+/- 15%	Yes	< 5	Yes	
WB - Atlantic St WB to EB Off-ramp	22,916	22,807	-109	0%	0.7	+/- 400 vph	Yes	< 5	Yes	
WB - Atlantic St EB Off-ramp	2,814	2,719	-95	-3%	1.8	+/- 400 vph	Yes	< 5	Yes	
WB - Atlantic St Off to On-ramp	20,102	20,087	-15	0%	0.1	+/- 400 vph	Yes	< 5	Yes	
WB - Atlantic St On-Ramp	2,382	2,293	-89	-4%	1.8	+/- 15%	Yes	< 5	Yes	
WB - Atlantic St to Douglas Blvd	22,484	22,376	-108	0%	0.7	+/- 400 vph	Yes	< 5	Yes	
WB - Douglas Blvd Off-Ramp	3,203	3,058	-145	-5%	2.6	+/- 400 vph	Yes	< 5	Yes	
WB - Douglas Blvd Off to On-Ramp	19,281	19,318	37	0%	0.3	+/- 400 vph	Yes	< 5	Yes	
WB - Douglas Blvd WB On-Ramp	2,693	2,507	-186	-7%	3.7	+/- 15%	Yes	< 5	Yes	
WB - Douglas Blvd WB to EB On-Ramp	21,974	21,825	-150	-1%	1.0	+/- 400 vph	Yes	< 5	Yes	
WB - Douglas Blvd EB On-Ramp	1,255	1,257	2	0%	0.0	+/- 15%	Yes	< 5	Yes	
WB - Douglas Blvd to Riverside Ave	23,229	23,071	-158	-1%	1.0	+/- 400 vph	Yes	< 5	Yes	
WB - Riverside Ave Off-ramp	1,860	1,689	-171	-9%	4.1	+/- 15%	Yes	< 5	Yes	
WB - Riverside Ave Off to On-Ramp	21,369	21,375	6	0%	0.0	+/- 400 vph	Yes	< 5	Yes	
WB - Riverside Ave NB On-ramp	699	723	24	3%	0.9	+/- 100 vph	Yes	< 5	Yes	
WB - Riverside Ave NB to SB On-Ramp	22,068	22,098	30	0%	0.2	+/- 400 vph	Yes	< 5	Yes	
WB - Riverside Ave SB On-ramp	4,233	4,324	91	2%	1.4	+/- 400 vph	Yes	< 5	Yes	
WB - Riverside Ave to Antelope Rd	26,301	26,420	119	0%	0.7	+/- 400 vph	Yes	< 5	Yes	
WB - Antelope Rd Off-ramp	1,270	1,151	-119	-9%	3.4	+/- 15%	Yes	< 5	Yes	
WB - Antelope Rd Off to On-Ramp	25,031	25,275	244	1%	1.5	+/- 400 vph	Yes	< 5	Yes	
WB - Antelope Rd WB On-ramp	2,088	2,083	-5	0%	0.1	+/- 15%	Yes	< 5	Yes	
WB - Antelope Rd WB to EB On-Ramp	27,119	27,359	240	1%	1.5	+/- 400 vph	Yes	< 5	Yes	
WB - Antelope Rd EB On-ramp	1,448	1,441	-7	-1%	0.2	+/- 15%	Yes	< 5	Yes	
WB - Antelope Rd to Elkhorn Blvd	28,567	28,633	66	0%	0.4	+/- 400 vph	Yes	< 5	Yes	
WB - Elkhorn Blvd Off-ramp	2,315	2,148	-167	-7%	3.5	+/- 15%	Yes	< 5	Yes	
WB - Elkhorn Blvd Off to On-Ramp	26,252	26,653	401	2%	2.5	+/- 400 vph	No	< 5	Yes	
WB - Elkhorn Blvd WB On-ramp	2,597	2,587	-10	0%	0.2	+/- 15%	Yes	< 5	Yes	
WB - Elkhorn Blvd WB to EB On-Ramp	28,849	29,235	386	1%	2.3	+/- 400 vph	Yes	< 5	Yes	
WB - Elkhorn Blvd EB On-ramp	3,184	3,160	-24	-1%	0.4	+/- 400 vph	Yes	< 5	Yes	
WB - Elkhorn Blvd to Madison Ave	32,033	32,393	360	1%	2.0	+/- 400 vph	Yes	< 5	Yes	
NB - I-80 to Stanford Ranch Rd	12,189	11,737	-452	-4%	4.1	+/- 400 vph	No	< 5	Yes	
NB - Stanford Ranch Rd Off-Ramp	2,331	2,239	-92	-4%	1.9	+/- 15%	Yes	< 5	Yes	
NB - Stanford Ranch Rd Off to On-Ramp	9,858	9,487	-371	-4%	3.8	+/- 400 vph	Yes	< 5	Yes	
NB - Stanford Ranch Rd On-Ramp	1,712	1,698	-14	-1%	0.3	+/- 15%	Yes	< 5	Yes	
NB - Stanford Ranch Rd to Pleasant Grove Blvd	11,570	11,169	-401	-3%	3.8	+/- 400 vph	No	< 5	Yes	
NB - Pleasant Grove Blvd Off-Ramp	2,131	1,978	-153	-7%	3.4	+/- 15%	Yes	< 5	Yes	
NB - Pleasant Grove Blvd Off to On-Ramp	9,439	9,184	-255	-3%	2.6	+/- 400 vph	Yes	< 5	Yes	
NB - Pleasant Grove Blvd On-Ramp	830	810	-20	-2%	0.7	+/- 15%	Yes	< 5	Yes	
NB - Pleasant Grove to Blue Oaks Blvd	10,269	9,990	-279	-3%	2.8	+/- 400 vph	Yes	< 5	Yes	

State Route 65

NB - Blue Oaks Blvd Off-Ramp	4,193	4,035	-158	-4%	2.5	+/- 400 vph	Yes	<5	Yes
NB - Blue Oaks Blvd Off to On-Ramp	6,076	5,942	-134	-2%	1.7	+/- 400 vph	Yes	<5	Yes
NB - Blue Oaks Blvd On-Ramp	1,134	1,118	-16	-1%	0.5	+/- 15%	Yes	<5	Yes
NB - Blue Oaks Blvd to Sunset Blvd	7,210	7,052	-158	-2%	1.9	+/- 400 vph	Yes	<5	Yes
NB - Sunset Blvd Off-Ramp	3,371	3,279	-92	-3%	1.6	+/- 400 vph	Yes	<5	Yes
NB - Sunset Blvd Off to On-ramp	3,839	3,766	-73	-2%	1.2	+/- 400 vph	Yes	<5	Yes
NB - Sunset Blvd EB On-Ramp	113	117	4	4%	0.4	+/- 100 vph	Yes	<5	Yes
NB - Sunset Blvd EB to WB On-ramp	3,952	3,883	-70	-2%	1.1	+/- 400 vph	Yes	<5	Yes
NB - Sunset Blvd WB On-Ramp	609	597	-12	-2%	0.5	+/- 100 vph	Yes	<5	Yes
NB - Sunset Blvd to Twelve Bridges Dr	4,561	4,467	-94	-2%	1.4	+/- 400 vph	Yes	<5	Yes
NB - Twelve Bridges Dr Off-Ramp	979	915	-64	-7%	2.1	+/- 15%	Yes	<5	Yes
NB - Twelve Bridges Dr Off to On-ramp	3,582	3,542	-41	-1%	0.7	+/- 400 vph	Yes	<5	Yes
NB - Twelve Bridges Dr On-Ramp	631	607	-24	-4%	1.0	+/- 100 vph	Yes	<5	Yes
NB - Twelve Bridges Dr to Sterling Pkwy	4,213	4,147	-66	-2%	1.0	+/- 400 vph	Yes	<5	Yes
SB - Sterling Pkwy to Twelve Bridges Dr	8,307	8,327	20	0%	0.2	+/- 400 vph	Yes	<5	Yes
SB - Twelve Bridges Dr Off-Ramp	865	852	-14	-2%	0.5	+/- 15%	Yes	<5	Yes
SB - Twelve Bridges Dr Off to On-Ramp	7,442	7,474	32	0%	0.4	+/- 400 vph	Yes	<5	Yes
SB - Twelve Bridges Dr On-Ramp	1,930	1,876	-54	-3%	1.2	+/- 15%	Yes	<5	Yes
SB - Twelve Bridges Dr to Sunset Blvd	9,372	9,343	-29	0%	0.3	+/- 400 vph	Yes	<5	Yes
SB - Sunset Blvd Off-Ramp	1,081	1,041	-40	-4%	1.2	+/- 15%	Yes	<5	Yes
SB - Sunset Blvd Off to On-ramp	8,291	8,294	3	0%	0.0	+/- 400 vph	Yes	<5	Yes
SB - Sunset Blvd WB On-Ramp	1,224	1,203	-21	-2%	0.6	+/- 15%	Yes	<5	Yes
SB - Sunset Blvd WB to EB On-Ramp	9,515	9,497	-18	0%	0.2	+/- 400 vph	Yes	<5	Yes
SB - Sunset Blvd EB On-Ramp	1,075	1,040	-35	-3%	1.1	+/- 15%	Yes	<5	Yes
SB - Sunset Blvd to Blue Oaks Blvd	10,590	10,534	-56	-1%	0.5	+/- 400 vph	Yes	<5	Yes
SB - Blue Oaks Blvd Off-Ramp	1,761	1,798	37	2%	0.9	+/- 15%	Yes	<5	Yes
SB - Blue Oaks Blvd Off to On-Ramp	8,829	8,729	-100	-1%	1.1	+/- 400 vph	Yes	<5	Yes
SB - Blue Oaks Blvd WB On-Ramp	1,330	1,217	-113	-9%	3.2	+/- 15%	Yes	<5	Yes
SB - Blue Oaks Blvd WB to EB On-Ramp	10,159	9,943	-216	-2%	2.2	+/- 400 vph	Yes	<5	Yes
SB - Blue Oaks Blvd EB On-Ramp	3,103	2,907	-197	-6%	3.6	+/- 400 vph	Yes	<5	Yes
SB - Blue Oaks Blvd to Pleasant Grove Blvd	13,262	12,846	-416	-3%	3.6	+/- 400 vph	No	<5	Yes
SB - Pleasant Grove Blvd Off-Ramp	1,680	1,662	-18	-1%	0.4	+/- 15%	Yes	<5	Yes
SB - Pleasant Grove Blvd Off to On-ramp	11,582	11,175	-407	-4%	3.8	+/- 400 vph	No	<5	Yes
SB - Pleasant Grove Blvd WB On-Ramp	1,649	1,602	-47	-3%	1.2	+/- 15%	Yes	<5	Yes
SB - Pleasant Grove Blvd WB to EB On-Ramp	13,231	12,776	-455	-3%	4.0	+/- 400 vph	No	<5	Yes
SB - Pleasant Grove Blvd EB On-Ramp	1,839	1,795	-44	-2%	1.0	+/- 15%	Yes	<5	Yes
SB - Pleasant Grove Blvd to Galleria Blvd	15,070	14,565	-506	-3%	4.2	+/- 400 vph	No	<5	Yes
SB - Galleria Blvd Off-Ramp	2,744	2,389	-355	-13%	7.0	+/- 15%	Yes	<5	No
SB - Galleria Blvd Off to On-Ramp	12,326	12,171	-155	-1%	1.4	+/- 400 vph	Yes	<5	Yes
SB - Galleria Blvd On-Ramp	2,528	2,652	124	5%	2.4	+/- 15%	Yes	<5	Yes
SB - Galleria Blvd to I-80	14,854	14,821	-33	0%	0.3	+/- 400 vph	Yes	<5	Yes
SB SR-65 n/o Sterling Pkwy	4,945	5,436	491	10%	6.8	+/- 400 vph	No	<5	No
NB SR-65 n/o Sterling Pkwy	3,235	3,197	-38	-1%	0.7	+/- 400 vph	Yes	<5	Yes
EB Sterling Pkwy e/o SR-65	1,115	1,085	-30	-3%	0.9	+/- 15%	Yes	<5	Yes
WB Sterling Pkwy e/o SR-65	3,499	3,042	-457	-13%	8.0	+/- 400 vph	No	<5	No
EB Twelve Bridges Dr w/o SB SR-65	531	476	-55	-10%	2.5	+/- 100 vph	Yes	<5	Yes
WB Twelve Bridges Dr w/o SB SR-65	887	830	-57	-6%	1.9	+/- 15%	Yes	<5	Yes
EB Twelve Bridges Dr e/o SB SR-65	875	807	-68	-8%	2.3	+/- 15%	Yes	<5	Yes
WB Twelve Bridges Dr e/o SB SR-65	2,296	2,190	-106	-5%	2.2	+/- 15%	Yes	<5	Yes
EB Twelve Bridges Dr e/o NB SR-65	1,451	1,450	-1	0%	0.0	+/- 15%	Yes	<5	Yes
WB Twelve Bridges Dr e/o NB SR-65	2,524	2,531	7	0%	0.1	+/- 15%	Yes	<5	Yes
EB Sunset Blvd w/o SB SR-65	1,511	1,493	-18	-1%	0.5	+/- 15%	Yes	<5	Yes
WB Sunset Blvd w/o SB SR-65	2,714	2,751	37	1%	0.7	+/- 400 vph	Yes	<5	Yes
EB Sunset Blvd e/o SB SR-65	1,193	1,172	-21	-2%	0.6	+/- 15%	Yes	<5	Yes
WB Sunset Blvd e/o SB SR-65	3,614	3,634	20	1%	0.3	+/- 400 vph	Yes	<5	Yes
EB Sunset Blvd e/o NB SR-65	2,632	2,450	-182	-7%	3.6	+/- 15%	Yes	<5	Yes
WB Sunset Blvd e/o NB SR-65	2,404	3,152	748	31%	14.2	+/- 400 vph	No	<5	No
EB Blue Oaks Blvd w/o Washington Blvd	5,406	5,339	-67	-1%	0.9	+/- 400 vph	Yes	<5	Yes
WB Blue Oaks Blvd w/o Washington Blvd	2,651	2,518	-133	-5%	2.6	+/- 15%	Yes	<5	Yes
WB Blue Oaks Blvd w/o NB SR-65 ramp	3,617	3,139	-478	-13%	8.2	+/- 400 vph	No	<5	No
EB Blue Oaks Blvd e/o Washington Blvd	6,018	5,583	-435	-7%	5.7	+/- 400 vph	No	<5	No
WB Blue Oaks Blvd e/o Washington Blvd	3,264	3,140	-124	-4%	2.2	+/- 400 vph	Yes	<5	Yes
SB Washington Blvd s/o Blue Oaks Blvd	1,884	2,159	275	15%	6.1	+/- 15%	Yes	<5	No
NB Washington Blvd s/o Blue Oaks Blvd	1,289	1,202	-87	-7%	2.5	+/- 15%	Yes	<5	Yes
EB Blue Oaks Blvd e/o NB SR-65	2,799	2,893	94	3%	1.8	+/- 400 vph	Yes	<5	Yes
WB Blue Oaks Blvd e/o NB SR-65	2,973	3,024	51	2%	0.9	+/- 400 vph	Yes	<5	Yes
EB Pleasant Grove Blvd w/o SB SR-65	4,344	4,359	15	0%	0.2	+/- 400 vph	Yes	<5	Yes
WB Pleasant Grove Blvd w/o SB SR-65	4,792	4,816	24	0%	0.3	+/- 400 vph	Yes	<5	Yes
EB Pleasant Grove Blvd e/o SB SR-65	2,887	2,924	37	1%	0.7	+/- 400 vph	Yes	<5	Yes
WB Pleasant Grove Blvd e/o SB SR-65	5,143	5,121	-22	0%	0.3	+/- 400 vph	Yes	<5	Yes
EB Pleasant Grove Blvd e/o NB SR-65	3,353	3,419	66	2%	1.1	+/- 400 vph	Yes	<5	Yes
WB Pleasant Grove Blvd e/o NB SR-65	4,308	4,467	159	4%	2.4	+/- 400 vph	Yes	<5	Yes
EB Five Star Blvd w/o Stanford Ranch Rd	731	643	-88	-12%	3.4	+/- 15%	Yes	<5	Yes
WB Five Star Blvd w/o Stanford Ranch Rd	813	811	-2	0%	0.1	+/- 15%	Yes	<5	Yes
EB Five Star Blvd e/o Stanford Ranch Rd	953	916	-37	-4%	1.2	+/- 15%	Yes	<5	Yes
WB Five Star Blvd e/o Stanford Ranch Rd	1,207	1,173	-34	-3%	1.0	+/- 15%	Yes	<5	Yes
SB Stanford Ranch Rd n/o Five Star Blvd	3,832	4,162	330	9%	5.2	+/- 400 vph	Yes	<5	No
NB Stanford Ranch Rd n/o Five Star Blvd	2,174	2,033	-141	-7%	3.1	+/- 15%	Yes	<5	Yes
SB Stanford Ranch Rd s/o Five Star Blvd	5,143	5,294	151	3%	2.1	+/- 400 vph	Yes	<5	Yes
NB Stanford Ranch Rd s/o Five Star Blvd	3,313	3,076	-237	-7%	4.2	+/- 400 vph	Yes	<5	Yes
SB Stanford Ranch Rd n/o NB SR-65	4,978	5,258	280	6%	3.9	+/- 400 vph	Yes	<5	Yes
NB Stanford Ranch Rd n/o NB SR-65	3,372	3,260	-112	-3%	1.9	+/- 400 vph	Yes	<5	Yes
SB Galleria Blvd n/o SB SR-65	5,173	5,272	99	2%	1.4	+/- 400 vph	Yes	<5	Yes
NB Galleria Blvd n/o SB SR-65	2,948	2,746	-202	-7%	3.8	+/- 400 vph	Yes	<5	Yes
SB Galleria Blvd s/o SB SR-65	5,320	5,196	-124	-2%	1.7	+/- 400 vph	Yes	<5	Yes
NB Galleria Blvd s/o SB SR-65	2,879	2,939	60	2%	1.1	+/- 400 vph	Yes	<5	Yes
EB Antelope Creek Dr w/o Galleria Blvd	167	177	10	6%	0.8	+/- 100 vph	Yes	<5	Yes
WB Antelope Creek Dr w/o Galleria Blvd	366	366	0	0%	0.0	+/- 100 vph	Yes	<5	Yes
EB Antelope Creek Dr e/o Galleria Blvd	593	613	20	3%	0.8	+/- 100 vph	Yes	<5	Yes
WB Antelope Creek Dr e/o Galleria Blvd	482	524	42	9%	1.9	+/- 100 vph	Yes	<5	Yes
SB Galleria Blvd n/o Antelope Creek Dr	4,660	4,497	-163	-4%	2.4	+/- 400 vph	Yes	<5	Yes
NB Galleria Blvd n/o Antelope Creek Dr	2,837	2,888	51	2%	1.0	+/- 400 vph	Yes	<5	Yes
SB Galleria Blvd s/o Antelope Creek Dr	4,292	4,162	-130	-3%	2.0	+/- 400 vph	Yes	<5	Yes
NB Galleria Blvd s/o Antelope Creek Dr	2,779	2,804	25	1%	0.5	+/- 400 vph	Yes	<5	Yes
EB Roseville Pkwy w/o Galleria Blvd	5,267	5,330	63	1%	0.9	+/- 400 vph	Yes	<5	Yes
WB Roseville Pkwy w/o Galleria Blvd	3,091	3,205	114	4%	2.0	+/- 400 vph	Yes	<5	Yes
EB Roseville Pkwy e/o Galleria Blvd	5,218	5,228	10	0%	0.1	+/- 400 vph	Yes	<5	Yes

WB Roseville Pkwy e/o Galleria Blvd	3,859	3,908	49	1%	0.8	+/- 400 vph	Yes	<5	Yes
SB Galleria Blvd n/o Roseville Pkwy	4,339	4,192	-147	-3%	2.3	+/- 400 vph	Yes	<5	Yes
NB Galleria Blvd n/o Roseville Pkwy	2,900	2,928	28	1%	0.5	+/- 400 vph	Yes	<5	Yes
SB Galleria Blvd s/o Roseville Pkwy	3,779	3,606	-173	-5%	2.9	+/- 400 vph	Yes	<5	Yes
NB Galleria Blvd s/o Roseville Pkwy	1,523	1,537	14	1%	0.4	+/- 15%	Yes	<5	Yes
EB Roseville Pkwy w/o Creekside Ridge Dr	5,205	5,165	-40	-1%	0.6	+/- 400 vph	Yes	<5	Yes
WB Roseville Pkwy w/o Creekside Ridge Dr	3,958	4,010	52	1%	0.8	+/- 400 vph	Yes	<5	Yes
SB Creekside Ridge Dr n/o Roseville Pkwy	294	341	47	16%	2.6	+/- 100 vph	Yes	<5	Yes
NB Creekside Ridge Dr n/o Roseville Pkwy	825	700	-125	-15%	4.5	+/- 15%	No	<5	Yes
SB Creekside Ridge Dr s/o Roseville Pkwy	54	53	-1	-2%	0.1	+/- 100 vph	Yes	<5	Yes
NB Creekside Ridge Dr s/o Roseville Pkwy	43	48	5	11%	0.7	+/- 100 vph	Yes	<5	Yes
EB Roseville Pkwy w/o Taylor Rd	5,267	5,434	167	3%	2.3	+/- 400 vph	Yes	<5	Yes
WB Roseville Pkwy w/o Taylor Rd	4,562	4,690	128	3%	1.9	+/- 400 vph	Yes	<5	Yes
EB Roseville Pkwy e/o Taylor Rd	6,555	6,307	-248	-4%	3.1	+/- 400 vph	Yes	<5	Yes
WB Roseville Pkwy e/o Taylor Rd	4,804	4,616	-189	-4%	2.7	+/- 400 vph	Yes	<5	Yes
SB Taylor Rd n/o Roseville Pkwy	1,907	1,781	-127	-7%	2.9	+/- 15%	Yes	<5	Yes
NB Taylor Rd n/o Roseville Pkwy	1,193	1,203	10	1%	0.3	+/- 15%	Yes	<5	Yes
SB Taylor Rd s/o Roseville Pkwy	1,631	1,472	-159	-10%	4.0	+/- 15%	Yes	<5	Yes
NB Taylor Rd s/o Roseville Pkwy	1,963	1,842	-121	-6%	2.8	+/- 15%	Yes	<5	Yes
EB Roseville Pkwy w/o Sunrise Ave	6,452	6,251	-201	-3%	2.5	+/- 400 vph	Yes	<5	Yes
WB Roseville Pkwy w/o Sunrise Ave	4,677	4,421	-256	-5%	3.8	+/- 400 vph	Yes	<5	Yes
EB Roseville Pkwy e/o Sunrise Ave	5,098	4,917	-182	-4%	2.6	+/- 400 vph	Yes	<5	Yes
WB Roseville Pkwy e/o Sunrise Ave	4,484	4,268	-216	-5%	3.3	+/- 400 vph	Yes	<5	Yes
SB Sunrise Ave n/o Roseville Pkwy	694	585	-110	-16%	4.3	+/- 100 vph	No	<5	Yes
NB Sunrise Ave n/o Roseville Pkwy	1,700	1,624	-76	-4%	1.9	+/- 15%	Yes	<5	Yes
SB Sunrise Ave s/o Roseville Pkwy	1,790	1,552	-238	-13%	5.8	+/- 15%	Yes	<5	No
NB Sunrise Ave s/o Roseville Pkwy	1,635	1,409	-226	-14%	5.8	+/- 15%	Yes	<5	No
EB Atlantic St w/o Wills Rd	2,535	2,647	112	4%	2.2	+/- 15%	Yes	<5	Yes
WB Atlantic St w/o Wills Rd	1,895	1,882	-13	-1%	0.3	+/- 15%	Yes	<5	Yes
EB Atlantic St w/o WB I-80	2,688	2,819	131	5%	2.5	+/- 400 vph	Yes	<5	Yes
WB Atlantic St w/o WB I-80	2,057	2,055	-2	0%	0.0	+/- 15%	Yes	<5	Yes
SB Wills Rd s/o Atlantic St	1,140	1,123	-17	-2%	0.5	+/- 15%	Yes	<5	Yes
NB Wills Rd s/o Atlantic St	1,131	1,125	-6	-1%	0.2	+/- 15%	Yes	<5	Yes
SB Galleria Blvd n/o Wills Rd	3,505	3,529	24	1%	0.4	+/- 400 vph	Yes	<5	Yes
NB Galleria Blvd n/o Wills Rd	1,795	1,891	96	5%	2.2	+/- 15%	Yes	<5	Yes
SB Harding Blvd s/o Wills Rd	3,388	3,259	-129	-4%	2.2	+/- 400 vph	Yes	<5	Yes
NB Harding Blvd s/o Wills Rd	1,679	1,648	-31	-2%	0.8	+/- 15%	Yes	<5	Yes
EB Eureka Rd w/o Taylor Rd	4,725	4,721	-5	0%	0.1	+/- 400 vph	Yes	<5	Yes
WB Eureka Rd w/o Taylor Rd	2,623	3,893	1270	48%	22.3	+/- 400 vph	No	<5	No
EB Eureka Rd e/o Taylor Rd	6,002	6,106	104	2%	1.3	+/- 400 vph	Yes	<5	Yes
WB Eureka Rd e/o Taylor Rd	2,965	2,904	-61	-2%	1.1	+/- 400 vph	Yes	<5	Yes
SB Taylor Rd n/o Eureka Rd	1,495	1,223	-272	-18%	7.4	+/- 15%	No	<5	No
NB Taylor Rd n/o Eureka Rd	2,163	2,081	-82	-4%	1.8	+/- 15%	Yes	<5	Yes
EB Eureka Rd w/o Sunrise Ave	5,864	5,887	23	0%	0.3	+/- 400 vph	Yes	<5	Yes
WB Eureka Rd w/o Sunrise Ave	3,011	2,917	-94	-3%	1.7	+/- 400 vph	Yes	<5	Yes
EB Eureka Rd e/o Sunrise Ave	4,522	4,737	215	5%	3.2	+/- 400 vph	Yes	<5	Yes
WB Eureka Rd e/o Sunrise Ave	2,448	2,422	-26	-1%	0.5	+/- 15%	Yes	<5	Yes
SB Sunrise Ave n/o Eureka Rd	1,588	1,458	-130	-8%	3.3	+/- 15%	Yes	<5	Yes
NB Sunrise Ave n/o Eureka Rd	1,581	1,618	37	2%	0.9	+/- 15%	Yes	<5	Yes
SB Sunrise Ave s/o Eureka Rd	2,211	1,876	-335	-15%	7.4	+/- 15%	No	<5	No
NB Sunrise Ave s/o Eureka Rd	1,425	1,381	-44	-3%	1.2	+/- 15%	Yes	<5	Yes
EB Douglas Blvd w/o Harding Blvd	3,203	3,586	383	12%	6.6	+/- 400 vph	Yes	<5	No
WB Douglas Blvd w/o Harding Blvd	2,700	3,150	450	17%	8.3	+/- 400 vph	No	<5	No
EB Douglas Blvd e/o Harding Blvd	3,146	4,127	981	31%	16.3	+/- 400 vph	No	<5	No
WB Douglas Blvd e/o Harding Blvd	3,404	3,582	178	5%	3.0	+/- 400 vph	Yes	<5	Yes
SB Harding Blvd n/o Douglas Blvd	2,009	1,236	-774	-39%	19.2	+/- 15%	No	<5	No
NB Harding Blvd n/o Douglas Blvd	1,424	1,026	-398	-28%	11.4	+/- 15%	No	<5	No
SB Harding Blvd s/o Douglas Blvd	256	274	18	7%	1.1	+/- 100 vph	Yes	<5	Yes
NB Harding Blvd s/o Douglas Blvd	165	173	8	5%	0.6	+/- 100 vph	Yes	<5	Yes
EB Douglas Blvd w/o Sunrise Ave	6,545	6,170	-375	-6%	4.7	+/- 400 vph	Yes	<5	Yes
WB Douglas Blvd w/o Sunrise Ave	5,212	5,192	-21	0%	0.3	+/- 400 vph	Yes	<5	Yes
EB Douglas Blvd e/o Sunrise Ave	5,497	5,225	-272	-5%	3.7	+/- 400 vph	Yes	<5	Yes
WB Douglas Blvd e/o Sunrise Ave	4,698	4,796	98	2%	1.4	+/- 400 vph	Yes	<5	Yes
SB Sunrise Ave n/o Douglas Blvd	1,545	1,658	113	7%	2.8	+/- 15%	Yes	<5	Yes
NB Sunrise Ave n/o Douglas Blvd	2,298	2,324	26	1%	0.5	+/- 15%	Yes	<5	Yes
SB Sunrise Ave s/o Douglas Blvd	1,824	1,288	-536	-29%	13.6	+/- 15%	No	<5	No
NB Sunrise Ave s/o Douglas Blvd	2,043	2,254	211	10%	4.5	+/- 15%	Yes	<5	Yes
EB Woodside Dr e/o Pacific St	188	184	-4	-2%	0.3	+/- 100 vph	Yes	<5	Yes
WB Woodside Dr e/o Pacific St	469	463	-6	-1%	0.3	+/- 100 vph	Yes	<5	Yes
SB Pacific St n/o Woodside Dr	3,309	3,201	-108	-3%	1.9	+/- 400 vph	Yes	<5	Yes
NB Pacific St n/o Woodside Dr	1,605	1,634	29	2%	0.7	+/- 15%	Yes	<5	Yes
SB Pacific St s/o Woodside Dr	3,594	3,475	-119	-3%	2.0	+/- 400 vph	Yes	<5	Yes
NB Pacific St s/o Woodside Dr	1,609	1,630	21	1%	0.5	+/- 15%	Yes	<5	Yes
EB Sunset Blvd w/o Pacific St	3,711	3,624	-87	-2%	1.4	+/- 400 vph	Yes	<5	Yes
WB Sunset Blvd w/o Pacific St	1,672	1,814	142	8%	3.4	+/- 15%	Yes	<5	Yes
EB Sunset Blvd e/o Pacific St	297	281	-16	-5%	0.9	+/- 100 vph	Yes	<5	Yes
WB Sunset Blvd e/o Pacific St	463	419	-45	-10%	2.1	+/- 100 vph	Yes	<5	Yes
SB Pacific St n/o Sunset Blvd	2,096	2,239	143	7%	3.1	+/- 15%	Yes	<5	Yes
NB Pacific St n/o Sunset Blvd	2,529	2,557	28	1%	0.6	+/- 15%	Yes	<5	Yes
SB Pacific St s/o Sunset Blvd	3,311	3,216	-95	-3%	1.7	+/- 400 vph	Yes	<5	Yes
NB Pacific St s/o Sunset Blvd	1,539	1,587	48	3%	1.2	+/- 15%	Yes	<5	Yes
EB Rocklin Rd w/o Granite Dr	2,406	2,379	-27	-1%	0.5	+/- 15%	Yes	<5	Yes
WB Rocklin Rd w/o Granite Dr	1,982	1,934	-48	-2%	1.1	+/- 15%	Yes	<5	Yes
EB Rocklin Rd e/o Granite Dr	3,000	3,008	8	0%	0.2	+/- 400 vph	Yes	<5	Yes
WB Rocklin Rd e/o Granite Dr	3,009	2,922	-87	-3%	1.6	+/- 400 vph	Yes	<5	Yes
SB Granite Dr n/o Rocklin Rd	1,160	1,165	5	0%	0.1	+/- 15%	Yes	<5	Yes
NB Granite Dr n/o Rocklin Rd	1,673	1,596	-77	-5%	1.9	+/- 15%	Yes	<5	Yes
EB Rocklin Rd w/o WB I-80	3,153	3,195	42	1%	0.8	+/- 400 vph	Yes	<5	Yes
WB Rocklin Rd w/o WB I-80	3,161	3,103	-58	-2%	1.0	+/- 400 vph	Yes	<5	Yes
EB Rocklin Rd e/o WB I-80	1,981	2,005	24	1%	0.5	+/- 15%	Yes	<5	Yes
WB Rocklin Rd e/o WB I-80	3,998	3,994	-4	0%	0.1	+/- 400 vph	Yes	<5	Yes
EB Rocklin Rd e/o EB I-80	3,572	3,596	24	1%	0.4	+/- 400 vph	Yes	<5	Yes
WB Rocklin Rd e/o EB I-80	2,492	2,395	-97	-4%	2.0	+/- 15%	Yes	<5	Yes
EB Rocklin Rd w/o Aguilar Rd	3,581	3,561	-20	-1%	0.3	+/- 400 vph	Yes	<5	Yes
WB Rocklin Rd w/o Aguilar Rd	2,567	2,249	-319	-12%	6.5	+/- 15%	Yes	<5	No
EB Rocklin Rd e/o Aguilar Rd	3,295	3,248	-47	-1%	0.8	+/- 400 vph	Yes	<5	Yes
WB Rocklin Rd e/o Aguilar Rd	2,029	1,985	-44	-2%	1.0	+/- 15%	Yes	<5	Yes

SB Aguilar Rd s/o Rocklin Rd	152	173	21	14%	1.6	+/- 100 vph	Yes	< 5	Yes
NB Aguilar Rd s/o Rocklin Rd	404	343	-61	-15%	3.2	+/- 100 vph	Yes	< 5	Yes
Overall	1,450,418	1,442,063	-8355	-0.6%	6.9	+/- 5%	Yes	< 4	No

Link Volumes		
	Target	% Met
< 700 vph	> 85 %	95%
> 700 & < 2,700 vph	> 85 %	96%
> 2,700 vph	> 85 %	90%
GEH Statistic	> 85 %	90%

Aggregated Volumes		
	Target	% Met
Intersections	> 85 %	86%
Interchanges	> 85 %	100%

VISSIM Metrics
 Calibration Comparison
 I-80/SR 65 Interchange
 Fehr & Peers
 Travel Time
 June 3, 2012

AM Peak Period

Path	Time Period	Measured	Modeled Conditions			Calibration Targets ¹	
		Travel Time (minutes)	Travel Time (minutes)	Difference (minutes)	Percent Difference	Target	Meets Target?
I-80 WB: Blue Oaks Blvd to Antelope Road	7:15 - 7:30	10.27	8.40	-1.87	-18.2%	+/- 15%	No
	7:45 - 8:00	10.80	10.38	-0.42	-3.9%	+/- 15%	Yes
	8:15 - 8:30	8.05	8.50	0.45	5.6%	+/- 15%	Yes
I-80 EB: Antelope Road to Blue Oaks Blvd	7:00 - 7:15	6.69	6.79	0.10	1.5%	+/- 15%	Yes
	7:45 - 8:00	7.28	7.46	0.18	2.5%	+/- 15%	Yes
	8:15 - 8:30	6.99	6.89	-0.10	-1.5%	+/- 15%	Yes
	8:45 - 9:00	6.93	6.89	-0.04	-0.6%	+/- 15%	Yes
I-80 WB: Sierra College Blvd to Antelope Road	7:00 - 7:15	7.98	9.34	1.36	17.0%	+/- 15%	No
	7:30 - 7:45	8.25	8.46	0.21	2.5%	+/- 15%	Yes
	8:00 - 8:15	7.83	8.48	0.64	8.2%	+/- 15%	Yes
	8:30 - 8:45	7.73	8.33	0.60	7.7%	+/- 15%	Yes
I-80 EB: Antelope Road to Sierra College Blvd	7:15 - 7:30	5.93	6.58	0.65	10.9%	+/- 15%	Yes
	7:45 - 8:00	6.13	6.71	0.58	9.5%	+/- 15%	Yes
	8:30 - 8:45	5.91	6.55	0.64	10.9%	+/- 15%	Yes
	8:45 - 9:00	6.16	6.55	0.39	6.4%	+/- 15%	Yes

Measure	% Cases
> 85%	87%
Met Target	

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Existing Conditions
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	143,451	56
Travel Distance [mi]	All Vehicles	645,274	1,372
Travel Time [h]	All Vehicles	13,757	107.7
Average Speed [mph]	All Vehicles	46.9	0.4
Total Delay [h]	All Vehicles	2,672	118.7
Average Delay per Vehicle [s]	All Vehicles	66	2.9
VHD/VMT [min/mile]	All Vehicles	0.25	0.01
Number of Vehicles Served	HOV	29,190	103
Travel Distance [mi]	HOV	127,289	610
Travel Time [h]	HOV	2,707	23
Average Speed [mph]	HOV	47.0	0.3
Total Delay [h]	HOV	518	19
Average Delay per Vehicle [s]	HOV	63	2
VHD/VMT [min/mile]	HOV	0.24	0.01
Number of Vehicles Served	Truck	3,675	31
Travel Distance [mi]	Truck	19,339	309
Travel Time [h]	Truck	398	6
Average Speed [mph]	Truck	48.5	0
Total Delay [h]	Truck	68	3
Average Delay per Vehicle [s]	Truck	65	3
VHD/VMT [min/mile]	Truck	0.21	0.01

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	29,190	3,670	143,450
Demand Volume	24,518	3,839	143,735
Percent Demand Served	119.1%	95.6%	99.8%
Vehicle Miles of Travel	127,290	19,340	645,270
Person Miles of Travel	267,310	20,310	786,260
Vehicle Hours of Travel	2,710	400	13,760
Vehicle Hours of Delay	520	70	2,670
VHD % of VHT	19.2%	17.5%	19.4%
Average Delay per Vehicle (min)	1.07	1.14	1.12
Person Hours of Delay	1,090	70	3,240
Average Travel Speed	47.0	48.5	46.9

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
AM Peak Hour

Location		Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
			Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1	I-80 EB - Auburn Blvd On-ramp	Merge	6,073	57	112.3%	845	15	115.0%				59.1	1.3	24.5	0.6	C
2	I-80 EB - Auburn Blvd to Douglas Blvd	Basic	6,906	71	112.4%							62.2	0.2	27.9	0.3	D
3	I-80 EB - Douglas Blvd EB Off-ramp	Diverge	6,902	66	112.3%				1,398	64	109.9%	62.1	0.7	23.8	0.6	C
4	I-80 EB - Douglas Blvd WB Off-ramp	Diverge	5,505	78	113.0%				337	36	115.0%	63.4	0.3	18.7	0.4	B
5	I-80 EB - Douglas Blvd Off to On-ramp	Basic	5,162	72	112.7%							63.6	0.1	21.2	0.3	C
6	I-80 EB - Douglas Blvd On-ramp	Merge	5,161	74	112.7%	857	34	100.2%				61.3	1.1	26.8	0.9	C
7	I-80 EB - Eureka Rd Off-ramp	Diverge	6,016	101	110.7%				1,219	72	111.4%	61.7	0.4	26.2	0.5	C
8	I-80 EB - Eureka Rd Off to On-ramp	Basic	4,795	109	110.4%							63.3	0.2	21.0	0.3	C
9	I-80 EB - Eureka Rd EB On-ramp	Merge	4,798	116	110.5%	200	25	123.6%				63.3	0.2	18.6	0.3	B
10	I-80 EB - Eureka Rd to Taylor Rd	Weave	5,001	127	111.0%	438	40	102.9%	242	32	115.3%	62.4	0.4	23.1	0.6	C
11	I-80 EB - Taylor Rd to SR-65	Basic	5,201	117	110.2%							62.0	0.3	27.8	0.6	D
17	I-80 EB - SR-65 Off-ramp	Diverge	5,204	112	110.3%				2,534	83	106.6%	61.5	0.6	27.6	0.4	C
18	I-80 EB - SR-65 Off to On-ramp	Basic	2,671	96	113.9%							64.0	0.1	15.1	0.5	B
19	I-80 EB - SR-65 On-ramp	Merge	2,674	100	114.1%	1,275	72	111.5%				61.3	1.4	20.9	0.7	C
20	I-80 EB - SR-65 to Lane Drop	Basic	3,953	126	113.3%							60.4	2.1	24.9	1.0	C
21	I-80 EB - Lane Drop to Rocklin Rd	Basic	3,955	123	113.4%							62.2	0.6	24.6	0.8	C
22	I-80 EB - Rocklin Rd Off-ramp	Diverge	3,957	124	113.4%				1,284	72	113.6%	61.1	1.0	22.2	0.9	C
23	I-80 EB - Rocklin Rd Off to On-ramp	Basic	2,674	106	113.4%							63.5	0.5	16.9	0.8	B
24	I-80 EB - Rocklin Rd On-ramp	Merge	2,674	105	113.4%	220	26	119.1%				62.5	0.5	15.7	0.5	B
25	I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	2,895	101	113.9%							63.9	0.1	17.2	0.7	B

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
AM Peak Hour

Location	Facility	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS	
	Type	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.		
26	I-80 EB - Sierra College Blvd Off-ramp	Diverge	2,898	100	113.9%				296	27	110.0%	63.3	0.5	17.9	0.7	B
27	I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,606	89	114.6%							63.7	0.3	16.5	0.5	B
28	I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,608	89	114.7%	133	4	102.5%				63.0	0.3	15.1	0.4	B
29	I-80 EB - Sierra College Blvd NB On-ramp	Merge	2,742	91	114.1%	277	8	107.6%				60.8	0.7	16.6	0.4	B
38	I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,202	25	105.7%				733	39	107.7%	59.2	1.0	22.2	0.5	C
39	I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,466	49	105.2%							63.0	0.4	20.9	0.2	C
40	I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,464	53	105.2%	55	3	103.4%				63.2	0.2	18.1	0.2	B
41	I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,517	57	105.1%	292	6	109.8%				60.1	1.0	19.5	0.4	B
42	I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	3,804	66	105.3%							63.4	0.1	21.2	0.3	C
43	I-80 WB - Rocklin Rd Off-ramp	Diverge	3,802	65	105.2%				240	29	111.9%	63.1	0.2	21.2	0.5	C
44	I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,560	60	104.7%							63.3	0.1	19.8	0.2	C
45	I-80 WB - Rocklin Rd On-ramp	Merge	3,559	65	104.7%	763	40	104.5%				53.4	2.0	24.4	1.5	C
46	I-80 WB - Rocklin Rd to HOV Lane Start	Basic	4,313	86	104.5%							61.3	0.3	26.3	0.5	D
47	I-80 WB - HOV Lane Start to SR-65	Basic	4,312	92	104.4%							63.1	0.2	17.8	0.3	B
48	I-80 WB - SR-65 Off-ramp	Diverge	4,311	95	104.4%				1,173	52	102.2%	63.1	0.5	18.8	0.5	B
49	I-80 WB - SR-65 Off to On-ramp	Basic	3,131	85	105.0%							63.2	0.3	17.7	0.5	B
50	I-80 WB - SR-65 On-ramp	Merge	3,130	90	105.0%	2,916	80	103.0%				63.0	0.1	24.7	0.3	C

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.

Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
AM Peak Hour

	Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
			Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
60	I-80 WB - Taylor Rd On-ramp	Merge	6,040	128	103.9%	584	43	113.5%				62.1	0.2	27.7	0.4	C
61	I-80 WB - Atlantic St WB Off-ramp	Diverge	6,623	144	104.7%				347	38	112.4%	60.7	1.7	31.2	1.1	D
62	I-80 WB - Atlantic St EB Off-ramp	Diverge	6,274	141	104.3%				828	63	100.2%	52.9	3.1	37.3	2.1	E
63	I-80 WB - Atlantic St Off to On-ramp	Basic	5,434	150	104.7%							62.6	0.4	22.4	0.6	C
64	I-80 WB - Atlantic St On-ramp	Merge	5,431	137	104.6%	684	43	104.6%				59.1	2.1	24.2	0.9	C
65	I-80 WB - Douglas Blvd Off-ramp	Diverge	6,114	144	104.6%				879	55	99.7%	56.5	3.0	31.7	1.9	D
66	I-80 WB - Douglas Rd Off to On-ramp	Basic	5,239	146	105.5%							60.8	1.5	29.9	0.9	D
67	I-80 WB - Douglas Blvd WB On-ramp	Merge	5,239	139	105.5%	797	52	103.9%				52.0	3.4	35.6	2.7	E
68	I-80 WB - Douglas Blvd EB On-ramp	Merge	6,037	132	105.3%	406	39	106.8%				48.4	3.1	41.7	3.3	E
69	I-80 WB - Douglas Blvd to Riverside Ave	Basic	6,433	134	105.3%							62.5	0.3	33.1	0.7	D
70	I-80 WB - Riverside Ave Off-ramp	Diverge	6,428	134	105.2%				473	43	89.5%	54.1	5.4	40.3	4.6	E
71	I-80 WB - Riverside Ave Off to On-ramp	Basic	5,958	134	106.7%							60.8	0.9	31.4	0.9	D
72	I-80 WB - Riverside Ave NB On-ramp	Merge	5,960	132	106.8%	122	7	61.2%				63.3	0.1	24.8	0.6	C
73	I-80 WB - Riverside Ave SB On-ramp	Merge	6,083	133	105.2%	1,185	15	105.6%				62.8	0.7	23.3	0.9	C
74	I-80 WB - Riverside Ave to Antelope Rd	Basic	7,270	137	105.3%							63.0	0.1	27.8	0.6	D
75	I-80 WB - Antelope Rd Off-ramp	Diverge	7,272	142	105.3%				288	40	87.2%	60.1	7.7	27.7	7.3	C

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Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR 65 Interchange
Existing Conditions
AM Peak Hour

	Location	Facility	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Type	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
76	I-80 WB - Antelope Rd Off to On-ramp	Basic	6,981	122	106.2%							53.4	15.1	37.6	24.7	E
77	I-80 WB - Antelope Rd WB On-ramp	Merge	6,985	156	106.2%	546	26	103.7%				41.1	15.3	53.5	31.7	F
78	I-80 WB - Antelope Rd to Truck Scales	Weave	7,558	233	106.4%	334	10	89.8%	38	15		38.3	18.8	61.8	30.7	F
79	I-80 WB - Truck Scales Off to On-ramp	Basic	7,995	416	107.0%							30.2	14.6	89.2	31.0	F
80	I-80 WB - Truck Scales On-ramp	Merge	8,047	484	107.7%	38	15					23.5	1.2	110.1	4.8	F
81	I-80 WB - Truck Scales to Elkhorn Blvd	Basic	8,159	475	109.2%							24.1	1.8	104.6	8.6	F
82	I-80 WB - Elkhorn Blvd Off-ramp	Diverge	8,175	473	109.4%				647	54	98.7%	27.1	2.3	79.8	4.9	F
83	I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	7,567	424	111.0%							56.6	0.7	29.9	1.3	D
84	I-80 WB - Elkhorn Blvd WB On-ramp	Merge	7,570	427	111.0%	635	43	100.6%				52.4	2.4	35.0	3.7	E
85	I-80 WB - Elkhorn Blvd EB On-ramp	Merge	8,195	410	110.0%	810	23	100.1%				56.6	6.2	35.0	5.9	E

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VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
AM Peak Hour

	Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
			Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
97	SR-65 SB - Twelve Bridges Dr Off-ramp	Diverge	2,633	65	109.0%				305	32	111.7%	63.4	0.3	19.0	0.5	B
98	SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,326	63	108.6%							63.2	0.2	19.3	0.6	C
99	SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,323	65	108.5%	612	31	114.6%				49.7	1.7	26.0	1.3	C
100	SR-65 SB - Twelve Bridges Dr to Sunset Blvd	Basic	2,931	74	109.5%							62.6	0.1	25.0	0.5	C
101	SR-65 SB - Sunset Blvd Off-ramp	Diverge	2,927	68	109.4%				366	37	104.5%	62.7	0.2	23.2	0.4	C
102	SR-65 SB - Sunset Blvd Off to On-ramp	Basic	2,560	80	110.0%							62.7	0.2	22.0	0.7	C
103	SR-65 SB - Sunset Blvd WB On-ramp	Merge	2,557	84	109.9%	414	33	109.9%				56.3	2.7	25.2	1.6	C
104	SR-65 SB - Sunset Blvd EB On-ramp	Merge	2,973	96	110.0%	314	23	104.5%				59.6	6.6	29.5	8.5	D
105	SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	3,281	88	109.3%							62.0	0.3	27.7	0.9	D
106	SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	3,278	88	109.1%				633	36	117.5%	57.3	3.5	29.2	1.8	D
107	SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	2,640	74	107.1%							48.5	13.7	31.9	11.3	D
108	SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	2,636	80	107.0%	371	32	95.8%				28.3	14.0	60.2	24.7	F
109	SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	3,008	96	105.5%	844	55	96.9%	635	57	105.5%	20.0	3.2	74.9	8.6	F
110	SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	3,198	86	102.5%							19.4	0.7	88.7	1.8	F
111	SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	3,190	71	102.2%	453	34	106.5%				20.8	2.1	72.4	6.0	F
112	SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	3,637	63	102.6%	546	35	102.5%				36.5	0.5	53.4	1.2	F
113	SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	4,176	50	102.4%							60.0	1.7	35.6	1.1	E
114	SR-65 SB - Galleria Blvd Off-ramp	Diverge	4,176	50	102.4%				763	44	95.3%	60.6	1.1	35.2	0.5	E
115	SR-65 SB - Galleria Blvd Off to Lane Add	Basic	3,411	66	104.0%							61.6	1.9	30.3	1.3	D
116	SR-65 SB - Lane Add to Galleria Blvd On-ramp	Basic	3,414	67	104.1%							63.3	0.2	21.0	0.5	C
117	SR-65 SB - Galleria Blvd On-ramp	Merge	3,414	69	104.1%	777	45	111.6%				51.4	3.3	30.1	2.9	D
118	SR-65 SB - I-80 WB Off-ramp	Diverge	4,190	81	105.4%				2,918	82	103.1%	62.7	0.4	23.8	0.5	C

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
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VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
AM Peak Hour

Location		Facility	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Type	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
125	SR-65 NB - I-80 WB On-ramp	Merge	2,531	94	106.5%	1,173	61	102.2%				35.6	5.2	52.9	10.5	F
126	SR-65 NB - I-80 to Stanford Ranch Rd	Basic	3,704	109	105.1%							60.4	1.6	32.2	1.1	D
127	SR-65 NB - Stanford Ranch Rd Off-ramp	Diverge	3,704	107	105.1%				633	49	101.3%	59.8	1.6	32.9	1.0	D
128	SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	3,072	115	106.0%							62.5	0.5	26.9	1.1	D
129	SR-65 NB - Stanford Ranch Rd On-ramp	Merge	3,074	110	106.1%	561	45	106.4%				53.2	4.5	33.6	3.4	D
130	SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	3,632	112	106.0%							61.1	0.7	30.1	1.1	D
131	SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	3,632	112	106.0%				611	36	100.5%	62.0	0.5	28.1	1.1	D
132	SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	3,018	114	107.1%							62.7	0.5	26.6	1.0	D
133	SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	3,021	118	107.2%	206	22	95.0%	1,430	82	104.6%	63.3	0.1	21.1	1.1	C
134	SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	1,799	83	107.9%							63.7	0.2	16.0	0.7	B
135	SR-65 NB - Blue Oaks Blvd On-ramp	Merge	1,799	86	108.0%	319	31	99.5%				60.9	1.1	17.4	0.6	B
136	SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	2,115	78	106.5%							63.3	0.2	18.4	0.7	C
137	SR-65 NB - Sunset Blvd Off-ramp	Diverge	2,116	84	106.5%				1,003	50	102.4%	63.5	0.1	16.4	0.6	B
138	SR-65 NB - Sunset Blvd Off to On-ramp	Basic	1,115	58	110.6%							64.1	0.1	10.4	0.6	A
139	SR-65 NB - Sunset Blvd EB On-ramp	Merge	1,117	60	110.8%	38	14	113.9%				63.5	0.4	10.6	0.5	B
140	SR-65 NB - Sunset Blvd WB On-ramp	Merge	1,154	63	110.8%	216	27	114.2%				63.8	0.2	12.3	0.5	B
141	SR-65 NB - Sunset Blvd to Twelve Bridges Dr	Basic	1,374	71	111.7%							63.8	0.2	12.7	0.5	B
142	SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	1,377	70	112.1%				275	33	96.0%	63.6	0.1	12.8	0.5	B
143	SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	1,106	58	117.3%							63.9	0.2	10.7	0.4	A
144	SR-65 NB - Twelve Bridges Dr On-ramp	Merge	1,109	59	117.6%	219	18	108.4%				62.7	0.4	11.7	0.3	B

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Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80 / SR-65 Interchange
Existing Conditions
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	SR-65/Sterling Pkwy	Signal	3,592	4,018	111.9%	18.7	0.8	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,086	1,200	110.5%	3.8	0.2	A
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,305	1,426	109.3%	3.3	0.4	A
4	SR-65 SB Ramps/Sunset Blvd	Signal	1,789	1,961	109.6%	7.0	0.5	A
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,101	2,227	106.0%	9.9	0.4	A
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks	Signal	3,555	3,653	102.8%	43.4	12.9	D
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	2,229	2,308	103.5%	23.7	8.3	C
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	3,383	3,542	104.7%	9.1	1.1	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	2,720	2,864	105.3%	10.3	0.9	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	2,578	2,842	110.2%	18.8	1.1	B
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	2,941	3,201	108.9%	8.5	1.3	A
12	SR-65 SB Ramps/Galleria Blvd	Signal	3,107	3,308	106.5%	12.8	0.8	B
13	Galleria Blvd/Antelope Creek Dr	Signal	2,373	2,551	107.5%	10.3	1.0	B
14	Galleria Blvd/Roseville Pkwy	Signal	4,665	5,153	110.5%	29.8	1.9	C
15	Creekside Ridge Dr/Roseville Pkwy	Signal	3,147	3,527	112.1%	5.7	0.6	A
16	Taylor Rd/East Roseville Pkwy	Signal	4,274	4,645	108.7%	29.5	3.7	C
17	North Sunrise Ave/East Roseville Pkwy	Signal	4,073	4,218	103.6%	37.2	4.4	D
18	Wills Rd/Atlantic St	Signal	1,717	1,953	113.7%	10.2	0.6	B
19	I-80 WB Ramps/Atlantic St	Signal	2,676	2,885	107.8%	7.0	0.6	A
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	3,496	4,005	114.6%	26.4	3.1	C
21	North Sunrise Ave/Eureka Rd	Signal	3,296	3,463	105.1%	24.1	4.8	C
22	Harding Blvd/Wills Rd	Signal	1,952	2,133	109.3%	11.6	0.8	B
23	Harding Blvd/Douglas Blvd	Signal	2,603	2,782	106.9%	18.5	1.2	B
24	I-80 WB Ramps/Douglas Blvd	Signal	3,426	3,597	105.0%	14.4	1.4	B

Network Summary	
Total Demand Volume (veh/hr)	68,084
Total Volume Served (veh/hr)	73,464
Percent Served	107.9%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.
3. For Side-street Stop and Uncontrolled intersections, the delay for the highest movement is reported.

VISSIM Metrics
 Calibration Comparison
 I-80 / SR 65 Interchange
 Fehr & Peers
 Link Volumes
 February 15, 2013

PM Peak Period

Fwy	Link		Measured Volumes		Modeled Conditions			Link Flow Criteria		Link GEH Criteria	
	Location	Demand Volume (vph)	Served Volume (vph)	Difference			Measure	Meets Target?	Target	Meets Target?	
				vph	%	GEH					
Interstate 80	EB - Auburn Blvd Off to On-ramp	24,273	24,417	144	0.6%	0.9	+/- 400 vph	Yes	< 5	Yes	
	EB - Auburn Blvd On-ramp	2,625	2,461	-164	-6.3%	3.3	+/- 15%	Yes	< 5	Yes	
	EB - Auburn Blvd to Douglas Blvd	26,898	26,889	-9	0.0%	0.1	+/- 400 vph	Yes	< 5	Yes	
	EB - Douglas Blvd EB Off-Ramp	4,450	4,467	17	0.4%	0.3	+/- 400 vph	Yes	< 5	Yes	
	EB - Douglas Blvd EB to WB Off-ramp	22,448	22,430	-18	-0.1%	0.1	+/- 400 vph	Yes	< 5	Yes	
	EB - Douglas Blvd WB Off-Ramp	1,519	1,594	75	4.9%	1.9	+/- 15%	Yes	< 5	Yes	
	EB - Douglas Blvd Off to On-Ramp	20,929	20,839	-90	-0.4%	0.6	+/- 400 vph	Yes	< 5	Yes	
	EB - Douglas Blvd On-Ramp	4,441	4,388	-53	-1.2%	0.8	+/- 400 vph	Yes	< 5	Yes	
	EB - Douglas Blvd to Eureka Rd	25,370	25,232	-138	-0.5%	0.9	+/- 400 vph	Yes	< 5	Yes	
	EB - Eureka Rd Off-Ramp	3,787	3,701	-86	-2.3%	1.4	+/- 400 vph	Yes	< 5	Yes	
	EB - Eureka Rd Off to On-ramp	21,583	21,534	-49	-0.2%	0.3	+/- 400 vph	Yes	< 5	Yes	
	EB - Eureka Rd EB On-Ramp	825	919	94	11.4%	3.2	+/- 15%	Yes	< 5	Yes	
	EB - Eureka Rd EB to WB On-Ramp	22,408	22,451	43	0.2%	0.3	+/- 400 vph	Yes	< 5	Yes	
	EB - Eureka Rd WB On-Ramp	3,287	3,406	119	3.6%	2.1	+/- 400 vph	Yes	< 5	Yes	
	EB - Eureka Rd to Taylor Rd	25,695	25,862	167	0.7%	1.0	+/- 400 vph	Yes	< 5	Yes	
	EB - Taylor Rd Off-Ramp	1,809	1,861	52	2.9%	1.2	+/- 15%	Yes	< 5	Yes	
	EB - Taylor Rd to SR-65	23,886	24,009	123	0.5%	0.8	+/- 400 vph	Yes	< 5	Yes	
	EB - SR-65 Off-Ramp	12,666	12,443	-223	-1.8%	2.0	+/- 400 vph	Yes	< 5	Yes	
	EB - SR-65 Off to On-Ramp	11,220	11,581	361	3.2%	3.4	+/- 400 vph	Yes	< 5	Yes	
	EB - SR-65 On-Ramp	5,807	5,848	41	0.7%	0.5	+/- 400 vph	Yes	< 5	Yes	
	EB - SR-65 to Rocklin Rd	17,027	17,439	412	2.4%	3.1	+/- 400 vph	No	< 5	Yes	
	EB - Rocklin Rd Off-Ramp	4,352	4,615	263	6.0%	3.9	+/- 400 vph	Yes	< 5	Yes	
	EB - Rocklin Rd Off to On-ramp	12,675	12,852	177	1.4%	1.6	+/- 400 vph	Yes	< 5	Yes	
	EB - Rocklin Rd On-Ramp	947	932	-15	-1.6%	0.5	+/- 15%	Yes	< 5	Yes	
	EB - Rocklin Rd to Sierra College Blvd	13,622	13,795	173	1.3%	1.5	+/- 400 vph	Yes	< 5	Yes	
	EB - Sierra College Rd Off-Ramp	1,069	1,233	164	15.3%	4.8	+/- 15%	No	< 5	Yes	
	EB - Sierra College Blvd Off to On-Ramp	12,553	12,565	12	0.1%	0.1	+/- 400 vph	Yes	< 5	Yes	
	EB - Sierra College Blvd SB On-Ramp	757	742	-15	-2.0%	0.6	+/- 15%	Yes	< 5	Yes	
	EB - Sierra College Blvd SB to NB On-Ramp	13,310	13,310	0	0.0%	0.0	+/- 400 vph	Yes	< 5	Yes	
	EB - Sierra College Blvd NB On-Ramp	1,613	1,608	-5	-0.3%	0.1	+/- 15%	Yes	< 5	Yes	
	EB - Sierra College Blvd to Horseshoe Bar Rd	14,923	14,924	1	0.0%	0.0	+/- 400 vph	Yes	< 5	Yes	
	WB - Horseshoe Bar Rd to Sierra College Blvd	11,488	11,488	0	0.0%	0.0	+/- 400 vph	Yes	< 5	Yes	
	WB - Sierra College Blvd Off-ramp	1,748	1,727	-21	-1.2%	0.5	+/- 15%	Yes	< 5	Yes	
	WB - Sierra College Blvd Off to On-ramp	9,740	9,766	26	0.3%	0.3	+/- 400 vph	Yes	< 5	Yes	
	WB - Sierra College Blvd NB On-Ramp	336	328	-8	-2.4%	0.4	+/- 100 vph	Yes	< 5	Yes	
	WB - Sierra College Blvd NB to SB On-Ramp	10,076	10,096	20	0.2%	0.2	+/- 400 vph	Yes	< 5	Yes	
	WB - Sierra College Blvd SB On-Ramp	859	922	63	7.3%	2.1	+/- 15%	Yes	< 5	Yes	
	WB - Sierra College Blvd to Rocklin Rd	10,935	11,029	94	0.9%	0.9	+/- 400 vph	Yes	< 5	Yes	
	WB - Rocklin Rd Off-Ramp	926	889	-37	-4.0%	1.2	+/- 15%	Yes	< 5	Yes	
	WB - Rocklin Rd Off to On-Ramp	10,009	10,151	142	1.4%	1.4	+/- 400 vph	Yes	< 5	Yes	
	WB - Rocklin Rd On-Ramp	3,742	3,849	107	2.9%	1.7	+/- 400 vph	Yes	< 5	Yes	
	WB - Rocklin Rd to SR-65	13,751	14,019	268	1.9%	2.3	+/- 400 vph	Yes	< 5	Yes	
	WB - SR-65 Off-Ramp	4,649	4,810	161	3.5%	2.3	+/- 400 vph	Yes	< 5	Yes	
	WB - SR-65 Off to On-Ramp	9,102	9,230	128	1.4%	1.3	+/- 400 vph	Yes	< 5	Yes	
	WB - SR-65 On-Ramp	9,425	9,356	-69	-0.7%	0.7	+/- 400 vph	Yes	< 5	Yes	
	WB - SR-65 to Taylor Rd	18,527	18,255	-272	-1.5%	2.0	+/- 400 vph	Yes	< 5	Yes	
	WB - Taylor Rd On-Ramp	1,604	1,595	-9	-0.6%	0.2	+/- 15%	Yes	< 5	Yes	
	WB - Taylor Rd to Atlantic St	20,131	20,192	61	0.3%	0.4	+/- 400 vph	Yes	< 5	Yes	
	WB - Atlantic St WB Off-Ramp	1,282	1,378	96	7.5%	2.6	+/- 15%	Yes	< 5	Yes	
	WB - Atlantic St WB to EB Off-ramp	18,849	18,827	-22	-0.1%	0.2	+/- 400 vph	Yes	< 5	Yes	
	WB - Atlantic St EB Off-ramp	2,525	2,576	51	2.0%	1.0	+/- 15%	Yes	< 5	Yes	
	WB - Atlantic St Off to On-ramp	16,324	16,264	-60	-0.4%	0.5	+/- 400 vph	Yes	< 5	Yes	
	WB - Atlantic St On-Ramp	3,356	3,540	184	5.5%	3.1	+/- 400 vph	Yes	< 5	Yes	
	WB - Atlantic St to Douglas Blvd	19,680	19,814	134	0.7%	1.0	+/- 400 vph	Yes	< 5	Yes	
	WB - Douglas Blvd Off-Ramp	3,440	3,435	-5	-0.1%	0.1	+/- 400 vph	Yes	< 5	Yes	
	WB - Douglas Blvd Off to On-Ramp	16,240	16,385	145	0.9%	1.1	+/- 400 vph	Yes	< 5	Yes	
	WB - Douglas Blvd WB On-Ramp	4,066	3,783	-283	-7.0%	4.5	+/- 400 vph	Yes	< 5	Yes	
	WB - Douglas Blvd WB to EB On-Ramp	20,306	20,170	-136	-0.7%	1.0	+/- 400 vph	Yes	< 5	Yes	
	WB - Douglas Blvd EB On-Ramp	1,618	1,614	-4	-0.3%	0.1	+/- 15%	Yes	< 5	Yes	
	WB - Douglas Blvd to Riverside Ave	21,924	21,811	-113	-0.5%	0.8	+/- 400 vph	Yes	< 5	Yes	
	WB - Riverside Ave Off-ramp	2,708	2,608	-100	-3.7%	1.9	+/- 400 vph	Yes	< 5	Yes	
	WB - Riverside Ave Off to On-Ramp	19,216	19,227	11	0.1%	0.1	+/- 400 vph	Yes	< 5	Yes	
	WB - Riverside Ave NB On-ramp	701	703	2	0.2%	0.1	+/- 15%	Yes	< 5	Yes	
	WB - Riverside Ave NB to SB On-Ramp	19,917	19,932	15	0.1%	0.1	+/- 400 vph	Yes	< 5	Yes	
	WB - Riverside Ave SB On-ramp	3,138	3,368	230	7.3%	4.0	+/- 400 vph	Yes	< 5	Yes	
	WB - Riverside Ave to Antelope Rd	23,055	23,322	267	1.2%	1.8	+/- 400 vph	Yes	< 5	Yes	
	WB - Antelope Rd Off-ramp	3,357	3,370	13	0.4%	0.2	+/- 400 vph	Yes	< 5	Yes	
	WB - Antelope Rd Off to On-Ramp	19,698	19,978	280	1.4%	2.0	+/- 400 vph	Yes	< 5	Yes	
	WB - Antelope Rd WB On-ramp	1,313	1,307	-6	-0.5%	0.2	+/- 15%	Yes	< 5	Yes	
	WB - Antelope Rd WB to EB On-Ramp	21,011	21,289	278	1.3%	1.9	+/- 400 vph	Yes	< 5	Yes	
	WB - Antelope Rd EB On-ramp	936	925	-11	-1.1%	0.3	+/- 15%	Yes	< 5	Yes	
	WB - Antelope Rd to Elkhorn Blvd	21,947	22,156	209	1.0%	1.4	+/- 400 vph	Yes	< 5	Yes	
	WB - Elkhorn Blvd Off-ramp	3,750	3,755	5	0.1%	0.1	+/- 400 vph	Yes	< 5	Yes	
	WB - Elkhorn Blvd Off to On-Ramp	18,197	18,515	318	1.7%	2.3	+/- 400 vph	Yes	< 5	Yes	
	WB - Elkhorn Blvd WB On-ramp	2,529	2,530	1	0.0%	0.0	+/- 15%	Yes	< 5	Yes	
	WB - Elkhorn Blvd WB to EB On-Ramp	20,726	21,048	322	1.6%	2.2	+/- 400 vph	Yes	< 5	Yes	
	WB - Elkhorn Blvd EB On-Ramp	2,294	2,286	-8	-0.3%	0.2	+/- 15%	Yes	< 5	Yes	
	WB - Elkhorn Blvd to Madison Ave	23,020	23,341	321	1.4%	2.1	+/- 400 vph	Yes	< 5	Yes	
	NB - I-80 to Stanford Ranch Rd	17,315	17,273	-42	-0.2%	0.3	+/- 400 vph	Yes	< 5	Yes	
	NB - Stanford Ranch Rd Off-Ramp	4,687	4,834	147	3.1%	2.1	+/- 400 vph	Yes	< 5	Yes	
NB - Stanford Ranch Rd Off to On-Ramp	12,628	12,446	-182	-1.4%	1.6	+/- 400 vph	Yes	< 5	Yes		
NB - Stanford Ranch Rd On-Ramp	3,634	3,483	-151	-4.2%	2.5	+/- 400 vph	Yes	< 5	Yes		
NB - Stanford Ranch Rd to Pleasant Grove Blvd	16,262	15,935	-327	-2.0%	2.6	+/- 400 vph	Yes	< 5	Yes		
NB - Pleasant Grove Blvd Off-Ramp	4,030	4,181	151	3.7%	2.4	+/- 400 vph	Yes	< 5	Yes		
NB - Pleasant Grove Blvd Off to On-Ramp	12,232	11,759	-473	-3.9%	4.3	+/- 400 vph	No	< 5	Yes		
NB - Pleasant Grove Blvd On-Ramp	2,089	2,020	-69	-3.3%	1.5	+/- 15%	Yes	< 5	Yes		
NB - Pleasant Grove to Blue Oaks Blvd	14,321	13,782	-539	-3.8%	4.5	+/- 400 vph	No	< 5	Yes		

State Route 65

NB - Blue Oaks Blvd Off-Ramp	4,701	4,204	-497	-10.6%	7.5	+/- 400 vph	No	< 5	No
NB - Blue Oaks Blvd Off to On-Ramp	9,620	9,588	-32	-0.3%	0.3	+/- 400 vph	Yes	< 5	Yes
NB - Blue Oaks Blvd On-Ramp	1,793	1,861	68	3.8%	1.6	+/- 15%	Yes	< 5	Yes
NB - Blue Oaks Blvd to Sunset Blvd	11,413	11,454	41	0.4%	0.4	+/- 400 vph	Yes	< 5	Yes
NB - Sunset Blvd Off-Ramp	2,780	2,705	-75	-2.7%	1.4	+/- 400 vph	Yes	< 5	Yes
NB - Sunset Blvd Off to On-ramp	8,633	8,754	121	1.4%	1.3	+/- 400 vph	Yes	< 5	Yes
NB - Sunset Blvd EB On-Ramp	247	249	2	0.9%	0.1	+/- 100 vph	Yes	< 5	Yes
NB - Sunset Blvd EB to WB On-ramp	8,880	9,003	123	1.4%	1.3	+/- 400 vph	Yes	< 5	Yes
NB - Sunset Blvd WB On-Ramp	1,002	955	-47	-4.7%	1.5	+/- 15%	Yes	< 5	Yes
NB - Sunset Blvd to Twelve Bridges Dr	9,882	9,958	76	0.8%	0.8	+/- 400 vph	Yes	< 5	Yes
NB - Twelve Bridges Dr Off-Ramp	2,235	2,165	-70	-3.1%	1.5	+/- 15%	Yes	< 5	Yes
NB - Twelve Bridges Dr Off to On-ramp	7,647	7,799	152	2.0%	1.7	+/- 400 vph	Yes	< 5	Yes
NB - Twelve Bridges Dr On-Ramp	1,100	916	-184	-16.7%	5.8	+/- 15%	No	< 5	No
NB - Twelve Bridges Dr to Sterling Pkwy	8,747	8,715	-32	-0.4%	0.3	+/- 400 vph	Yes	< 5	Yes
SB - Sterling Pkwy to Twelve Bridges Dr	6,566	6,641	75	1.1%	0.9	+/- 400 vph	Yes	< 5	Yes
SB - Twelve Bridges Dr Off-Ramp	855	840	-15	-1.8%	0.5	+/- 15%	Yes	< 5	Yes
SB - Twelve Bridges Dr Off to On-Ramp	5,711	5,807	96	1.7%	1.3	+/- 400 vph	Yes	< 5	Yes
SB - Twelve Bridges Dr On-Ramp	1,519	1,587	68	4.5%	1.7	+/- 15%	Yes	< 5	Yes
SB - Twelve Bridges Dr to Sunset Blvd	7,230	7,417	187	2.6%	2.2	+/- 400 vph	Yes	< 5	Yes
SB - Sunset Blvd Off-Ramp	912	982	70	7.7%	2.3	+/- 15%	Yes	< 5	Yes
SB - Sunset Blvd Off to On-ramp	6,318	6,459	141	2.2%	1.8	+/- 400 vph	Yes	< 5	Yes
SB - Sunset Blvd WB On-Ramp	1,782	1,774	-8	-0.5%	0.2	+/- 15%	Yes	< 5	Yes
SB - Sunset Blvd WB to EB On-Ramp	8,100	8,238	138	1.7%	1.5	+/- 400 vph	Yes	< 5	Yes
SB - Sunset Blvd EB On-Ramp	2,299	2,230	-69	-3.0%	1.5	+/- 15%	Yes	< 5	Yes
SB - Sunset Blvd to Blue Oaks Blvd	10,399	10,485	86	0.8%	0.8	+/- 400 vph	Yes	< 5	Yes
SB - Blue Oaks Blvd Off-Ramp	1,997	2,024	27	1.4%	0.6	+/- 15%	Yes	< 5	Yes
SB - Blue Oaks Blvd Off to On-Ramp	8,402	8,477	75	0.9%	0.8	+/- 400 vph	Yes	< 5	Yes
SB - Blue Oaks Blvd WB On-Ramp	1,415	1,067	-348	-24.6%	9.9	+/- 15%	No	< 5	No
SB - Blue Oaks Blvd WB to EB On-Ramp	9,817	9,547	-270	-2.7%	2.7	+/- 400 vph	Yes	< 5	Yes
SB - Blue Oaks Blvd EB On-Ramp	3,384	3,205	-179	-5.3%	3.1	+/- 400 vph	Yes	< 5	Yes
SB - Blue Oaks Blvd to Pleasant Grove Blvd	13,201	12,756	-445	-3.4%	3.9	+/- 400 vph	No	< 5	Yes
SB - Pleasant Grove Blvd Off-Ramp	2,177	2,256	79	3.6%	1.7	+/- 15%	Yes	< 5	Yes
SB - Pleasant Grove Blvd Off to On-ramp	11,024	10,512	-512	-4.6%	4.9	+/- 400 vph	No	< 5	Yes
SB - Pleasant Grove Blvd WB On-Ramp	1,252	1,403	151	12.1%	4.1	+/- 15%	Yes	< 5	Yes
SB - Pleasant Grove Blvd WB to EB On-Ramp	12,276	11,917	-359	-2.9%	3.3	+/- 400 vph	Yes	< 5	Yes
SB - Pleasant Grove Blvd EB On-Ramp	2,281	2,298	17	0.8%	0.4	+/- 15%	Yes	< 5	Yes
SB - Pleasant Grove Blvd to Galleria Blvd	14,557	14,227	-330	-2.3%	2.7	+/- 400 vph	Yes	< 5	Yes
SB - Galleria Blvd Off-Ramp	3,198	2,954	-244	-7.6%	4.4	+/- 400 vph	Yes	< 5	Yes
SB - Galleria Blvd Off to On-Ramp	11,359	11,277	-82	-0.7%	0.8	+/- 400 vph	Yes	< 5	Yes
SB - Galleria Blvd On-Ramp	3,873	3,913	40	1.0%	0.6	+/- 400 vph	Yes	< 5	Yes
SB - Galleria Blvd to I-80	15,232	15,191	-42	-0.3%	0.3	+/- 400 vph	Yes	< 5	Yes
SB SR 65 n/o Sterling Pkwy	4,588	4,645	57	1.2%	0.8	+/- 400 vph	Yes	< 5	Yes
NB SR 65 n/o Sterling Pkwy	5,719	5,876	157	2.7%	2.1	+/- 400 vph	Yes	< 5	Yes
EB Sterling Pkwy e/o SR 65	3,251	3,078	-173	-5.3%	3.1	+/- 400 vph	Yes	< 5	Yes
WB Sterling Pkwy e/o SR 65	2,201	2,212	11	0.5%	0.2	+/- 15%	Yes	< 5	Yes
EB Twelve Bridges Dr w/o SB SR 65	1,293	1,066	-227	-17.5%	6.6	+/- 15%	No	< 5	No
WB Twelve Bridges Dr w/o SB SR 65	980	972	-8	-0.8%	0.2	+/- 15%	Yes	< 5	Yes
EB Twelve Bridges Dr e/o SB SR 65	1,588	1,358	-230	-14.5%	6.0	+/- 15%	Yes	< 5	No
WB Twelve Bridges Dr e/o SB SR 65	1,939	2,007	68	3.5%	1.5	+/- 15%	Yes	< 5	Yes
EB Twelve Bridges Dr e/o NB SR 65	2,866	2,870	4	0.1%	0.1	+/- 400 vph	Yes	< 5	Yes
WB Twelve Bridges Dr e/o NB SR 65	2,082	2,260	178	8.5%	3.8	+/- 15%	Yes	< 5	Yes
EB Sunset Blvd w/o SB SR 65	3,297	3,262	-36	-1.1%	0.6	+/- 400 vph	Yes	< 5	Yes
WB Sunset Blvd w/o SB SR 65	2,178	1,974	-204	-9.4%	4.5	+/- 15%	Yes	< 5	Yes
EB Sunset Blvd e/o SB SR 65	1,729	1,843	114	6.6%	2.7	+/- 15%	Yes	< 5	Yes
WB Sunset Blvd e/o SB SR 65	3,779	3,574	-205	-5.4%	3.4	+/- 400 vph	Yes	< 5	Yes
EB Sunset Blvd e/o NB SR 65	2,794	3,011	217	7.8%	4.0	+/- 400 vph	Yes	< 5	Yes
WB Sunset Blvd e/o NB SR 65	3,313	3,699	386	11.6%	6.5	+/- 400 vph	Yes	< 5	No
EB Blue Oaks Blvd w/o Washington Blvd	6,884	6,938	54	0.8%	0.6	+/- 400 vph	Yes	< 5	Yes
WB Blue Oaks Blvd w/o Washington Blvd	4,031	4,363	332	8.2%	5.1	+/- 400 vph	Yes	< 5	No
WB Blue Oaks Blvd w/o NB SR 65 ramp	4,121	3,935	-186	-4.5%	2.9	+/- 400 vph	Yes	< 5	Yes
EB Blue Oaks Blvd e/o Washington Blvd	7,841	8,142	301	3.8%	3.4	+/- 400 vph	Yes	< 5	Yes
WB Blue Oaks Blvd e/o Washington Blvd	4,121	3,935	-186	-4.5%	2.9	+/- 400 vph	Yes	< 5	Yes
SB Washington Blvd s/o Blue Oaks Blvd	2,016	2,226	210	10.4%	4.6	+/- 15%	Yes	< 5	Yes
NB Washington Blvd s/o Blue Oaks Blvd	2,631	2,893	262	9.9%	5.0	+/- 15%	Yes	< 5	Yes
EB Blue Oaks Blvd e/o NB SR 65	5,033	4,856	-177	-3.5%	2.5	+/- 400 vph	Yes	< 5	Yes
WB Blue Oaks Blvd e/o NB SR 65	4,208	4,167	-41	-1.0%	0.6	+/- 400 vph	Yes	< 5	Yes
EB Pleasant Grove Blvd w/o SB SR 65	8,489	8,443	-46	-0.5%	0.5	+/- 400 vph	Yes	< 5	Yes
WB Pleasant Grove Blvd w/o SB SR 65	7,805	7,617	-188	-2.4%	2.1	+/- 400 vph	Yes	< 5	Yes
EB Pleasant Grove Blvd e/o SB SR 65	6,863	6,824	-39	-0.6%	0.5	+/- 400 vph	Yes	< 5	Yes
WB Pleasant Grove Blvd e/o SB SR 65	7,535	7,439	-96	-1.3%	1.1	+/- 400 vph	Yes	< 5	Yes
EB Pleasant Grove Blvd e/o NB SR 65	7,475	8,013	538	7.2%	6.1	+/- 400 vph	No	< 5	No
WB Pleasant Grove Blvd e/o NB SR 65	6,206	6,460	254	4.1%	3.2	+/- 400 vph	Yes	< 5	Yes
EB Five Star Blvd w/o Stanford Ranch Rd	2,109	1,952	-157	-7.5%	3.5	+/- 15%	Yes	< 5	Yes
WB Five Star Blvd w/o Stanford Ranch Rd	2,278	2,440	162	7.1%	3.3	+/- 15%	Yes	< 5	Yes
EB Five Star Blvd e/o Stanford Ranch Rd	2,045	1,973	-72	-3.5%	1.6	+/- 15%	Yes	< 5	Yes
WB Five Star Blvd e/o Stanford Ranch Rd	2,149	2,048	-101	-4.7%	2.2	+/- 15%	Yes	< 5	Yes
SB Stanford Ranch Rd n/o Five Star Blvd	4,046	4,073	27	0.7%	0.4	+/- 400 vph	Yes	< 5	Yes
NB Stanford Ranch Rd n/o Five Star Blvd	5,446	5,674	228	4.2%	3.1	+/- 400 vph	Yes	< 5	Yes
SB Stanford Ranch Rd s/o Five Star Blvd	6,916	6,422	-494	-7.1%	6.0	+/- 400 vph	No	< 5	No
NB Stanford Ranch Rd s/o Five Star Blvd	8,381	8,436	55	0.7%	0.6	+/- 400 vph	Yes	< 5	Yes
SB Stanford Ranch Rd n/o NB SR 65	7,033	7,188	155	2.2%	1.8	+/- 400 vph	Yes	< 5	Yes
NB Stanford Ranch Rd n/o NB SR 65	8,645	8,930	285	3.3%	3.0	+/- 400 vph	Yes	< 5	Yes
SB Galleria Blvd n/o SB SR 65	7,496	7,542	46	0.6%	0.5	+/- 400 vph	Yes	< 5	Yes
NB Galleria Blvd n/o SB SR 65	8,055	7,920	-135	-1.7%	1.5	+/- 400 vph	Yes	< 5	Yes
SB Galleria Blvd s/o SB SR 65	7,601	7,650	49	0.6%	0.6	+/- 400 vph	Yes	< 5	Yes
NB Galleria Blvd s/o SB SR 65	8,835	8,978	143	1.6%	1.5	+/- 400 vph	Yes	< 5	Yes
EB Antelope Creek Dr w/o Galleria Blvd	2,174	1,568	-606	-27.9%	14.0	+/- 15%	No	< 5	No
WB Antelope Creek Dr w/o Galleria Blvd	1,268	1,268	0	0.0%	0.0	+/- 15%	Yes	< 5	Yes
EB Antelope Creek Dr e/o Galleria Blvd	1,729	1,711	-18	-1.0%	0.4	+/- 15%	Yes	< 5	Yes
WB Antelope Creek Dr e/o Galleria Blvd	2,233	2,264	31	1.4%	0.6	+/- 15%	Yes	< 5	Yes
SB Galleria Blvd n/o Antelope Creek Dr	5,692	5,706	14	0.2%	0.2	+/- 400 vph	Yes	< 5	Yes
NB Galleria Blvd n/o Antelope Creek Dr	8,167	8,262	95	1.2%	1.0	+/- 400 vph	Yes	< 5	Yes
SB Galleria Blvd s/o Antelope Creek Dr	5,838	5,547	-291	-5.0%	3.9	+/- 400 vph	Yes	< 5	Yes
NB Galleria Blvd s/o Antelope Creek Dr	6,903	7,010	107	1.5%	1.3	+/- 400 vph	Yes	< 5	Yes
EB Roseville Pkwy w/o Galleria Blvd	7,361	7,396	35	0.5%	0.4	+/- 400 vph	Yes	< 5	Yes
WB Roseville Pkwy w/o Galleria Blvd	7,438	7,603	165	2.2%	1.9	+/- 400 vph	Yes	< 5	Yes
EB Roseville Pkwy e/o Galleria Blvd	6,337	6,253	-84	-1.3%	1.1	+/- 400 vph	Yes	< 5	Yes

WB Roseville Pkwy e/o Galleria Blvd	7,876	7,764	-112	-1.4%	1.3	+/- 400 vph	Yes	< 5	Yes
SB Galleria Blvd n/o Roseville Pkwy	5,990	5,795	-195	-3.3%	2.5	+/- 400 vph	Yes	< 5	Yes
NB Galleria Blvd n/o Roseville Pkwy	6,770	6,928	158	2.3%	1.9	+/- 400 vph	Yes	< 5	Yes
SB Galleria Blvd s/o Roseville Pkwy	4,986	4,833	-153	-3.1%	2.2	+/- 400 vph	Yes	< 5	Yes
NB Galleria Blvd s/o Roseville Pkwy	4,304	4,663	359	8.3%	5.4	+/- 400 vph	Yes	< 5	No
EB Roseville Pkwy w/o Creekside Ridge Dr	6,104	5,974	-130	-2.1%	1.7	+/- 400 vph	Yes	< 5	Yes
WB Roseville Pkwy w/o Creekside Ridge Dr	8,191	8,079	-112	-1.4%	1.2	+/- 400 vph	Yes	< 5	Yes
SB Creekside Ridge Dr n/o Roseville Pkwy	1,277	1,196	-81	-6.3%	2.3	+/- 15%	Yes	< 5	Yes
NB Creekside Ridge Dr n/o Roseville Pkwy	1,114	1,049	-65	-5.8%	2.0	+/- 15%	Yes	< 5	Yes
SB Creekside Ridge Dr s/o Roseville Pkwy	200	107	-93	-46.6%	7.5	+/- 100 vph	Yes	< 5	No
NB Creekside Ridge Dr s/o Roseville Pkwy	219	180	-39	-17.8%	2.8	+/- 100 vph	Yes	< 5	Yes
EB Roseville Pkwy w/o Taylor Rd	6,880	6,964	84	1.2%	1.0	+/- 400 vph	Yes	< 5	Yes
WB Roseville Pkwy w/o Taylor Rd	8,785	8,885	100	1.1%	1.1	+/- 400 vph	Yes	< 5	Yes
EB Roseville Pkwy e/o Taylor Rd	7,238	7,048	-190	-2.6%	2.3	+/- 400 vph	Yes	< 5	Yes
WB Roseville Pkwy e/o Taylor Rd	9,251	8,800	-451	-4.9%	4.8	+/- 400 vph	No	< 5	Yes
SB Taylor Rd n/o Roseville Pkwy	2,071	2,153	82	3.9%	1.8	+/- 15%	Yes	< 5	Yes
NB Taylor Rd n/o Roseville Pkwy	3,106	2,834	-272	-8.8%	5.0	+/- 400 vph	Yes	< 5	Yes
SB Taylor Rd s/o Roseville Pkwy	2,246	2,166	-80	-3.6%	1.7	+/- 15%	Yes	< 5	Yes
NB Taylor Rd s/o Roseville Pkwy	3,173	3,017	-156	-4.9%	2.8	+/- 400 vph	Yes	< 5	Yes
EB Roseville Pkwy w/o Sunrise Ave	7,106	7,018	-88	-1.2%	1.0	+/- 400 vph	Yes	< 5	Yes
WB Roseville Pkwy w/o Sunrise Ave	9,053	8,465	-589	-6.5%	6.3	+/- 400 vph	No	< 5	No
EB Roseville Pkwy e/o Sunrise Ave	6,566	6,647	81	1.2%	1.0	+/- 400 vph	Yes	< 5	Yes
WB Roseville Pkwy e/o Sunrise Ave	7,019	6,617	-402	-5.7%	4.9	+/- 400 vph	No	< 5	Yes
SB Sunrise Ave n/o Roseville Pkwy	1,633	1,612	-21	-1.3%	0.5	+/- 15%	Yes	< 5	Yes
NB Sunrise Ave n/o Roseville Pkwy	840	842	2	0.3%	0.1	+/- 15%	Yes	< 5	Yes
SB Sunrise Ave s/o Roseville Pkwy	2,297	2,087	-210	-9.1%	4.5	+/- 15%	Yes	< 5	Yes
NB Sunrise Ave s/o Roseville Pkwy	2,998	2,794	-205	-6.8%	3.8	+/- 400 vph	Yes	< 5	Yes
EB Atlantic St w/o Wills Rd	2,932	2,955	23	0.8%	0.4	+/- 400 vph	Yes	< 5	Yes
WB Atlantic St w/o Wills Rd	3,655	3,753	98	2.7%	1.6	+/- 400 vph	Yes	< 5	Yes
EB Atlantic St w/o WB I-80	2,999	3,242	243	8.1%	4.3	+/- 400 vph	Yes	< 5	Yes
WB Atlantic St w/o WB I-80	3,376	3,704	328	9.7%	5.5	+/- 400 vph	Yes	< 5	No
SB Wills Rd s/o Atlantic St	1,580	1,554	-26	-1.6%	0.6	+/- 15%	Yes	< 5	Yes
NB Wills Rd s/o Atlantic St	1,926	1,884	-42	-2.2%	1.0	+/- 15%	Yes	< 5	Yes
SB Galleria Blvd n/o Wills Rd	4,110	4,126	16	0.4%	0.2	+/- 400 vph	Yes	< 5	Yes
NB Galleria Blvd n/o Wills Rd	4,521	4,695	174	3.8%	2.6	+/- 400 vph	Yes	< 5	Yes
SB Harding Blvd s/o Wills Rd	3,793	3,654	-139	-3.7%	2.3	+/- 400 vph	Yes	< 5	Yes
NB Harding Blvd s/o Wills Rd	4,541	4,580	39	0.9%	0.6	+/- 400 vph	Yes	< 5	Yes
EB Eureka Rd w/o Taylor Rd	4,744	4,898	154	3.2%	2.2	+/- 400 vph	Yes	< 5	Yes
WB Eureka Rd w/o Taylor Rd	7,602	8,335	733	9.6%	8.2	+/- 400 vph	No	< 5	No
EB Eureka Rd e/o Taylor Rd	5,485	5,641	156	2.8%	2.1	+/- 400 vph	Yes	< 5	Yes
WB Eureka Rd e/o Taylor Rd	6,615	7,145	530	8.0%	6.4	+/- 400 vph	No	< 5	No
SB Taylor Rd n/o Eureka Rd	2,455	2,320	-135	-5.5%	2.8	+/- 15%	Yes	< 5	Yes
NB Taylor Rd n/o Eureka Rd	3,334	3,171	-163	-4.9%	2.9	+/- 400 vph	Yes	< 5	Yes
EB Eureka Rd w/o Sunrise Ave	5,440	5,569	129	2.4%	1.7	+/- 400 vph	Yes	< 5	Yes
WB Eureka Rd w/o Sunrise Ave	6,603	6,884	281	4.2%	3.4	+/- 400 vph	Yes	< 5	Yes
EB Eureka Rd e/o Sunrise Ave	4,540	4,517	-23	-0.5%	0.3	+/- 400 vph	Yes	< 5	Yes
WB Eureka Rd e/o Sunrise Ave	5,199	5,669	470	9.0%	6.4	+/- 400 vph	No	< 5	No
SB Sunrise Ave n/o Eureka Rd	2,573	2,172	-401	-15.6%	8.2	+/- 15%	No	< 5	No
NB Sunrise Ave n/o Eureka Rd	2,887	2,854	-33	-1.1%	0.6	+/- 400 vph	Yes	< 5	Yes
SB Sunrise Ave s/o Eureka Rd	2,968	2,571	-397	-13.4%	7.5	+/- 400 vph	Yes	< 5	No
NB Sunrise Ave s/o Eureka Rd	3,786	3,415	-371	-9.8%	6.2	+/- 400 vph	Yes	< 5	No
EB Douglas Blvd w/o Harding Blvd	3,619	4,160	541	14.9%	8.7	+/- 400 vph	No	< 5	No
WB Douglas Blvd w/o Harding Blvd	4,768	5,027	259	5.4%	3.7	+/- 400 vph	Yes	< 5	Yes
EB Douglas Blvd e/o Harding Blvd	5,056	5,665	609	12.0%	8.3	+/- 400 vph	No	< 5	No
WB Douglas Blvd e/o Harding Blvd	5,967	5,737	-230	-3.9%	3.0	+/- 400 vph	Yes	< 5	Yes
SB Harding Blvd n/o Douglas Blvd	3,376	2,632	-744	-22.0%	13.6	+/- 400 vph	No	< 5	No
NB Harding Blvd n/o Douglas Blvd	2,470	1,891	-579	-23.4%	12.4	+/- 15%	No	< 5	No
SB Harding Blvd s/o Douglas Blvd	415	454	39	9.3%	1.9	+/- 100 vph	Yes	< 5	Yes
NB Harding Blvd s/o Douglas Blvd	473	508	35	7.3%	1.6	+/- 100 vph	Yes	< 5	Yes
EB Douglas Blvd w/o Sunrise Ave	7,692	7,814	122	1.6%	1.4	+/- 400 vph	Yes	< 5	Yes
WB Douglas Blvd w/o Sunrise Ave	9,202	8,682	-521	-5.7%	5.5	+/- 400 vph	No	< 5	No
EB Douglas Blvd e/o Sunrise Ave	6,883	7,007	124	1.8%	1.5	+/- 400 vph	Yes	< 5	Yes
WB Douglas Blvd e/o Sunrise Ave	7,717	7,699	-18	-0.2%	0.2	+/- 400 vph	Yes	< 5	Yes
SB Sunrise Ave n/o Douglas Blvd	3,697	3,860	163	4.4%	2.6	+/- 400 vph	Yes	< 5	Yes
NB Sunrise Ave n/o Douglas Blvd	3,461	3,650	189	5.4%	3.2	+/- 400 vph	Yes	< 5	Yes
SB Sunrise Ave s/o Douglas Blvd	3,085	1,925	-1160	-37.6%	23.2	+/- 400 vph	No	< 5	No
NB Sunrise Ave s/o Douglas Blvd	3,525	3,544	19	0.5%	0.3	+/- 400 vph	Yes	< 5	Yes
EB Woodside Dr e/o Pacific St	580	617	37	6.4%	1.5	+/- 100 vph	Yes	< 5	Yes
WB Woodside Dr e/o Pacific St	370	347	-23	-6.3%	1.2	+/- 100 vph	Yes	< 5	Yes
SB Pacific St n/o Woodside Dr	3,154	3,268	114	3.6%	2.0	+/- 400 vph	Yes	< 5	Yes
NB Pacific St n/o Woodside Dr	4,234	4,198	-36	-0.9%	0.6	+/- 400 vph	Yes	< 5	Yes
SB Pacific St s/o Woodside Dr	3,220	3,306	86	2.7%	1.5	+/- 400 vph	Yes	< 5	Yes
NB Pacific St s/o Woodside Dr	4,510	4,506	-4	-0.1%	0.1	+/- 400 vph	Yes	< 5	Yes
EB Sunset Blvd w/o Pacific St	3,589	3,923	334	9.3%	5.4	+/- 400 vph	Yes	< 5	No
WB Sunset Blvd w/o Pacific St	4,959	5,288	329	6.6%	4.6	+/- 400 vph	Yes	< 5	Yes
EB Sunset Blvd e/o Pacific St	705	545	-160	-22.8%	6.4	+/- 15%	No	< 5	No
WB Sunset Blvd e/o Pacific St	852	761	-92	-10.7%	3.2	+/- 15%	Yes	< 5	Yes
SB Pacific St n/o Sunset Blvd	3,840	3,919	79	2.1%	1.3	+/- 400 vph	Yes	< 5	Yes
NB Pacific St n/o Sunset Blvd	3,656	3,656	-1	0.0%	0.0	+/- 400 vph	Yes	< 5	Yes
SB Pacific St s/o Sunset Blvd	3,102	3,250	148	4.8%	2.6	+/- 400 vph	Yes	< 5	Yes
NB Pacific St s/o Sunset Blvd	4,141	4,136	-6	-0.1%	0.1	+/- 400 vph	Yes	< 5	Yes
EB Rocklin Rd w/o Granite Dr	3,081	3,143	62	2.0%	1.1	+/- 400 vph	Yes	< 5	Yes
WB Rocklin Rd w/o Granite Dr	3,512	3,862	350	10.0%	5.8	+/- 400 vph	Yes	< 5	No
EB Rocklin Rd e/o Granite Dr	4,132	4,045	-87	-2.1%	1.4	+/- 400 vph	Yes	< 5	Yes
WB Rocklin Rd e/o Granite Dr	4,491	4,579	88	2.0%	1.3	+/- 400 vph	Yes	< 5	Yes
SB Granite Dr n/o Rocklin Rd	2,645	2,362	-283	-10.7%	5.7	+/- 15%	Yes	< 5	No
NB Granite Dr n/o Rocklin Rd	2,633	2,212	-422	-16.0%	8.6	+/- 15%	No	< 5	No
EB Rocklin Rd w/o WB I-80	4,238	4,193	-45	-1.1%	0.7	+/- 400 vph	Yes	< 5	Yes
WB Rocklin Rd w/o WB I-80	4,736	4,774	38	0.8%	0.6	+/- 400 vph	Yes	< 5	Yes
EB Rocklin Rd e/o WB I-80	2,597	2,516	-81	-3.1%	1.6	+/- 15%	Yes	< 5	Yes
WB Rocklin Rd e/o WB I-80	5,911	6,059	148	2.5%	1.9	+/- 400 vph	Yes	< 5	Yes
EB Rocklin Rd e/o EB I-80	4,246	4,236	-10	-0.2%	0.2	+/- 400 vph	Yes	< 5	Yes
EB Rocklin Rd e/o EB I-80	4,155	4,060	-95	-2.3%	1.5	+/- 400 vph	Yes	< 5	Yes
EB Rocklin Rd w/o Aguilar Rd	4,373	4,294	-79	-1.8%	1.2	+/- 400 vph	Yes	< 5	Yes
WB Rocklin Rd w/o Aguilar Rd	4,217	3,843	-374	-8.9%	5.9	+/- 400 vph	Yes	< 5	No
EB Rocklin Rd e/o Aguilar Rd	3,705	3,529	-176	-4.8%	2.9	+/- 400 vph	Yes	< 5	Yes
WB Rocklin Rd e/o Aguilar Rd	3,722	3,546	-176	-4.7%	2.9	+/- 400 vph	Yes	< 5	Yes

SB Aguilar Rd s/o Rocklin Rd	497	446	-51	-10.2%	2.3	+/- 100 vph	Yes	< 5	Yes
NB Aguilar Rd s/o Rocklin Rd	324	297	-27	-8.3%	1.5	+/- 100 vph	Yes	< 5	Yes
Overall	1,749,267	1,748,116	-1,151	-0.1%	0.9	+/- 5%	Yes	< 4	Yes

Link Volumes		
	Target	% Met
< 700 vph	> 85 %	96%
> 700 & < 2,700 vph	> 85 %	96%
> 2,700 vph	> 85 %	100%
GEH Statistic	> 85 %	86%

Aggregated Volumes		
	Target	Modeled
Intersections	> 85 %	93%
Interchanges	> 85 %	100%

VISSIM Metrics
 Calibration Comparison
 I-80/SR 65 Interchange
 Fehr & Peers
 Travel Time
 February 21, 2013

PM Peak Period

Path	Time Period	Measured	Modeled Conditions			Calibration Targets ¹	
		Travel Time (minutes)	Travel Time (minutes)	Difference (minutes)	Percent Difference	Target	Meets Target?
I-80 WB: Blue Oaks Blvd to Antelope Road	4:00 - 4:15	8.17	8.27	0.10	1.3%	+/- 15%	Yes
	4:30 - 4:45	8.03	8.41	0.38	4.7%	+/- 15%	Yes
	5:00 - 5:15	8.27	8.41	0.14	1.7%	+/- 15%	Yes
	5:45 - 6:00	9.03	8.20	-0.83	-9.2%	+/- 15%	Yes
	6:15 - 6:30	8.05	8.05	0.00	0.0%	+/- 15%	Yes
I-80 EB: Antelope Road to Blue Oaks Blvd	3:45 - 4:00	7.39	9.52	2.13	28.7%	+/- 15%	No
	4:15 - 4:30	8.06	9.21	1.15	14.2%	+/- 15%	Yes
	4:45 - 5:00	8.61	10.20	1.59	18.4%	+/- 15%	No
	5:15 - 5:30	12.21	9.58	-2.63	-21.5%	+/- 15%	No
	6:00 - 6:15	9.04	8.25	-0.79	-8.7%	+/- 15%	Yes
I-80 WB: Sierra College Blvd to Antelope Road	4:00 - 4:15	8.75	8.07	-0.68	-7.8%	+/- 15%	Yes
	5:00 - 5:15	8.50	8.19	-0.31	-3.6%	+/- 15%	Yes
	5:30 - 5:45	7.30	8.10	0.80	11.0%	+/- 15%	Yes
	6:00 - 6:15	7.77	7.98	0.22	2.8%	+/- 15%	Yes
	6:30 - 6:45	7.68	7.94	0.26	3.3%	+/- 15%	Yes
I-80 EB: Antelope Road to Sierra College Blvd	4:15 - 4:30	5.84	6.55	0.71	12.1%	+/- 15%	Yes
	4:45 - 5:00	6.08	6.63	0.55	9.0%	+/- 15%	Yes
	5:15 - 5:30	6.26	6.57	0.31	4.9%	+/- 15%	Yes
	5:45 - 6:00	7.06	6.41	-0.65	-9.3%	+/- 15%	Yes

Measure	% Cases
> 85%	84%
Not Met	

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Existing Conditions
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	198,170	39
Travel Distance [mi]	All Vehicles	730,101	1,288
Travel Time [h]	All Vehicles	16,851	93.9
Average Speed [mph]	All Vehicles	43.3	0.2
Total Delay [h]	All Vehicles	3,946	91.1
Average Delay per Vehicle [s]	All Vehicles	71	1.6
VHD/VMT [min/mile]	All Vehicles	0.32	0.01
Number of Vehicles Served	HOV	36,144	153
Travel Distance [mi]	HOV	135,800	858
Travel Time [h]	HOV	3,038	20
Average Speed [mph]	HOV	44.7	0.2
Total Delay [h]	HOV	652	16
Average Delay per Vehicle [s]	HOV	64	2
VHD/VMT [min/mile]	HOV	0.29	0.01
Number of Vehicles Served	Truck	2,717	49
Travel Distance [mi]	Truck	13,929	276
Travel Time [h]	Truck	297	5
Average Speed [mph]	Truck	46.9	1
Total Delay [h]	Truck	60	3
Average Delay per Vehicle [s]	Truck	78	5
VHD/VMT [min/mile]	Truck	0.26	0.02

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	36,140	2,720	198,170
Demand Volume	35,829	2,724	195,975
Percent Demand Served	100.9%	99.9%	101.1%
Vehicle Miles of Travel	135,800	13,930	730,100
Person Miles of Travel	285,180	14,630	880,180
Vehicle Hours of Travel	3,040	300	16,850
Vehicle Hours of Delay	650	60	3,950
VHD % of VHT	21.4%	20.0%	23.4%
Average Delay per Vehicle (min)	1.08	1.32	1.20
Person Hours of Delay	1,370	60	4,670
Average Travel Speed	44.7	46.9	43.3

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
PM Peak Hour

	Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
			Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1	I-80 EB - Auburn Blvd On-ramp	Merge	6,296	44	101.8%	649	10	92.6%				60.1	1.4	24.2	0.6	C
2	I-80 EB - Auburn Blvd to Douglas Blvd	Basic	6,935	67	100.7%							55.6	2.9	39.4	2.1	E
3	I-80 EB - Douglas Blvd EB Off-ramp	Diverge	6,929	75	100.6%				1,171	72	102.3%	62.2	0.3	22.3	0.4	C
4	I-80 EB - Douglas Blvd WB Off-ramp	Diverge	5,760	93	100.4%				410	37	106.1%	62.6	1.8	18.0	1.1	B
5	I-80 EB - Douglas Blvd Off to On-ramp	Basic	5,351	79	100.0%							62.7	2.3	22.7	2.8	C
6	I-80 EB - Douglas Blvd On-ramp	Merge	5,349	86	99.9%	1,192	45	102.4%				56.7	7.3	30.5	9.1	D
7	I-80 EB - Eureka Rd Off-ramp	Diverge	6,549	128	100.5%				890	55	94.6%	52.0	9.2	46.4	19.6	F
8	I-80 EB - Eureka Rd Off to On-ramp	Basic	5,670	133	101.7%							62.0	1.7	23.3	0.8	C
9	I-80 EB - Eureka Rd EB On-ramp	Merge	5,670	127	101.7%	297	33	129.6%				62.0	0.4	19.5	1.5	B
10	I-80 EB - Eureka Rd to Taylor Rd	Weave	5,965	124	102.7%	977	55	108.7%	539	37	106.0%	48.1	12.4	42.3	17.7	E
11	I-80 EB - Taylor Rd to SR-65	Basic	6,412	147	103.5%							44.4	9.8	41.5	12.4	E
17	I-80 EB - SR-65 Off-ramp	Diverge	6,416	153	103.5%				3,181	94	99.8%	44.3	6.6	51.6	13.4	F
18	I-80 EB - SR-65 Off to On-ramp	Basic	3,231	108	107.4%							63.9	0.2	18.2	0.9	C
19	I-80 EB - SR-65 On-ramp	Merge	3,230	108	107.4%	1,581	89	100.0%				60.8	3.8	22.4	1.6	C
20	I-80 EB - SR-65 to Lane Drop	Basic	4,809	150	104.7%							58.5	3.3	27.5	1.5	D
21	I-80 EB - Lane Drop to Rocklin Rd	Basic	4,803	150	104.6%							61.7	0.5	26.9	0.6	D
22	I-80 EB - Rocklin Rd Off-ramp	Diverge	4,803	151	104.6%				1,217	65	107.4%	61.0	1.0	23.8	0.7	C
23	I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,586	138	103.7%							63.1	0.4	20.2	0.8	C
24	I-80 EB - Rocklin Rd On-ramp	Merge	3,587	138	103.7%	267	26	104.8%				61.5	0.7	19.0	0.9	B
25	I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,857	147	103.9%							63.5	0.2	20.7	0.8	C

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
PM Peak Hour

	Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
			Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
26	I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,857	147	103.9%				374	41	131.6%	62.2	1.3	21.8	0.9	C
27	I-80 EB - Sierra College Blvd Off to On-ramp	Basic	3,482	138	101.5%							63.3	0.5	19.6	0.6	C
28	I-80 EB - Sierra College Blvd SB On-ramp	Merge	3,481	132	101.5%	236	6	107.2%				62.5	0.4	18.2	0.7	B
29	I-80 EB - Sierra College Blvd NB On-ramp	Merge	3,720	121	101.9%	464	9	102.0%				59.7	1.1	21.0	0.9	C
38	I-80 WB - Sierra College Blvd Off-ramp	Diverge	3,241	18	106.0%				490	42	104.5%	60.7	0.8	16.5	0.3	B
39	I-80 WB - Sierra College Blvd Off to On-ramp	Basic	2,749	52	106.3%							63.7	0.2	16.4	0.3	B
40	I-80 WB - Sierra College Blvd NB On-ramp	Merge	2,747	54	106.2%	70	3	100.4%				63.6	0.1	14.2	0.3	B
41	I-80 WB - Sierra College Blvd SB On-ramp	Merge	2,819	60	106.1%	293	7	122.0%				61.5	0.6	15.3	0.4	B
42	I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	3,106	60	107.2%							63.8	0.1	16.8	0.4	B
43	I-80 WB - Rocklin Rd Off-ramp	Diverge	3,104	63	107.2%				273	28	101.3%	63.2	0.3	19.4	0.5	B
44	I-80 WB - Rocklin Rd Off to On-ramp	Basic	2,831	64	107.7%							63.4	0.2	17.0	0.3	B
45	I-80 WB - Rocklin Rd On-ramp	Merge	2,829	59	107.7%	1,080	60	111.2%				50.8	1.6	24.0	1.5	C
46	I-80 WB - Rocklin Rd to HOV Lane Start	Basic	3,912	80	108.7%							61.8	0.4	24.2	0.6	C
47	I-80 WB - HOV Lane Start to SR-65	Basic	3,904	69	108.5%							63.2	0.2	16.2	0.2	B
48	I-80 WB - SR-65 Off-ramp	Diverge	3,903	67	108.4%				1,258	53	107.3%	52.6	9.9	35.1	19.9	E
49	I-80 WB - SR-65 Off to On-ramp	Basic	2,632	67	108.4%							63.8	0.2	14.9	0.3	B
50	I-80 WB - SR-65 On-ramp	Merge	2,633	66	108.5%	2,498	96	102.3%				63.5	0.1	20.6	0.6	C

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
PM Peak Hour

	Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
			Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
60	I-80 WB - Taylor Rd On-ramp	Merge	5,126	109	105.2%	470	34	104.6%				62.8	0.1	23.7	0.5	C
61	I-80 WB - Atlantic St WB Off-ramp	Diverge	5,589	122	105.1%				422	46	113.0%	60.9	2.5	25.0	1.1	C
62	I-80 WB - Atlantic St EB Off-ramp	Diverge	5,169	110	104.5%				682	58	103.0%	60.3	1.8	26.8	0.9	C
63	I-80 WB - Atlantic St Off to On-ramp	Basic	4,489	122	104.8%							63.4	0.3	17.7	0.6	B
64	I-80 WB - Atlantic St On-ramp	Merge	4,490	123	104.8%	1,126	65	114.6%				61.1	1.4	21.6	0.8	C
65	I-80 WB - Douglas Blvd Off-ramp	Diverge	5,616	145	106.6%				956	71	107.0%	60.6	2.3	26.1	1.4	C
66	I-80 WB - Douglas Rd Off to On-ramp	Basic	4,656	105	106.4%							62.3	1.2	25.6	0.7	C
67	I-80 WB - Douglas Blvd WB On-ramp	Merge	4,656	103	106.5%	1,029	61	89.5%				49.7	3.1	33.5	3.3	D
68	I-80 WB - Douglas Blvd EB On-ramp	Merge	5,683	125	102.9%	524	41	113.6%				49.5	3.6	37.1	2.6	E
69	I-80 WB - Douglas Blvd to Riverside Ave	Basic	6,198	135	103.6%							62.8	0.1	31.4	0.7	D
70	I-80 WB - Riverside Ave Off-ramp	Diverge	6,199	132	103.6%				759	59	101.6%	57.3	2.8	36.1	2.4	E
71	I-80 WB - Riverside Ave Off to On-ramp	Basic	5,446	118	104.0%							61.5	0.6	28.4	0.7	D
72	I-80 WB - Riverside Ave NB On-ramp	Merge	5,443	122	103.9%	199	7	99.4%				63.5	0.1	22.6	0.6	C
73	I-80 WB - Riverside Ave SB On-ramp	Merge	5,639	124	103.7%	985	11	110.5%				62.9	0.5	21.7	0.6	C
74	I-80 WB - Riverside Ave to Antelope Rd	Basic	6,612	138	104.5%							63.1	0.1	25.9	0.6	C
75	I-80 WB - Antelope Rd Off-ramp	Diverge	6,604	137	104.4%				959	40	102.6%	56.7	2.7	31.1	1.7	D

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR 65 Interchange
Existing Conditions
PM Peak Hour

	Location	Facility	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Type	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
76	I-80 WB - Antelope Rd Off to On-ramp	Basic	5,632	145	104.4%							59.7	0.8	23.4	0.6	C
77	I-80 WB - Antelope Rd WB On-ramp	Merge	5,633	143	104.5%	321	8	97.7%				60.5	0.9	22.0	1.0	C
78	I-80 WB - Antelope Rd to Truck Scales	Weave	5,948	138	104.0%	261	5	99.7%	19	10	100.0%	62.9	0.2	23.3	0.5	C
79	I-80 WB - Truck Scales Off to On-ramp	Basic	6,180	135	103.6%							63.2	0.1	23.7	0.5	C
80	I-80 WB - Truck Scales On-ramp	Merge	6,179	134	103.6%	19	10	100.0%				63.0	0.1	23.5	0.6	C
81	I-80 WB - Truck Scales to Elkhorn Blvd	Basic	6,189	144	103.5%							63.0	0.2	23.8	0.7	C
82	I-80 WB - Elkhorn Blvd Off-ramp	Diverge	6,190	143	103.5%				1,011	56	99.0%	58.3	1.6	26.1	1.0	C
83	I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	5,174	150	104.3%							61.6	0.8	20.6	0.7	C
84	I-80 WB - Elkhorn Blvd WB On-ramp	Merge	5,175	148	104.4%	708	9	106.9%				58.8	0.7	20.7	0.7	C
85	I-80 WB - Elkhorn Blvd EB On-ramp	Merge	5,875	152	104.5%	605	9	105.6%				62.7	0.7	24.0	0.5	C

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
PM Peak Hour

	Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
			Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
97	SR-65 SB - Twelve Bridges Dr Off-ramp	Diverge	1,745	43	101.6%				210	26	101.3%	63.8	0.2	12.4	0.3	B
98	SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	1,532	38	101.5%							63.6	0.3	12.7	0.3	B
99	SR-65 SB - Twelve Bridges Dr On-ramp	Merge	1,532	39	101.4%	388	26	101.8%				57.7	0.9	14.9	0.5	B
100	SR-65 SB - Twelve Bridges Dr to Sunset Blvd	Basic	1,928	53	102.0%							63.2	0.3	15.9	0.6	B
101	SR-65 SB - Sunset Blvd Off-ramp	Diverge	1,930	56	102.1%				268	27	109.8%	63.3	0.3	14.7	0.4	B
102	SR-65 SB - Sunset Blvd Off to On-ramp	Basic	1,660	52	100.8%							63.3	0.3	13.4	0.5	B
103	SR-65 SB - Sunset Blvd WB On-ramp	Merge	1,662	53	100.9%	547	24	108.1%				56.1	1.6	17.6	0.8	B
104	SR-65 SB - Sunset Blvd EB On-ramp	Merge	2,210	59	102.7%	617	32	102.8%				62.2	0.3	22.1	0.7	C
105	SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	2,821	77	102.5%							62.4	0.3	23.3	0.6	C
106	SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	2,822	74	102.5%				528	41	97.5%	60.7	1.6	23.8	0.8	C
107	SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	2,294	75	103.8%							62.6	0.6	19.4	0.8	C
108	SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	2,293	74	103.7%	282	24	76.1%				60.2	1.0	19.7	0.6	B
109	SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	2,578	74	99.9%	907	45	97.7%	559	42	99.2%	60.8	0.3	21.1	0.6	C
110	SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	2,922	101	99.2%							61.9	0.8	25.0	0.8	C
111	SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	2,922	97	99.1%	352	25	117.6%				51.4	4.3	31.3	3.1	D
112	SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	3,276	94	100.9%	620	45	106.1%				47.5	3.8	38.8	4.0	E
113	SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	3,895	104	101.7%							61.9	0.6	32.4	1.0	D
114	SR-65 SB - Galleria Blvd Off-ramp	Diverge	3,895	104	101.7%				831	52	105.6%	62.0	0.4	32.2	1.0	D
115	SR-65 SB - Galleria Blvd Off to Lane Add	Basic	3,060	108	100.6%							62.0	0.4	27.1	1.0	D
116	SR-65 SB - Lane Add to Galleria Blvd On-ramp	Basic	3,057	109	100.5%							63.3	0.2	19.4	0.3	C
117	SR-65 SB - Galleria Blvd On-ramp	Merge	3,057	111	100.5%	1,021	70	104.0%				55.8	2.7	24.3	1.8	C
118	SR-65 SB - I-80 WB Off-ramp	Diverge	4,079	134	101.4%				2,498	96	102.3%	62.9	0.1	21.6	0.8	C

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80 / SR-65 Interchange
Existing Conditions
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
125 SR-65 NB - I-80 WB On-ramp	Merge	3,178	94	99.7%	1,232	58	105.1%				20.8	1.5	95.2	3.8	F
126 SR-65 NB - I-80 to Stanford Ranch Rd	Basic	4,405	94	101.1%							28.7	2.7	76.5	5.7	F
127 SR-65 NB - Stanford Ranch Rd Off-ramp	Diverge	4,404	94	101.0%				1,247	56	108.8%	34.4	3.4	62.4	4.8	F
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	3,157	93	98.2%							58.7	4.8	27.4	2.6	D
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	3,156	89	98.2%	961	57	103.9%				48.9	10.0	39.2	8.8	E
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	4,118	113	99.5%							60.8	0.4	31.5	1.1	D
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	4,118	113	99.5%				1,109	69	109.8%	62.2	0.2	27.9	0.9	C
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	3,010	116	96.2%							63.2	0.2	24.2	1.1	C
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	3,012	115	96.3%	516	51	94.5%	1,061	67	90.4%	63.1	0.1	21.3	0.9	C
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	2,465	99	98.6%							63.1	0.4	20.1	1.1	C
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	2,464	103	98.6%	528	33	110.2%				56.2	2.7	24.5	2.2	C
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	2,991	116	100.4%							62.7	0.2	25.3	0.9	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	2,988	111	100.3%				651	54	94.4%	62.9	0.1	22.7	0.7	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	2,334	97	101.9%							63.2	0.2	19.7	0.8	C
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	2,330	99	101.7%	66	14	93.7%				62.3	0.3	20.0	0.8	C
140 SR-65 NB - Sunset Blvd WB On-ramp	Merge	2,395	94	101.5%	274	24	102.2%				62.5	0.3	22.0	0.8	C
141 SR-65 NB - Sunset Blvd to Twelve Bridges Dr	Basic	2,667	92	101.5%							62.5	0.2	23.1	0.7	C
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	2,657	95	101.1%				508	48	89.5%	61.9	0.3	23.3	0.8	C
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,146	82	104.2%							63.0	0.1	18.6	0.5	C
144 SR-65 NB - Twelve Bridges Dr On-ramp	Merge	2,147	81	104.2%	238	23	81.1%				62.1	0.4	19.6	0.5	B

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80 / SR-65 Interchange
Existing Conditions
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	SR-65 /Sterling Parkway	Signal	4,125	4,171	101.1%	18.0	2.6	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,055	970	91.9%	4.6	0.5	A
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,520	1,431	94.1%	3.0	0.3	A
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,112	2,131	100.9%	6.0	0.2	A
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,081	2,125	102.1%	9.3	0.4	A
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks	Signal	4,225	4,384	103.8%	32.8	3.3	C
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	2,891	2,954	102.2%	22.6	1.3	C
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	4,642	4,705	101.3%	7.9	0.6	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	4,337	4,496	103.7%	14.2	1.0	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	4,292	4,370	101.8%	32.0	2.0	C
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	5,088	5,350	105.1%	15.2	2.1	B
12	SR-65 SB Ramps/Galleria Blvd	Signal	5,081	5,279	103.9%	19.3	1.6	B
13	Galleria Blvd/Antelope Creek Dr	Signal	4,480	4,526	101.0%	24.4	2.1	C
14	Galleria Blvd/Roseville Pkwy	Signal	6,853	7,146	104.3%	36.4	1.6	D
15	Creekside Ridge Dr/Roseville Pkwy	Signal	4,484	4,508	100.5%	17.4	2.1	B
16	Taylor Rd/East Roseville Pkwy	Signal	5,875	5,808	98.9%	28.3	3.5	C
17	North Sunrise Ave/East Roseville Pkwy	Signal	5,080	5,030	99.0%	37.3	3.1	D
18	Wills Rd/Atlantic St	Signal	2,312	2,514	108.7%	12.3	1.2	B
19	I-80 WB Ramps/Atlantic St	Signal	3,239	3,595	111.0%	10.9	0.6	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	4,818	5,175	107.4%	60.6	11.0	E
21	North Sunrise Ave/Eureka Rd	Signal	4,692	4,869	103.8%	29.9	1.9	C
22	Harding Blvd/Wills Rd	Signal	2,793	3,018	108.0%	13.4	1.1	B
23	Harding Blvd/Douglas Blvd	Signal	3,536	3,596	101.7%	27.7	1.8	C
24	I-80 WB Ramps/Douglas Blvd	Signal	4,479	4,480	100.0%	16.7	1.8	B

Network Summary	
Total Demand Volume (veh/hr)	94,090
Total Volume Served (veh/hr)	96,629
Percent Served	102.7%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

I-80/SR 65 Interchange Improvements

**Vissim Model Results – Design Year Alternative 1
(Taylor Road Full Access Interchange)**

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	207,225	54
Travel Distance [mi]	All Vehicles	920,913	1,602
Travel Time [h]	All Vehicles	21,449	206.0
Average Speed [mph]	All Vehicles	42.9	0.4
Total Delay [h]	All Vehicles	5,563	200.7
Average Delay per Vehicle [s]	All Vehicles	94	3.4
VHD/VMT [min/mile]	All Vehicles	0.36	0.01
Number of Vehicles Served	HOV	34,560	27
Travel Distance [mi]	HOV	166,450	782
Travel Time [h]	HOV	3,557	21
Average Speed [mph]	HOV	46.8	0.2
Total Delay [h]	HOV	717	16
Average Delay per Vehicle [s]	HOV	73	2
VHD/VMT [min/mile]	HOV	0.26	0.01
Number of Vehicles Served	Truck	7,578	10
Travel Distance [mi]	Truck	42,203	298
Travel Time [h]	Truck	971	16
Average Speed [mph]	Truck	43.5	1
Total Delay [h]	Truck	251	13
Average Delay per Vehicle [s]	Truck	116	6
VHD/VMT [min/mile]	Truck	0.36	0.02

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	34,560	7,580	207,230
Demand Volume	35,620	8,200	209,100
Percent Demand Served	97.0%	92.4%	99.1%
Vehicle Miles of Travel	166,450	42,200	920,910
Person Miles of Travel	349,550	44,310	1,106,120
Vehicle Hours of Travel	3,560	970	21,450
Vehicle Hours of Delay	720	250	5,560
VHD % of VHT	20.2%	25.8%	25.9%
Average Delay per Vehicle (min)	1.25	1.98	1.61
Person Hours of Delay	1,510	260	6,360
Average Travel Speed	46.8	43.5	42.9

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	300,414	340
Travel Distance [mi]	All Vehicles	1,113,998	1,642
Travel Time [h]	All Vehicles	29,967	370.8
Average Speed [mph]	All Vehicles	37.2	0.4
Total Delay [h]	All Vehicles	10,300	365.7
Average Delay per Vehicle [s]	All Vehicles	121	4.3
VHD/VMT [min/mile]	All Vehicles	0.55	0.02
Number of Vehicles Served	HOV	53,147	77
Travel Distance [mi]	HOV	218,075	755
Travel Time [h]	HOV	5,352	52
Average Speed [mph]	HOV	40.8	0.3
Total Delay [h]	HOV	1,546	46
Average Delay per Vehicle [s]	HOV	103	3
VHD/VMT [min/mile]	HOV	0.43	0.01
Number of Vehicles Served	Truck	5,471	13
Travel Distance [mi]	Truck	26,192	163
Travel Time [h]	Truck	669	15
Average Speed [mph]	Truck	39.1	1
Total Delay [h]	Truck	216	13
Average Delay per Vehicle [s]	Truck	139	8
VHD/VMT [min/mile]	Truck	0.49	0.03

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	53,150	5,470	300,410
Demand Volume	53,990	6,030	300,030
Percent Demand Served	98.4%	90.7%	100.1%
Vehicle Miles of Travel	218,070	26,190	1,114,000
Person Miles of Travel	457,960	27,500	1,355,200
Vehicle Hours of Travel	5,350	670	29,970
Vehicle Hours of Delay	1,550	220	10,300
VHD % of VHT	29.0%	32.8%	34.4%
Average Delay per Vehicle (min)	1.75	2.41	2.06
Person Hours of Delay	3,260	230	12,020
Average Travel Speed	40.8	39.1	37.2

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,484	47	110.4%	1,247	31	111.4%				59.3	4.2	33.4	3.3	D
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,726	82	110.5%							55.2	4.0	40.0	3.3	E
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,718	104	110.4%				1,414	72	109.6%	60.3	0.9	30.6	1.0	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,304	140	110.5%				371	39	109.2%	62.1	1.1	25.9	1.5	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,932	129	110.6%							62.8	0.3	27.8	0.4	D
6 I-80 EB - Douglas Blvd On-ramp	Merge	6,933	135	110.6%	1,149	19	97.3%				59.8	1.9	34.5	1.9	D
7 I-80 EB - Eureka Rd Off-ramp	Diverge	8,082	128	108.5%				1,398	59	104.3%	58.9	1.6	36.6	1.2	E
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	6,685	149	109.4%							62.7	0.3	27.8	0.6	D
9 I-80 EB - Eureka Rd EB On-ramp	Merge	6,686	141	109.4%	198	26	104.4%				62.6	0.1	25.4	0.6	C
10 I-80 EB - Eureka Rd to SR-65	Weave	6,881	152	109.2%	1,105	47	105.3%	4,948	107	108.3%	62.0	0.4	23.4	0.5	C
11 I-80 EB - SR-65 Off-ramp to Taylor Rd Off-ramp	Basic	3,044	109	109.5%							63.7	0.1	16.3	0.6	B
12 I-80 EB - Taylor Rd Off-ramp	Diverge	3,044	109	109.5%				301	37	103.8%	63.9	0.1	16.1	0.7	B
13 I-80 EB - Taylor Rd Off to On-ramp	Basic	2,746	99	110.3%							63.9	0.1	16.0	0.6	B
18 I-80 EB - Taylor Rd On-ramp	Merge	2,748	97	110.4%	256	36	98.5%				63.8	0.1	17.6	0.6	B
19 I-80 EB - SR-65 On-ramp	Merge	3,006	109	109.3%	1,927	78	107.1%				61.5	0.2	30.2	0.5	D
20 I-80 EB - SR-65 to Rocklin Rd	Basic	4,933	123	108.4%							62.6	0.3	24.7	0.4	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	4,942	130	108.6%				1,542	67	107.1%	63.2	0.2	23.7	0.4	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,405	121	109.5%							63.1	0.4	22.0	0.4	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,410	121	109.7%	259	29	107.8%				58.6	1.0	23.1	0.7	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,676	129	109.7%							63.0	0.3	23.3	0.5	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,677	127	109.8%				743	65	110.9%	61.5	0.9	24.8	0.6	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,939	118	109.6%							63.1	0.5	19.6	0.5	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,941	119	109.7%	139	5	92.4%				62.5	0.2	17.8	0.5	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	3,083	120	108.9%	493	20	109.5%				62.1	0.3	19.7	0.6	B
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	5,374	37	105.8%				1,069	60	104.8%	52.7	4.2	32.8	3.2	D
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	4,301	71	105.9%							61.6	0.9	25.9	0.5	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	4,300	81	105.9%	50	4	84.0%				62.8	0.5	23.1	0.5	C
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	4,348	93	105.5%	319	12	102.9%				60.8	0.6	25.0	0.6	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,661	93	105.2%							61.9	0.7	27.9	0.7	D
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,658	83	105.2%				289	27	99.5%	60.7	1.1	28.4	1.1	D
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	4,364	87	105.4%							63.0	0.3	25.9	0.7	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	4,361	83	105.3%	1,039	48	98.9%				59.6	1.2	28.3	0.9	D
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,388	98	103.8%							60.5	0.7	31.6	0.8	D
47 I-80 WB - SR-65 Off-ramp	Diverge	5,381	97	103.7%				1,554	59	103.6%	63.3	0.3	24.1	0.3	C
48 I-80 WB - Taylor Rd Off-ramp	Diverge	3,825	85	103.6%				413	37	98.2%	63.3	0.3	19.7	0.5	B
49 I-80 WB - Taylor Rd Off to On-ramp	Basic	3,406	97	104.2%							63.7	0.1	18.3	0.7	C
50 I-80 WB - Taylor Rd On-ramp	Merge	3,403	106	104.1%	752	37	109.0%				62.3	1.0	20.6	0.7	C
60 I-80 WB - SR-65 to Atlantic St	Weave	4,154	100	104.9%	4,593	216	100.9%	388	45	104.7%	22.3	2.6	90.2	8.7	F
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	8,174	234	100.4%				1,093	84	98.5%	21.9	0.6	112.4	2.6	F
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	7,050	184	100.3%							23.6	0.5	109.3	2.7	F
64 I-80 WB - Atlantic St On-ramp	Merge	7,052	170	100.3%	933	34	107.2%				23.0	0.9	74.9	1.4	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,982	158	101.0%				991	72	94.4%	36.6	1.3	63.1	2.8	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	7,004	145	102.2%							29.8	1.3	87.4	3.7	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	7,004	141	102.2%	937	31	107.7%				23.5	0.5	112.9	1.9	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,932	127	102.8%	462	28	110.0%				28.8	0.3	76.7	1.0	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,394	101	103.1%							58.4	0.5	34.5	0.5	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	8,401	119	103.2%				1,023	66	95.6%	61.9	0.2	28.8	0.4	D
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	7,377	140	104.3%							62.1	0.1	34.1	0.5	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	7,381	132	104.4%	183	11	73.0%				62.8	0.1	27.2	0.4	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,565	141	103.4%	762	18	94.0%				62.9	0.2	25.8	0.5	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	8,331	130	102.5%							62.2	0.2	31.2	0.5	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	8,337	125	102.5%				456	38	87.6%	61.9	0.3	31.3	0.7	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	7,889	122	103.7%							62.4	0.3	30.1	0.4	D
77 I-80 WB - Antelope Rd WB On-ramp	Merge	7,890	121	103.7%	534	12	100.8%				61.6	0.7	29.0	0.5	D
78 I-80 WB - Antelope Rd to Truck Scales	Weave	8,429	124	103.6%	451	15	90.1%	91	15	82.8%	60.3	1.9	31.3	1.0	D
79 I-80 WB - Truck Scales Off to On-ramp	Basic	8,821	140	103.4%							48.1	9.8	46.9	9.8	F
80 I-80 WB - Truck Scales On-ramp	Merge	8,853	138	103.8%	92	12	83.2%				32.3	11.2	77.5	19.3	F
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	9,008	135	104.3%							41.4	5.6	56.1	6.6	F
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	9,015	132	104.3%				1,077	65	104.6%	52.5	6.3	36.4	5.0	E
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	7,971	170	104.7%							43.7	14.4	54.0	22.1	F
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	8,000	167	105.1%	807	18	102.2%				35.6	14.3	72.0	26.0	F
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	8,859	162	105.5%	777	29	94.7%				38.3	12.5	66.6	16.4	F

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,426	9	128.5%				73	17	104.1%	63.8	0.1	19.1	0.1	B
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	1,354	29	130.2%							63.6	0.2	18.5	0.3	C
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	1,354	33	130.2%	1,045	21	106.7%				48.0	8.1	25.7	5.1	C
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	2,399	71	118.8%	1,136	70	103.2%				9.5	1.1	133.3	16.0	F
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	3,529	102	113.1%							11.9	0.7	121.9	3.5	F
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	3,514	106	112.6%							15.1	0.9	112.4	3.0	F
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	3,493	108	108.1%	1,337	51	106.9%	851	62	106.4%	20.0	1.0	87.4	2.2	F
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	3,891	63	105.7%							20.5	0.7	94.9	1.9	F
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	3,878	59	105.4%	649	38	113.8%				29.9	0.3	73.0	0.8	F
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	4,507	75	106.0%							59.7	1.4	38.6	1.2	E
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	4,505	71	106.0%				766	47	109.5%	60.8	2.8	35.3	1.8	E
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	3,727	83	105.0%							52.3	15.3	42.4	19.5	E
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	3,714	83	104.6%	456	32	108.6%				44.1	17.1	53.6	22.3	F
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	4,155	99	104.6%	502	44	111.4%	746	54	103.6%	59.2	1.8	33.6	1.0	D
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,897	119	105.3%							62.2	0.3	32.3	0.8	D
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,896	120	105.3%	435	28	111.5%				57.6	3.6	36.4	2.7	E
104 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	4,327	117	105.8%	599	35	105.1%	888	68	108.3%	59.8	0.8	32.0	1.0	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	4,020	90	104.7%							56.7	8.6	37.2	7.2	E
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	4,019	92	104.7%	527	38	105.4%				48.7	7.8	43.1	8.8	E
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	4,547	106	104.8%	1,249	55	101.6%	746	44	105.0%	56.0	4.4	36.6	3.7	E
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	5,048	107	103.9%							62.0	0.3	36.7	0.8	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	5,047	108	103.9%	615	19	100.8%				60.1	2.4	28.7	1.4	D
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	5,658	104	103.4%	849	42	104.8%				53.8	9.9	38.0	12.5	E
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	6,505	119	103.6%							59.4	1.0	33.3	0.7	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	6,505	117	103.6%				1,346	61	101.9%	61.7	0.3	29.2	0.5	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	5,161	95	104.0%							62.6	0.2	27.3	0.5	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	5,161	90	104.0%	1,471	66	105.8%	4,723	108	103.8%	59.5	0.7	26.3	0.6	C
120 SR-65 SB to EB I-80 Connector	Basic	1,916	74	106.5%							56.0	0.2	20.0	0.6	C
121 SR-65 SB to WB I-80 Connector	Basic	3,716	163	100.7%							24.0	12.9	76.0	32.6	F
123 SR-65 NB from WB I-80 Connector	Basic	1,556	58	103.7%							56.4	0.1	16.3	0.6	B
125 SR-65 NB from EB I-80 Connector	Basic	4,360	94	108.2%							53.6	0.1	29.7	0.5	D
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,362	102	108.2%	2,145	69	105.2%	1,052	67	104.2%	59.6	0.7	26.5	0.6	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	5,449	116	107.7%							41.6	11.6	47.2	17.1	F
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	5,449	123	107.7%	523	36	98.8%				34.5	5.9	61.3	9.4	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	5,979	133	107.0%							48.9	5.0	44.4	5.9	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	5,980	134	107.0%				944	56	98.4%	52.8	4.4	39.6	4.7	E
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	5,038	106	108.8%							57.1	5.1	42.9	5.2	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	5,038	111	108.8%	297	28	99.1%	2,016	93	110.7%	61.3	0.9	30.9	0.6	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	3,325	87	106.9%							62.5	0.2	27.1	0.7	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	3,324	84	106.9%	559	35	99.9%				60.1	1.0	28.4	0.8	D
136 SR-65 NB - Blue Oaks Blvd to HOV Lane End	Basic	3,885	93	105.8%							62.5	0.5	29.9	0.7	D
162 SR-65 NB - HOV Lane End to Sunset Blvd	Basic	3,885	90	105.9%							62.7	0.3	25.4	0.4	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	3,887	90	105.9%				1,395	73	106.5%	63.4	0.1	23.9	0.4	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	2,491	74	105.5%							63.5	0.2	20.8	0.6	C
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	2,491	75	105.6%	105	20	95.6%				62.9	0.4	21.4	0.8	C
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	2,595	86	105.1%	396	31	116.5%	795	54	98.1%	63.2	0.3	19.3	0.6	B
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	2,194	83	109.7%							63.5	0.2	19.3	0.7	C
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	2,197	82	109.8%	677	41	105.8%				59.5	0.8	22.5	0.6	C
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	2,871	80	108.7%	455	38	113.7%				61.2	0.7	26.3	0.8	C
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	3,328	107	109.5%							61.2	0.4	29.4	0.7	D
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	3,331	107	109.6%				723	51	99.0%	61.5	0.5	29.5	0.9	D
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,608	95	112.9%							62.9	0.1	24.5	0.5	C
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,608	92	112.9%	761	40	102.8%	1,268	68	116.3%	62.9	0.2	20.4	0.4	C
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	2,103	72	107.3%							63.7	0.2	19.3	0.7	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	2,103	76	107.3%				1,161	65	102.8%	64.2	0.1	15.2	0.4	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	940	58	113.3%							64.2	0.2	9.6	0.3	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	941	56	113.3%	70	6	100.1%				63.4	0.2	9.6	0.2	A

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS		
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.			
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,969	43	102.0%	972	23	96.2%				62.1	0.3	27.9	0.4	C		
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,936	68	101.3%							61.7	0.3	32.8	0.5	D		
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,923	96	101.2%				1,132	83	98.4%	55.7	7.2	36.7	10.2	E		
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,758	146	101.2%				393	46	100.7%	59.9	7.4	30.2	19.6	D		
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	7,368	152	101.2%							62.8	0.3	26.9	0.6	D		
6 I-80 EB - Douglas Blvd On-ramp	Merge	7,366	158	101.2%	1,799	64	96.7%				59.5	5.4	35.2	4.8	E		
7 I-80 EB - Eureka Rd Off-ramp	Diverge	9,169	176	100.3%						940	59	98.9%	59.6	3.3	37.7	3.2	E
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	8,231	174	100.5%							62.5	0.2	29.8	0.7	D		
9 I-80 EB - Eureka Rd EB On-ramp	Merge	8,233	179	100.5%	322	21	103.7%				61.4	1.6	28.7	1.1	D		
10 I-80 EB - Eureka Rd to SR-65	Weave	8,557	172	100.7%	1,391	51	95.9%	6,029	173	100.1%	60.2	1.2	27.1	1.0	C		
11 I-80 EB - SR-65 Off-ramp to Taylor Rd Off-ramp	Basic	3,918	102	99.7%							63.5	0.1	17.7	0.5	B		
12 I-80 EB - Taylor Rd Off-ramp	Diverge	3,917	102	99.7%				585	41	97.5%	63.6	0.3	16.7	0.5	B		
13 I-80 EB - Taylor Rd Off to On-ramp	Basic	3,330	98	100.0%							63.7	0.3	16.7	0.5	B		
18 I-80 EB - Taylor Rd On-ramp	Merge	3,329	93	100.0%	176	24	80.0%				63.9	0.1	17.8	0.6	B		
19 I-80 EB - SR-65 On-ramp	Merge	3,504	94	98.7%	2,528	86	97.6%				59.3	0.8	33.0	0.9	D		
20 I-80 EB - SR-65 to Rocklin Rd	Basic	6,031	123	98.2%							62.2	0.2	27.7	0.8	D		
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	6,023	147	98.1%				1,435	72	98.3%	63.1	0.1	26.3	0.7	C		
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	4,578	137	97.8%							63.0	0.3	26.6	0.9	D		
24 I-80 EB - Rocklin Rd On-ramp	Merge	4,576	141	97.8%	262	15	100.9%				58.6	0.9	27.4	1.0	C		
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	4,839	133	98.0%							62.9	0.2	27.8	0.8	D		
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	4,836	134	97.9%				700	61	93.3%	61.3	0.7	29.2	1.0	D		
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	4,130	108	98.6%							63.0	0.2	23.9	0.6	C		
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	4,128	110	98.5%	334	8	98.3%				60.5	0.8	22.8	0.8	C		
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	4,458	112	98.4%	854	22	101.6%				59.2	0.7	28.0	0.6	D		
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,076	25	105.9%				750	52	105.6%	60.2	0.6	21.9	0.4	C		
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,323	56	105.8%							63.3	0.4	20.5	0.3	C		
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,323	57	105.8%	406	15	104.1%				62.2	0.3	19.3	0.4	B		
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,729	64	105.6%	422	11	103.0%				60.7	0.7	22.4	0.5	C		
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,147	66	105.2%							63.1	0.2	24.1	0.5	C		
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,148	64	105.3%				304	40	101.5%	62.5	0.3	25.1	0.7	C		
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,841	67	105.5%							63.4	0.2	22.6	0.4	C		
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,839	69	105.5%	1,641	84	105.9%				57.8	1.6	29.5	1.2	D		
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,476	121	105.5%							54.2	6.2	36.0	4.8	E		
47 I-80 WB - SR-65 Off-ramp	Diverge	5,474	121	105.5%				2,025	82	103.9%	63.3	0.2	23.0	0.5	C		
48 I-80 WB - Taylor Rd Off-ramp	Diverge	3,447	97	106.4%				329	34	106.0%	63.4	0.2	17.2	0.5	B		
49 I-80 WB - Taylor Rd Off to On-ramp	Basic	3,116	97	106.4%							63.9	0.2	17.1	0.6	B		
50 I-80 WB - Taylor Rd On-ramp	Merge	3,117	102	106.4%	650	45	98.5%				63.0	0.5	17.8	0.5	B		
60 I-80 WB - SR-65 to Atlantic St	Weave	3,771	118	105.1%	4,158	130	99.5%	487	46	103.7%	50.3	9.1	39.0	14.3	E		
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	7,328	237	100.4%				1,067	71	99.8%	27.1	14.6	90.7	39.2	F		
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	6,173	221	99.1%							22.5	8.2	108.4	26.6	F		
64 I-80 WB - Atlantic St On-ramp	Merge	6,118	225	98.2%	1,189	62	97.4%				19.0	1.2	84.4	3.9	F		
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,211	177	96.8%				1,061	79	95.6%	29.5	1.7	76.7	3.2	F		
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,090	144	96.1%							24.1	0.7	100.4	3.9	F		
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,071	139	95.8%	1,310	50	97.0%				21.5	0.4	114.0	2.9	F		
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,355	109	95.6%	657	26	90.1%				27.5	0.5	73.8	0.8	F		
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,013	136	95.2%							60.1	0.4	32.1	0.7	D		
70 I-80 WB - Riverside Ave Off-ramp	Diverge	8,013	125	95.2%				1,173	52	93.8%	62.4	0.1	27.9	0.6	C		
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,838	133	95.4%							62.4	0.1	32.5	0.7	D		
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,836	121	95.3%	195	11	92.8%				62.9	0.1	26.2	0.6	C		
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,028	129	95.2%	599	16	106.9%				62.2	0.5	22.6	0.3	C		
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	7,626	114	96.0%							62.4	0.2	28.1	0.3	D		
75 I-80 WB - Antelope Rd Off-ramp	Diverge	7,622	118	96.0%				1,102	56	95.0%	60.8	2.8	29.9	1.8	D		
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	6,515	124	96.1%							63.0	0.2	24.9	0.6	C		
77 I-80 WB - Antelope Rd WB On-ramp	Merge	6,513	123	96.1%	346	10	98.8%				61.1	1.0	21.9	0.9	C		
78 I-80 WB - Antelope Rd to Truck Scales	Weave	6,861	122	96.2%	529	12	99.9%	52	14	58.2%	62.4	0.3	24.3	0.6	C		
79 I-80 WB - Truck Scales Off to On-ramp	Basic	7,339	111	96.9%							62.8	0.1	27.1	0.6	D		
80 I-80 WB - Truck Scales On-ramp	Merge	7,335	112	96.9%	51	14	57.1%				62.5	0.1	26.9	0.7	C		
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	7,386	112	96.4%							61.2	0.7	28.9	0.7	D		
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	7,385	106	96.4%				1,191	75	95.3%	62.0	0.5	26.7	0.5	C		
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	6,199	120	96.7%							63.0	0.3	23.8	0.5	C		
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	6,200	126	96.7%	897	6	99.7%				57.2	1.5	25.7	1.3	C		
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	7,096	121	97.1%	601	20	103.5%				61.3	1.5	28.6	0.7	D		

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,128	10	101.6%				125	20	104.5%	64.4	0.2	10.1	0.0	B
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	1,002	26	101.2%							64.5	0.2	8.7	0.3	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	1,004	26	101.4%	691	20	100.1%				61.4	0.1	10.4	0.2	B
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,692	32	100.7%	645	14	94.9%				61.1	0.3	12.6	0.3	B
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,338	36	99.1%							63.2	0.5	21.4	0.4	C
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	2,340	36	99.1%							63.2	0.3	20.5	0.4	C
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	2,339	35	99.1%	1,447	62	100.5%	827	52	99.6%	60.8	0.4	22.1	0.5	C
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,964	85	99.8%							63.2	0.1	24.3	0.9	C
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,966	83	99.9%	584	47	95.8%				60.5	1.3	27.4	1.3	C
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	3,551	100	99.2%							62.3	0.3	29.3	1.0	D
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	3,550	105	99.2%				990	58	98.0%	62.7	0.2	26.3	0.8	C
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,557	99	99.5%							63.3	0.2	21.3	1.0	C
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,559	97	99.6%	469	32	104.2%				61.1	0.8	24.0	0.8	C
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	3,029	100	100.3%	726	39	99.4%	597	44	97.8%	61.8	0.2	25.3	0.9	C
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,162	99	100.7%							62.6	0.2	26.5	1.1	D
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,161	96	100.7%	561	36	105.8%				58.9	1.9	29.2	1.3	D
104 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	3,721	102	101.4%	1,001	48	101.1%	858	46	98.6%	61.5	0.4	28.8	1.0	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,858	123	101.8%							62.1	0.2	31.6	1.2	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,858	122	101.8%	337	25	88.6%				58.9	1.0	32.4	1.5	D
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	4,195	121	100.6%	1,350	55	97.8%	644	54	97.5%	59.5	1.9	32.4	1.9	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,901	129	100.2%							62.3	0.3	35.4	0.9	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,900	135	100.2%	456	38	99.2%				61.8	0.2	27.6	0.6	C
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	5,357	149	100.1%	1,103	51	98.5%				60.5	0.7	30.5	0.8	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	6,462	148	99.9%							59.3	1.2	33.1	1.1	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	6,462	148	99.9%				1,548	80	99.9%	61.6	0.4	28.9	0.6	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,914	119	99.9%							62.5	0.2	27.7	0.5	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,918	124	100.0%	1,771	95	95.7%	4,148	139	99.2%	61.0	0.4	25.0	0.6	C
120 SR-65 SB to EB I-80 Connector	Basic	2,533	85	97.8%							54.9	0.4	24.8	0.9	C
121 SR-65 SB to WB I-80 Connector	Basic	3,434	121	96.2%							55.7	0.3	23.4	0.7	C
123 SR-65 NB from WB I-80 Connector	Basic	2,026	84	103.9%							54.6	3.0	21.4	1.3	C
125 SR-65 NB from EB I-80 Connector	Basic	4,912	145	100.0%							49.7	12.0	36.7	23.4	E
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,898	129	99.7%	3,137	102	102.5%	1,624	83	97.8%	46.3	14.3	44.4	19.7	E
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	6,322	115	100.2%							25.4	1.0	102.7	11.0	F
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	6,298	102	99.8%	1,043	69	94.0%				30.7	0.3	73.3	1.1	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	7,329	86	98.8%							53.5	1.1	38.1	1.4	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	7,328	86	98.8%				1,529	74	100.6%	58.5	1.0	33.4	1.3	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	5,794	105	98.2%							60.9	2.4	37.6	2.4	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	5,794	106	98.2%	610	37	100.0%	2,211	73	98.3%	61.3	0.7	32.2	0.5	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	4,199	127	98.6%							61.3	3.2	31.4	2.0	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	4,199	127	98.6%	619	57	95.2%				58.8	1.8	32.7	1.4	D
136 SR-65 NB - Blue Oaks Blvd to HOV Lane End	Basic	4,818	125	98.1%							62.2	0.6	33.2	1.0	D
162 SR-65 NB - HOV Lane End to Sunset Blvd	Basic	4,816	131	98.1%							61.5	0.7	30.0	0.6	D
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	4,815	139	98.1%				1,168	73	98.9%	62.6	0.5	28.0	0.6	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	3,647	136	97.8%							62.6	0.1	29.5	0.7	D
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	3,646	135	97.7%	296	29	102.0%				61.7	0.4	30.7	0.7	D
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	3,948	137	98.2%	755	39	106.3%	1,233	71	100.2%	61.8	0.5	28.2	1.2	D
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	3,470	120	99.2%							62.8	0.1	27.9	1.2	D
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	3,471	123	99.2%	382	32	97.9%				60.2	1.8	30.3	1.2	D
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,850	134	99.0%	494	41	102.9%				55.1	4.7	36.8	3.7	E
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	4,339	141	99.3%							57.9	1.7	38.3	2.1	E
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	4,339	138	99.3%				720	43	102.9%	59.9	1.3	37.2	1.5	E
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	3,618	123	98.6%							62.4	0.1	31.0	1.1	D
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	3,614	119	98.5%	952	52	97.1%	1,499	76	97.4%	62.4	0.2	27.1	0.9	C
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	3,064	104	98.5%							63.2	0.1	24.6	1.1	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	3,065	103	98.5%				1,863	80	98.0%	63.8	0.2	19.2	0.8	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	1,198	73	99.0%							64.3	0.2	9.9	0.6	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	1,196	72	98.9%	126	9	97.1%				63.1	0.3	10.1	0.6	B

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	3,745	4,157	111.0%	16.2	1.0	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	2,085	2,270	108.9%	17.2	3.7	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	2,130	2,270	106.6%	32.0	6.7	C
4	SR-65 SB Ramps/Sunset Blvd	Signal	3,335	3,578	107.3%	12.6	0.8	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	3,715	4,047	108.9%	11.9	0.6	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	5,430	5,650	104.0%	45.1	4.6	D
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,400	3,639	107.0%	10.3	1.2	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	4,450	5,055	113.6%	16.9	13.1	B
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	3,425	3,454	100.8%	14.1	0.9	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	3,370	3,532	104.8%	27.7	1.7	C
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	3,580	3,740	104.5%	16.2	2.9	B
12	SR-65 SB Ramps/Galleria Blvd	Signal	3,840	3,930	102.3%	23.5	1.7	C
13	Galleria Blvd/Antelope Creek Dr	Signal	2,415	2,388	98.9%	9.7	1.3	A
14	Galleria Blvd/Roseville Pkwy	Signal	5,316	5,676	106.8%	44.5	4.2	D
15	Creekside Ridge Dr/Roseville Pkwy	Signal	3,425	3,640	106.3%	6.7	1.7	A
16	Taylor Rd/East Roseville Pkwy	Signal	5,335	5,652	105.9%	60.8	10.6	E
17	North Sunrise Ave/East Roseville Pkwy	Signal	5,015	5,285	105.4%	37.3	4.9	D
18	Wills Rd/Atlantic St	Signal	2,190	2,391	109.2%	25.3	16.0	C
19	I-80 WB Ramps/Atlantic St	Signal	3,615	3,803	105.2%	43.2	12.9	D
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	5,305	5,562	104.8%	31.9	4.0	C
21	North Sunrise Ave/Eureka Rd	Signal	5,125	5,346	104.3%	38.2	2.9	D
22	Harding Blvd/Wills Rd	Signal	2,140	2,264	105.8%	15.5	4.4	B
23	Harding Blvd/Douglas Blvd	Signal	2,770	2,950	106.5%	27.5	5.5	C
24	I-80 WB Ramps/Douglas Blvd	Signal	3,780	3,996	105.7%	31.6	4.2	C

Network Summary	
Total Demand Volume (veh/hr)	88,936
Total Volume Served (veh/hr)	94,272
Percent Served	106.0%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
25	I-80 EB Ramps/Douglas Blvd	Signal	4,170	4,505	108.0%	14.8	7.3	B
26	North Sunrise Ave/Douglas Blvd	Signal	4,555	4,835	106.1%	36.7	2.0	D
27	Pacific St/Woodside Dr	Signal	2,215	2,430	109.7%	7.4	0.7	A
28	Pacific St/Sunset Blvd	Signal	3,480	3,823	109.9%	27.1	1.9	C
29	Granite Dr/Rocklin Rd	Signal	2,851	2,963	103.9%	26.9	2.5	C
30	I-80 WB Ramps/Rocklin Rd	Signal	3,035	3,154	103.9%	22.5	1.5	C
31	I-80 EB Ramps/Rocklin Rd	Signal	3,105	3,354	108.0%	25.0	2.4	C
32	Aguilar Rd/Rocklin Rd	Signal	2,335	2,532	108.4%	10.0	0.8	A
33	Lincoln Blvd/SR-65 NB Off-Ramp	Signal	3,460	3,841	111.0%	12.3	1.6	B
34	Lincoln Blvd/SR-65 SB On-Ramp	Signal	2,365	2,569	108.6%	22.1	4.3	C
35	SR-65 SB Ramps/Placer Pkwy	Signal	3,850	4,182	108.6%	17.0	1.0	B
36	SR-65 NB Ramps/Whitney Ranch Pkwy	Signal	3,825	4,063	106.2%	13.7	0.3	B
37	Taylor Rd/I-80 Ramps	Signal	2,895	3,062	105.8%	20.6	1.5	C
40	Galleria Blvd/Berry St	Signal	2,090	2,197	105.1%	10.4	1.6	B

Network Summary	
Total Demand Volume (veh/hr)	44,231
Total Volume Served (veh/hr)	47,509
Percent Served	107.4%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	66	6	322	134	NO
	Through						
	Right Turn	1500	67	6	322	134	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	24	9	138	29	NO
	Through						
	Right Turn	1500	24	9	138	29	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	73	5	241	35	NO
	Through						
	Right Turn	1330	75	5	243	35	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	61	1	235	39	NO
	Through						
	Right Turn	1400	25	5	165	30	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	36	14	218	114	MAX
	Through	2260	123	16	499	231	NO
	Right Turn	200	8	5	225	231	MAX

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	43	15	245	35	NO
	Through						
	Right Turn	1100	43	15	245	35	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	25	7	147	23	NO
	Through						
	Right Turn	1130	28	7	150	23	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	43	6	185	38	NO
	Through						
	Right Turn	1420	42	6	185	38	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
AM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	4	1	53	12	NO
WB	Left Turn						
	Through						
	Right Turn	1170	14	1	143	44	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	53	1	268	38	NO
WB	Left Turn						
	Through						
	Right Turn	1780	2	0	50	6	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
AM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	74	8	356	324	MAX
	Through	1700	90	17	580	315	NO
	Right Turn	1700	10	6	287	297	NO
SB	Left Turn	550	46	19	184	32	NO
	Through						
	Right Turn	550	26	4	135	29	NO
EB	Left Turn	1120	39	4	121	27	NO
	Through	1120	97	3	639	123	NO
	Right Turn	810	8	3	246	75	NO
WB	Left Turn						
	Through	1370	106	28	570	73	NO
	Right Turn	280	1	1	48	18	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	66	66	369	67	NO
	Through	1530	66	66	369	67	NO
	Right Turn	730	66	67	369	67	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 1 (Full Taylor)
 AM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	5	10	166	524	NO
SB	Left Turn						
	Through						
	Right Turn	1250	40	49	376	316	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	22	6	166	52	NO
	Through						
	Right Turn	1230	30	8	186	52	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	53	3	248	38	NO
	Through						
	Right Turn	1080	38	6	256	45	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
AM Peak Hour

Intersection 33 Lincoln Blvd/SR-65 NB Off-Ramp Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	48	15	314	35	NO

Intersection 35 SR-65 SB Ramps/Placer Pkwy Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	57	14	312	70	NO
	Through						
	Right Turn	1650	57	14	312	70	NO

Intersection 36 SR-65 NB Ramps/Whitney Ranch Pkwy Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	63	10	319	54	NO
	Through						
	Right Turn	1620	63	10	319	54	NO

Intersection 37 Taylor Rd/I-80 Ramps Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	700	53	9	324	68	NO
	Through						
	Right Turn	700	4	1	67	16	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	4,665	4,632	99.3%	21.3	1.1	C
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	2,210	2,172	98.3%	15.0	1.2	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	2,335	2,316	99.2%	18.7	1.4	B
4	SR-65 SB Ramps/Sunset Blvd	Signal	4,225	4,309	102.0%	10.2	0.5	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	4,295	4,439	103.4%	11.8	1.0	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	7,035	6,889	97.9%	165.4	30.3	F
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	4,225	4,230	100.1%	84.9	31.8	F
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	6,115	6,449	105.5%	8.5	1.2	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	5,305	5,328	100.4%	10.0	0.6	A
10	Stanford Ranch Rd/Five Star Blvd	Signal	5,260	5,177	98.4%	55.8	9.2	E
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	6,035	5,942	98.5%	26.4	14.2	C
12	SR-65 SB Ramps/Galleria Blvd	Signal	6,225	6,027	96.8%	23.9	1.5	C
13	Galleria Blvd/Antelope Creek Dr	Signal	4,215	3,804	90.2%	22.6	2.5	C
14	Galleria Blvd/Roseville Pkwy	Signal	8,125	7,655	94.2%	91.0	8.7	F
15	Creekside Ridge Dr/Roseville Pkwy	Signal	4,796	4,504	93.9%	76.7	22.5	E
16	Taylor Rd/East Roseville Pkwy	Signal	7,130	6,980	97.9%	53.6	5.8	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	6,405	6,495	101.4%	46.0	11.1	D
18	Wills Rd/Atlantic St	Signal	3,350	3,411	101.8%	25.9	3.6	C
19	I-80 WB Ramps/Atlantic St	Signal	4,770	4,760	99.8%	15.3	4.5	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	6,495	6,409	98.7%	103.9	8.5	F
21	North Sunrise Ave/Eureka Rd	Signal	6,760	6,858	101.5%	99.3	17.9	F
22	Harding Blvd/Wills Rd	Signal	3,005	3,079	102.5%	19.4	1.4	B
23	Harding Blvd/Douglas Blvd	Signal	3,875	3,752	96.8%	80.9	19.6	F
24	I-80 WB Ramps/Douglas Blvd	Signal	4,640	4,526	97.5%	25.4	6.8	C

Network Summary	
Total Demand Volume (veh/hr)	121,496
Total Volume Served (veh/hr)	120,143
Percent Served	98.9%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
25	I-80 EB Ramps/Douglas Blvd	Signal	5,430	5,269	97.0%	29.8	19.7	C
26	North Sunrise Ave/Douglas Blvd	Signal	6,285	6,071	96.6%	157.7	12.1	F
27	Pacific St/Woodside Dr	Signal	3,350	3,336	99.6%	8.3	1.8	A
28	Pacific St/Sunset Blvd	Signal	5,310	5,331	100.4%	32.1	3.2	C
29	Granite Dr/Rocklin Rd	Signal	3,980	4,177	105.0%	82.8	22.6	F
30	I-80 WB Ramps/Rocklin Rd	Signal	3,800	3,958	104.1%	26.0	7.0	C
31	I-80 EB Ramps/Rocklin Rd	Signal	3,650	3,716	101.8%	22.8	3.7	C
32	Aguilar Rd/Rocklin Rd	Signal	2,940	3,001	102.1%	21.3	3.2	C
33	Lincoln Blvd/SR-65 NB Off-Ramp	Signal	4,115	4,087	99.3%	10.3	0.9	B
34	Lincoln Blvd/SR-65 SB On-Ramp	Signal	2,580	2,586	100.2%	30.4	1.3	C
35	SR-65 SB Ramps/Placer Pkwy	Signal	4,815	4,901	101.8%	23.6	3.2	C
36	SR-65 NB Ramps/Whitney Ranch Pkwy	Signal	4,465	4,498	100.7%	21.9	8.1	C
37	Taylor Rd/I-80 Ramps	Signal	3,805	3,803	99.9%	25.0	1.9	C
40	Galleria Blvd/Berry St	Signal	2,980	2,995	100.5%	11.0	1.1	B

Network Summary	
Total Demand Volume (veh/hr)	57,505
Total Volume Served (veh/hr)	57,729
Percent Served	100.4%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	68	7	316	43	NO
	Through						
	Right Turn	1500	69	7	317	43	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	24	10	134	54	NO
	Through						
	Right Turn	1500	24	10	134	54	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	59	8	203	19	NO
	Through						
	Right Turn	1330	61	8	205	19	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	62	3	241	39	NO
	Through						
	Right Turn	1400	15	3	118	35	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 1 (Full Taylor)
 PM Peak Hour

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	108	46	663	418	MAX
	Through	2260	145	81	886	329	NO
	Right Turn	200	29	33	612	329	MAX

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	44	2	206	29	NO
	Through						
	Right Turn	1100	43	2	205	29	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	26	3	123	13	NO
	Through						
	Right Turn	1130	28	3	125	13	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	46	2	161	35	NO
	Through						
	Right Turn	1420	46	2	160	35	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
PM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	12	1	97	29	NO
WB	Left Turn						
	Through						
	Right Turn	1170	81	9	401	194	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	74	2	325	48	NO
WB	Left Turn						
	Through						
	Right Turn	1780	11	4	101	17	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 1 (Full Taylor)
 PM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	143	48	725	360	MAX
	Through	1700	31	14	168	31	NO
	Right Turn	1700	23	22	422	356	NO
SB	Left Turn	550	69	11	275	97	NO
	Through						
	Right Turn	550	62	14	333	108	NO
EB	Left Turn	1120	56	5	206	24	NO
	Through	1120	140	22	765	50	NO
	Right Turn	810	20	12	350	50	NO
WB	Left Turn						
	Through	1370	566	462	1526	19	MAX
	Right Turn	280	9	10	266	252	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	82	80	411	92	NO
	Through	1530	82	80	411	92	NO
	Right Turn	730	83	80	412	92	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
PM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	123	235	993	855	NO
SB	Left Turn						
	Through						
	Right Turn	1250	90	76	361	527	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	64	38	355	106	NO
	Through						
	Right Turn	1230	76	41	375	105	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	67	13	268	31	NO
	Through						
	Right Turn	1080	44	5	271	37	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 1 (Full Taylor)
PM Peak Hour

Intersection 33 Lincoln Blvd/SR-65 NB Off-Ramp Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	89	6	393	87	NO

Intersection 35 SR-65 SB Ramps/Placer Pkwy Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	103	12	399	78	NO
	Through						
	Right Turn	1650	103	12	399	78	NO

Intersection 36 SR-65 NB Ramps/Whitney Ranch Pkwy Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	136	46	517	144	NO
	Through						
	Right Turn	1620	136	46	517	144	NO

Intersection 37 Taylor Rd/I-80 Ramps Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	700	61	7	294	72	NO
	Through						
	Right Turn	700	28	10	216	69	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

I-80/SR 65 Interchange Improvements

**Vissim Model Results – Design Year Alternative 2
(Collector-Distributor System Ramps)**

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	206,771	64
Travel Distance [mi]	All Vehicles	921,614	1,210
Travel Time [h]	All Vehicles	21,194	344.2
Average Speed [mph]	All Vehicles	43.5	0.7
Total Delay [h]	All Vehicles	5,312	336.9
Average Delay per Vehicle [s]	All Vehicles	90	5.7
VHD/VMT [min/mile]	All Vehicles	0.35	0.02
Number of Vehicles Served	HOV	34,570	44
Travel Distance [mi]	HOV	170,166	1,080
Travel Time [h]	HOV	3,580	38
Average Speed [mph]	HOV	47.5	0.4
Total Delay [h]	HOV	687	31
Average Delay per Vehicle [s]	HOV	70	3
VHD/VMT [min/mile]	HOV	0.24	0.01
Number of Vehicles Served	Truck	7,606	9
Travel Distance [mi]	Truck	42,020	280
Travel Time [h]	Truck	959	24
Average Speed [mph]	Truck	43.8	1
Total Delay [h]	Truck	242	20
Average Delay per Vehicle [s]	Truck	112	9
VHD/VMT [min/mile]	Truck	0.35	0.03

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	34,570	7,610	206,770
Demand Volume	35,670	8,240	208,760
Percent Demand Served	96.9%	92.4%	99.0%
Vehicle Miles of Travel	170,170	42,020	921,610
Person Miles of Travel	357,350	44,120	1,110,890
Vehicle Hours of Travel	3,580	960	21,190
Vehicle Hours of Delay	690	240	5,310
VHD % of VHT	19.3%	25.0%	25.1%
Average Delay per Vehicle (min)	1.20	1.89	1.54
Person Hours of Delay	1,450	250	6,080
Average Travel Speed	47.5	43.8	43.5

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	300,020	254
Travel Distance [mi]	All Vehicles	1,109,609	955
Travel Time [h]	All Vehicles	30,791	155.6
Average Speed [mph]	All Vehicles	36.0	0.2
Total Delay [h]	All Vehicles	11,210	148.8
Average Delay per Vehicle [s]	All Vehicles	132	1.8
VHD/VMT [min/mile]	All Vehicles	0.61	0.01
Number of Vehicles Served	HOV	52,929	113
Travel Distance [mi]	HOV	216,334	556
Travel Time [h]	HOV	5,398	27
Average Speed [mph]	HOV	40.1	0.2
Total Delay [h]	HOV	1,626	22
Average Delay per Vehicle [s]	HOV	109	1
VHD/VMT [min/mile]	HOV	0.45	0.01
Number of Vehicles Served	Truck	8,063	38
Travel Distance [mi]	Truck	38,623	249
Travel Time [h]	Truck	1,022	15
Average Speed [mph]	Truck	37.8	0
Total Delay [h]	Truck	354	11
Average Delay per Vehicle [s]	Truck	155	5
VHD/VMT [min/mile]	Truck	0.55	0.01

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	52,930	8,060	300,020
Demand Volume	54,090	8,670	300,470
Percent Demand Served	97.9%	93.0%	99.9%
Vehicle Miles of Travel	216,330	38,620	1,109,610
Person Miles of Travel	454,300	40,550	1,349,510
Vehicle Hours of Travel	5,400	1,020	30,790
Vehicle Hours of Delay	1,630	350	11,210
VHD % of VHT	30.2%	34.3%	36.4%
Average Delay per Vehicle (min)	1.85	2.61	2.24
Person Hours of Delay	3,420	370	13,020
Average Travel Speed	40.1	37.8	36.0

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,487	37	110.3%	1,250	28	111.6%				57.7	6.2	36.4	5.1	E
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,733	83	110.4%							58.8	1.9	36.7	1.4	E
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,722	107	110.3%				1,333	72	104.1%	60.4	1.4	29.3	1.0	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,388	107	111.4%				307	27	90.4%	62.4	0.4	26.0	0.5	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	7,081	116	112.6%							62.8	0.2	27.9	0.3	D
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	7,083	120	112.6%	1,146	22	96.3%	1,685	66	96.8%	62.4	0.1	25.9	0.4	C
7 I-80 EB CD - Eureka Rd to Taylor Rd/SR-65	Weave	629	45	104.8%	1,205	67	104.8%	894	50	105.1%	61.7	1.1	14.9	0.6	B
8 I-80 EB - Eureka Rd to SR-65	Basic	6,546	139	114.0%							61.7	0.7	30.2	0.8	D
9 I-80 EB - HOV Connector Off-ramp	Diverge	6,547	140	114.1%				766	40	139.2%	59.3	1.3	30.2	0.9	D
10 I-80 EB - SR-65 Off-ramp	Diverge	5,785	132	111.5%				3,233	98	108.1%	63.2	0.4	24.9	0.5	C
11 I-80 EB - SR-65 Off-ramp to Eureka Rd On-ramp	Basic	2,557	74	116.2%							64.2	0.2	17.2	0.5	B
17 I-80 EB - Eureka Rd On-ramp	Merge	2,559	76	116.3%	589	37	105.2%				62.9	0.2	16.9	0.5	B
18 I-80 EB - Eureka Rd On-ramp to SR-65 On-ramp	Basic	3,144	91	113.9%							63.9	0.2	18.5	0.5	C
19 I-80 EB - SR-65 On-ramp	Merge	3,145	93	113.9%	1,874	78	105.9%				60.8	0.5	30.2	0.8	D
20 I-80 EB - SR-65 to Rocklin Rd	Basic	5,019	114	110.8%							62.9	0.3	25.3	0.6	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	5,020	142	110.8%				1,570	78	107.5%	63.5	0.2	23.8	0.6	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,460	130	112.7%							63.5	0.4	22.8	0.9	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,464	125	112.8%	270	28	112.3%				58.9	0.9	23.2	1.0	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,738	133	112.9%							63.2	0.2	24.0	0.9	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,741	134	113.0%				741	59	109.0%	62.0	0.8	24.9	0.8	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	3,014	119	114.6%							63.4	0.5	20.4	0.8	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	3,014	121	114.6%	139	5	92.7%				62.7	0.3	18.1	0.7	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	3,155	125	113.5%	501	7	104.5%				62.0	0.3	20.4	0.8	C
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	5,379	26	105.9%				1,100	39	105.7%	53.9	1.4	31.9	0.7	D
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	4,277	62	105.9%							61.6	0.3	25.9	0.4	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	4,277	69	105.9%	50	3	83.2%				63.0	0.2	22.9	0.6	C
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	4,321	72	105.4%	326	14	105.0%				61.1	0.8	24.9	0.7	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,640	82	105.2%							62.2	0.2	27.8	0.5	D
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,642	86	105.3%				274	31	101.6%	60.7	1.0	28.6	0.8	D
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	4,360	98	105.3%							62.9	0.3	26.1	0.8	D
45 I-80 WB - Rocklin Rd On-ramp	Merge	4,360	99	105.3%	980	46	101.0%				60.2	0.8	28.0	1.1	C
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,328	111	104.3%							60.7	1.4	31.2	1.2	D
47 I-80 WB - HOV Lane Start to SR-65	Basic	5,320	114	104.1%							61.6	0.6	24.5	0.6	C
48 I-80 WB - SR-65 Off-ramp	Diverge	5,319	108	104.1%				1,649	63	103.7%	63.6	0.2	22.4	0.5	C
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,658	96	103.9%							63.7	0.1	20.1	0.6	C
60 I-80 WB - SR-65 to Atlantic St	Weave	3,653	98	103.8%	5,418	273	104.2%	440	33	100.0%	26.1	7.0	82.9	21.0	F
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	8,357	265	100.9%				1,181	108	98.4%	22.5	0.8	107.3	4.0	F
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	7,133	191	100.7%							24.2	0.8	104.3	2.4	F
64 I-80 WB - Atlantic St On-ramp	Merge	7,118	186	100.5%	913	56	107.4%				23.8	0.9	73.1	2.4	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	8,016	167	101.1%				1,063	83	97.5%	38.2	2.2	60.3	3.6	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,948	133	101.6%							29.4	0.8	88.3	3.1	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,951	121	101.6%	949	32	106.7%				24.0	0.6	112.8	2.3	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,902	117	102.2%	463	28	110.2%				28.4	0.5	76.2	1.4	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,365	109	102.6%							58.2	0.6	34.5	0.8	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	8,369	127	102.7%				1,027	62	96.0%	62.0	0.2	28.6	0.6	D
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	7,345	116	103.7%							62.2	0.1	33.9	0.5	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	7,348	118	103.8%	190	6	75.9%				62.9	0.1	27.2	0.6	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,537	127	102.8%	763	18	94.2%				62.8	0.2	25.9	0.6	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	8,309	125	102.1%							62.2	0.1	31.3	0.4	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	8,312	124	102.1%				452	39	86.8%	61.5	0.9	31.9	0.8	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	7,870	131	103.3%							62.3	0.4	30.4	0.4	D
77 I-80 WB - Antelope Rd WB On-ramp	Merge	7,872	131	103.3%	534	13	100.7%				61.4	1.2	29.5	0.8	D
78 I-80 WB - Antelope Rd to Truck Scales	Weave	8,413	134	103.2%	447	14	89.5%	90	16	81.4%	61.1	0.7	31.0	0.4	D
79 I-80 WB - Truck Scales Off to On-ramp	Basic	8,794	135	103.0%							54.2	8.1	40.3	7.0	E
80 I-80 WB - Truck Scales On-ramp	Merge	8,819	143	103.3%	90	16	81.8%				35.0	6.9	69.7	16.3	F
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	8,968	174	103.7%							40.7	3.5	56.9	5.8	F
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	8,979	170	103.8%				1,066	70	103.5%	55.2	6.4	35.0	5.8	E
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	7,943	152	104.2%							49.4	16.5	48.6	23.1	F
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	7,963	156	104.5%	810	18	102.6%				46.6	17.6	55.2	32.3	F
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	8,799	177	104.6%	779	21	95.0%				41.1	11.9	61.2	16.1	F

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,425	11	116.8%				72	19	103.0%	63.8	0.2	19.0	0.2	B
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	1,353	19	117.7%							63.6	0.2	18.5	0.2	C
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	1,354	21	117.8%	897	4	91.5%				55.8	2.9	20.3	1.1	C
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	2,251	33	105.7%	1,200	43	109.1%				12.6	3.6	96.8	28.1	F
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	3,454	120	106.9%							12.6	2.2	116.5	14.9	F
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	3,454	128	106.9%							15.7	2.6	109.4	11.2	F
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	3,455	133	107.0%	1,320	50	106.5%	845	59	108.4%	20.2	1.9	86.8	4.9	F
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	3,890	91	105.4%							20.0	0.8	96.1	2.6	F
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	3,876	76	105.0%	644	40	115.0%				29.4	0.4	73.7	0.7	F
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	4,501	70	105.9%							59.6	1.5	38.8	1.2	E
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	4,499	68	105.9%				767	37	109.6%	61.4	0.5	34.8	0.5	D
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	3,727	75	105.0%							60.7	3.0	32.6	1.7	D
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	3,723	78	104.9%	434	32	106.0%				53.0	12.3	41.9	14.6	E
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	4,147	84	93.4%	526	36	109.5%	741	54	103.0%	60.2	1.1	33.3	0.5	D
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,921	102	93.4%							51.3	14.0	40.2	15.6	E
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,920	102	93.3%	425	25	108.9%				56.3	8.7	37.4	9.5	E
104 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	4,339	105	94.5%	569	31	105.4%	866	53	106.9%	60.4	0.5	30.4	0.8	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	4,022	105	93.1%							62.3	0.4	31.4	0.8	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	4,021	109	93.1%	532	37	106.4%				53.4	3.1	37.1	3.7	E
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	4,546	106	94.3%	1,227	64	99.7%	742	51	104.5%	56.6	2.0	34.6	1.9	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	5,041	98	94.4%							61.8	0.6	35.6	0.7	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	5,041	97	94.4%	638	41	102.8%				61.0	0.7	28.1	0.6	D
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	5,676	97	95.2%	815	41	103.1%				53.0	7.8	36.1	7.2	E
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	6,483	115	96.0%							59.0	1.0	32.9	0.7	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	6,481	115	96.0%				1,352	72	102.4%	61.5	0.5	28.8	0.7	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	5,122	115	94.3%							62.6	0.2	27.0	0.5	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	5,120	122	94.3%	1,415	64	106.4%	4,680	163	103.8%	58.9	1.5	25.9	0.8	C
120 SR-65 SB to EB I-80 Connector	Basic	1,868	79	105.5%							51.8	0.6	27.3	1.1	D
121 SR-65 SB to WB I-80 Connector	Basic	3,688	206	101.0%							39.7	18.3	48.6	40.8	F
123 SR-65 NB from WB I-80 Connector	Basic	1,651	60	103.8%							53.0	0.2	18.0	0.8	C
124 SR-65 NB from EB I-80 Connector	Basic	3,233	97	108.1%							62.6	0.3	27.6	0.8	D
125 SR-65 NB - Eureka Rd On-ramp	Merge	3,233	96	108.1%	944	64	104.8%				48.9	0.1	30.7	0.8	D
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,172	106	107.2%	2,420	77	113.1%	959	66	97.8%	60.0	0.2	26.1	0.7	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	5,629	124	111.5%							42.2	14.0	47.2	15.4	F
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	5,633	123	111.6%	520	48	98.1%				37.6	8.5	57.5	10.1	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	6,151	141	110.2%							48.4	5.0	45.7	6.5	F
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	6,151	142	110.2%				917	56	95.6%	53.2	3.8	39.5	3.7	E
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	5,224	131	113.1%							59.2	2.3	41.2	2.1	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	5,227	128	113.1%	324	19	98.1%	1,920	90	106.1%	61.4	0.8	31.3	0.7	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	3,650	112	116.2%							61.9	1.9	27.8	1.6	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	3,649	112	116.2%	572	41	102.1%				58.4	3.5	30.2	2.8	D
136 SR-65 NB - Blue Oaks Blvd to HOV Lane End	Basic	4,219	109	114.0%							62.2	0.5	30.7	1.1	D
162 SR-65 NB - HOV Lane End to Sunset Blvd	Basic	4,222	112	114.1%							62.1	0.3	27.4	0.7	D
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	4,224	110	114.2%				1,370	77	104.5%	62.7	0.1	26.2	0.5	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	2,860	91	119.7%							62.4	0.1	25.8	0.7	C
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	2,861	88	119.7%	129	14	99.2%				62.7	0.1	25.7	0.7	C
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	2,985	90	118.4%	393	30	112.3%	812	51	100.2%	62.2	0.2	23.9	0.7	C
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	2,570	88	124.8%							62.4	0.1	24.1	0.8	C
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	2,570	90	124.8%	508	34	105.9%				60.8	0.4	25.9	0.8	C
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,075	90	121.1%	472	33	115.2%				59.5	1.6	30.0	1.1	D
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	3,552	101	120.4%							59.7	0.8	33.5	0.9	D
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	3,556	103	120.5%				666	57	99.5%	61.3	0.3	32.6	0.7	D
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,899	82	127.1%							62.3	0.1	27.8	0.8	D
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,900	86	127.2%	768	54	105.2%	1,219	62	115.0%	62.5	0.2	23.3	0.7	C
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	2,449	87	125.6%							63.1	0.2	21.1	0.4	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	2,450	88	125.6%				1,197	72	105.9%	63.6	0.1	17.4	0.3	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	1,258	60	153.5%							63.1	0.1	13.2	0.4	B
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	1,262	64	153.8%	70	5	99.4%				62.3	0.3	13.2	0.4	B

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,974	44	102.1%	972	21	96.2%				61.2	1.5	28.8	1.1	D
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,944	61	101.4%							61.4	0.5	32.9	0.5	D
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,943	84	101.4%				1,146	70	99.7%	59.9	3.4	30.4	2.0	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,796	116	101.6%				393	39	100.9%	61.5	1.4	26.8	0.8	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	7,403	107	101.7%							62.4	0.7	27.1	0.4	D
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	7,401	113	101.7%	1,723	54	92.6%	1,703	86	101.4%	61.8	0.3	27.0	0.3	C
7 I-80 EB CD - Eureka Rd to Taylor Rd/SR-65	Weave	1,092	65	105.0%	1,411	57	92.8%	1,311	78	101.6%	53.9	16.2	27.6	23.7	C
8 I-80 EB - Eureka Rd to SR-65	Basic	7,432	114	99.6%							60.1	1.3	32.1	1.0	D
9 I-80 EB - HOV Connector Off-ramp	Diverge	7,428	118	99.6%				1,140	53	96.6%	53.5	2.6	34.9	2.0	D
10 I-80 EB - SR-65 Off-ramp	Diverge	6,278	104	100.0%				3,512	99	101.2%	61.5	0.7	25.0	0.5	C
11 I-80 EB - SR-65 Off-ramp to Eureka Rd On-ramp	Basic	2,762	87	98.3%							64.0	0.2	15.9	0.4	B
17 I-80 EB - Eureka Rd On-ramp	Merge	2,759	87	98.2%	716	53	100.9%				63.1	0.4	15.7	0.5	B
18 I-80 EB - Eureka Rd On-ramp to SR-65 On-ramp	Basic	3,472	100	98.6%							63.8	0.2	17.2	0.4	B
19 I-80 EB - SR-65 On-ramp	Merge	3,471	102	98.6%	2,540	69	98.1%				59.0	0.8	31.9	0.8	D
20 I-80 EB - SR-65 to Rocklin Rd	Basic	6,011	121	98.4%							62.4	0.4	26.8	0.4	D
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	5,985	136	97.9%				1,443	89	98.8%	63.1	0.2	25.8	0.4	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	4,535	109	97.5%							63.0	0.3	26.3	0.4	D
24 I-80 EB - Rocklin Rd On-ramp	Merge	4,530	112	97.4%	265	16	101.8%				59.0	1.0	26.8	0.7	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	4,789	120	97.5%							62.9	0.2	27.3	0.6	D
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	4,788	123	97.5%				706	50	92.9%	59.6	2.4	29.4	1.6	D
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	4,078	112	98.3%							62.8	0.6	23.5	0.6	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	4,075	112	98.2%	336	12	98.8%				60.3	0.9	22.3	0.8	C
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	4,407	111	98.1%	884	21	101.7%				57.9	1.8	28.1	1.5	D
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,075	25	105.8%				761	40	104.2%	59.5	1.0	22.1	0.5	C
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,312	60	106.1%							63.1	0.4	20.4	0.4	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,312	58	106.2%	397	14	104.3%				61.9	0.5	19.4	0.4	B
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,707	67	105.9%	416	11	104.0%				61.0	0.6	22.0	0.5	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,121	61	105.7%							63.0	0.2	23.7	0.4	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,119	59	105.6%				321	41	103.4%	62.4	0.3	24.7	0.4	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,797	73	105.8%							63.4	0.2	22.2	0.5	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,796	77	105.7%	1,630	82	105.2%				57.5	2.0	29.1	1.4	D
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,422	107	105.5%							52.6	9.4	36.7	8.2	E
47 I-80 WB - HOV Lane Start to SR-65	Basic	5,412	110	105.3%							60.7	0.9	23.6	0.5	C
48 I-80 WB - SR-65 Off-ramp	Diverge	5,411	112	105.3%				2,150	74	103.8%	63.8	0.1	21.5	0.4	C
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,260	84	106.2%							63.8	0.1	18.4	0.7	C
60 I-80 WB - SR-65 to Atlantic St	Weave	3,262	83	106.3%	4,821	134	98.6%	602	36	103.8%	56.5	4.2	24.5	7.1	C
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	7,541	157	102.2%				1,153	63	101.1%	40.9	17.1	51.1	30.0	F
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	6,336	171	101.5%							26.0	8.8	87.2	27.9	F
64 I-80 WB - Atlantic St On-ramp	Merge	6,293	195	100.8%	1,169	69	95.1%				20.7	1.4	79.1	3.2	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,374	197	98.7%				1,115	71	97.8%	31.8	1.6	71.1	3.8	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,209	144	98.1%							24.8	0.6	96.6	2.0	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,183	139	97.7%	1,185	49	87.1%				21.6	0.3	111.1	2.0	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,312	122	95.1%	660	24	91.7%				26.8	0.5	74.9	0.7	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	7,972	173	94.8%							59.4	0.6	32.4	0.9	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	7,966	117	94.7%				1,189	73	95.1%	62.4	0.2	27.7	0.6	C
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,781	106	94.7%							62.4	0.2	32.4	0.7	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,785	107	94.8%	195	9	97.3%				62.9	0.1	25.9	0.4	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	6,980	110	94.8%	597	15	106.7%				62.4	0.5	22.1	0.5	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	7,579	105	95.7%							62.4	0.2	27.9	0.4	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	7,574	99	95.6%				1,108	54	95.5%	62.0	0.7	29.1	0.5	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	6,457	97	95.5%							62.7	0.5	24.8	0.5	C
77 I-80 WB - Antelope Rd WB On-ramp	Merge	6,456	96	95.5%	346	10	98.8%				61.3	0.9	21.7	0.6	C
78 I-80 WB - Antelope Rd to Truck Scales	Weave	6,801	100	95.7%	528	14	99.6%	74	18	82.1%	62.4	0.3	24.1	0.4	C
79 I-80 WB - Truck Scales Off to On-ramp	Basic	7,255	100	96.1%							62.8	0.1	26.8	0.4	D
80 I-80 WB - Truck Scales On-ramp	Merge	7,253	113	96.1%	72	18	80.0%				62.4	0.2	26.5	0.7	C
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	7,335	102	96.0%							61.3	0.5	28.6	0.5	D
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	7,333	98	96.0%				1,165	71	93.2%	62.1	0.3	26.4	0.5	C
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	6,167	103	96.5%							63.1	0.2	23.5	0.4	C
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	6,168	96	96.5%	897	5	99.7%				56.4	0.6	26.1	0.7	C
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	7,063	95	96.9%	598	20	103.1%				61.4	0.7	28.3	0.7	D

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,128	12	104.4%				121	24	100.9%	64.4	0.1	10.1	0.2	B
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	1,008	34	105.0%							64.4	0.2	8.8	0.3	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	1,009	32	105.1%	691	20	100.1%				61.2	0.2	10.5	0.2	B
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,700	37	103.0%	681	17	100.2%				60.4	0.2	13.3	0.3	B
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,385	47	102.4%							62.9	0.5	22.5	0.5	C
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	2,385	45	102.3%							63.0	0.4	21.6	0.2	C
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	2,384	48	102.3%	1,463	47	100.9%	844	54	101.7%	61.0	0.6	22.5	0.3	C
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	3,004	91	101.8%							63.0	0.3	24.7	0.5	C
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	3,003	87	101.8%	592	42	97.1%				60.2	0.9	27.8	0.6	C
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	3,602	87	101.2%							62.1	0.3	29.6	0.4	D
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	3,602	87	101.2%				993	59	99.3%	62.6	0.1	26.6	0.5	C
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,607	86	101.8%							63.2	0.1	21.5	0.4	C
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,608	84	101.9%	449	31	104.4%				61.2	0.5	24.0	0.6	C
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	3,059	96	102.3%	740	39	101.3%	600	49	99.9%	61.7	0.4	25.5	0.7	C
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,201	96	102.6%							62.6	0.2	26.5	0.8	D
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,201	94	102.6%	549	31	103.5%				59.3	2.8	29.2	1.6	D
104 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	3,747	93	102.7%	982	70	99.2%	842	47	97.9%	61.3	0.7	28.9	1.1	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,883	121	102.7%							62.2	0.2	31.7	1.0	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,884	121	102.8%	359	35	94.3%				58.9	1.9	32.6	1.6	D
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	4,244	126	102.0%	1,369	41	99.2%	657	48	99.5%	59.6	0.4	32.6	0.8	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,956	132	101.6%							61.9	0.6	36.1	0.6	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,958	131	101.6%	480	37	100.1%				61.0	0.3	28.3	0.6	D
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	5,438	133	101.5%	1,098	52	98.9%				59.5	1.5	31.8	1.0	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	6,534	152	101.0%							58.9	0.6	33.9	0.6	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	6,534	153	101.0%				1,574	71	100.9%	61.2	0.3	29.6	0.8	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,963	125	101.1%							62.4	0.2	27.9	0.6	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,962	124	101.0%	1,749	83	95.1%	4,167	126	100.2%	60.8	0.9	25.1	0.6	C
120 SR-65 SB to EB I-80 Connector	Basic	2,538	73	98.0%							49.3	0.9	35.3	1.3	E
121 SR-65 SB to WB I-80 Connector	Basic	3,447	119	97.1%							55.0	0.3	23.5	0.8	C
123 SR-65 NB from WB I-80 Connector	Basic	2,149	76	103.8%							46.9	3.3	25.0	2.0	C
124 SR-65 NB from EB I-80 Connector	Basic	3,508	98	101.1%							50.8	18.6	41.5	29.6	E
125 SR-65 NB - Eureka Rd On-ramp	Merge	3,499	97	100.8%	1,178	69	92.0%				26.7	14.8	77.9	36.4	F
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,615	145	97.2%	3,290	83	101.2%	1,586	104	96.1%	27.8	6.2	71.3	11.2	F
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	6,230	110	98.1%							24.8	0.5	111.8	1.5	F
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	6,227	106	98.1%	1,053	56	94.0%				29.6	0.6	74.8	1.4	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	7,277	87	97.4%							51.8	1.8	39.4	1.7	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	7,278	87	97.4%				1,557	71	99.8%	57.3	1.4	34.1	1.6	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	5,718	82	96.8%							61.5	0.6	36.9	0.7	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	5,722	84	96.8%	619	40	101.5%	2,186	88	96.7%	61.3	0.3	31.8	0.5	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	4,156	103	97.5%							62.0	0.3	30.4	0.7	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	4,158	99	97.6%	619	63	93.8%				58.6	2.2	32.5	1.7	D
136 SR-65 NB - Blue Oaks Blvd to HOV Lane End	Basic	4,778	135	97.1%							62.2	0.5	32.9	1.1	D
162 SR-65 NB - HOV Lane End to Sunset Blvd	Basic	4,781	135	97.2%							61.7	0.4	29.5	0.7	D
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	4,780	142	97.2%				1,178	66	99.0%	62.8	0.2	27.4	0.5	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	3,602	117	96.6%							62.6	0.2	29.2	1.2	D
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	3,600	115	96.5%	361	19	106.3%				59.6	1.4	31.5	1.6	D
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	3,957	125	97.2%	759	44	108.4%	1,189	57	99.9%	61.5	0.4	28.9	1.0	D
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	3,530	111	98.6%							62.8	0.2	28.7	1.0	D
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	3,529	108	98.6%	275	28	98.1%				61.1	0.9	30.1	1.2	D
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,804	105	98.5%	503	43	102.7%				57.6	6.0	35.1	5.2	E
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	4,310	121	99.1%							59.0	1.2	37.5	1.6	E
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	4,310	119	99.1%				709	51	101.3%	58.7	5.4	37.3	4.2	E
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	3,598	98	98.6%							62.4	0.3	30.7	0.7	D
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	3,594	96	98.5%	948	50	96.7%	1,483	80	97.6%	62.3	0.2	26.9	0.6	C
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	3,058	111	98.3%							63.2	0.2	24.6	0.8	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	3,058	109	98.3%				1,862	87	98.0%	63.9	0.2	19.4	0.7	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	1,196	79	98.8%							64.4	0.2	10.0	0.6	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	1,195	78	98.7%	125	9	95.8%				63.1	0.3	10.2	0.6	B

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	3,740	4,128	110.4%	16.4	1.3	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	2,055	2,234	108.7%	15.7	1.6	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	2,080	2,208	106.2%	24.3	7.4	C
4	SR-65 SB Ramps/Sunset Blvd	Signal	3,335	3,570	107.0%	16.5	5.0	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	3,755	4,055	108.0%	11.0	0.7	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	5,420	5,653	104.3%	49.0	5.1	D
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,400	3,564	104.8%	10.9	0.9	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	4,435	4,528	102.1%	7.0	0.4	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	3,480	3,490	100.3%	15.3	0.8	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	3,310	3,433	103.7%	25.9	2.0	C
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	3,570	3,698	103.6%	25.0	4.3	C
12	SR-65 SB Ramps/Galleria Blvd	Signal	3,920	4,050	103.3%	34.4	2.7	C
13	Galleria Blvd/Antelope Creek Dr	Signal	2,556	2,552	99.8%	8.2	1.6	A
14	Galleria Blvd/Roseville Pkwy	Signal	5,431	5,769	106.2%	44.6	1.8	D
15	Creekside Ridge Dr/Roseville Pkwy	Signal	3,520	3,686	104.7%	6.8	2.4	A
16	Taylor Rd/East Roseville Pkwy	Signal	4,960	5,292	106.7%	62.0	11.3	E
17	North Sunrise Ave/East Roseville Pkwy	Signal	4,850	5,187	106.9%	31.2	3.0	C
18	Wills Rd/Atlantic St	Signal	2,250	2,417	107.4%	15.9	3.0	B
19	I-80 WB Ramps/Atlantic St	Signal	3,755	3,910	104.1%	25.3	3.4	C
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	5,445	5,524	101.4%	29.3	5.5	C
21	North Sunrise Ave/Eureka Rd	Signal	5,130	5,262	102.6%	37.0	3.1	D
22	Harding Blvd/Wills Rd	Signal	2,150	2,273	105.7%	15.2	1.9	B
23	Harding Blvd/Douglas Blvd	Signal	2,705	2,872	106.2%	29.3	7.8	C
24	I-80 WB Ramps/Douglas Blvd	Signal	3,850	4,012	104.2%	36.5	4.8	D

Network Summary	
Total Demand Volume (veh/hr)	89,102
Total Volume Served (veh/hr)	93,367
Percent Served	104.8%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	51	5	243	43	NO
	Through						
	Right Turn	1500	52	5	244	43	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	16	4	104	20	NO
	Through						
	Right Turn	1500	16	4	104	20	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	64	3	220	19	NO
	Through						
	Right Turn	1330	66	3	222	19	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	52	2	217	22	NO
	Through						
	Right Turn	1400	22	5	146	48	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	36	15	234	112	MAX
	Through	2260	113	14	458	100	NO
	Right Turn	200	4	3	178	100	NO

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	39	13	207	43	NO
	Through						
	Right Turn	1100	38	13	206	43	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	25	6	128	22	NO
	Through						
	Right Turn	1130	28	5	130	22	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	42	7	163	18	NO
	Through						
	Right Turn	1420	41	7	163	18	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
AM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	8	3	73	17	NO
WB	Left Turn						
	Through						
	Right Turn	1170	34	2	194	41	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	64	5	292	43	NO
WB	Left Turn						
	Through						
	Right Turn	1780	2	1	54	13	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	7	16	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 2 (CD Roadway)
 AM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	105	49	532	523	MAX
	Through	1700	98	21	645	505	NO
	Right Turn	1700	41	46	530	687	NO
SB	Left Turn	550	38	10	149	31	NO
	Through						
	Right Turn	550	26	5	142	37	NO
EB	Left Turn	1120	36	3	114	14	NO
	Through	1120	100	7	661	92	NO
	Right Turn	810	9	3	248	93	NO
WB	Left Turn						
	Through	1370	84	14	578	178	NO
	Right Turn	280	0	0	45	24	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	70	70	369	87	NO
	Through	1530	70	70	369	87	NO
	Right Turn	730	70	70	369	87	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 2 (CD Roadway)
 AM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1,400	0	0	5	17	NO
SB	Left Turn						
	Through						
	Right Turn	1,250	68	107	641	343	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	21	2	148	51	NO
	Through						
	Right Turn	1,230	28	4	168	51	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,080	53	4	253	35	NO
	Through						
	Right Turn	1,080	38	4	258	42	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 33 **Lincoln Blvd/SR-65 NB Off-Ramp** **Signalized**

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1,940	2	2	47	17	NO
	Through						
	Right Turn	1,940	45	14	257	59	NO

Intersection 35 **SR-65 SB Ramps/Placer Pkwy** **Signalized**

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1,650	57	18	333	64	NO
	Through						
	Right Turn	1,650	57	18	333	64	NO

Intersection 36 **SR-65 NB Ramps/Whitney Ranch Pkwy** **Signalized**

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,620	63	11	326	64	NO
	Through						
	Right Turn	1,620	63	11	326	64	NO

Intersection 38 **Taylor Rd/I-80 EB Off-ramp** **Unsignalized**

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn						
	Through						
	Right Turn	1,000	0	0	18	28	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	4,670	4,638	99.3%	24.5	1.3	C
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	2,215	2,189	98.8%	15.6	1.1	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	2,315	2,286	98.7%	18.3	1.6	B
4	SR-65 SB Ramps/Sunset Blvd	Signal	4,260	4,325	101.5%	20.0	34.1	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	4,350	4,487	103.1%	26.8	16.2	C
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks	Signal	7,035	6,903	98.1%	163.7	26.1	F
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	4,245	4,217	99.3%	69.2	29.5	E
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	6,115	6,115	100.0%	9.0	1.4	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	5,355	5,361	100.1%	12.0	0.9	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	5,140	4,997	97.2%	55.1	8.8	E
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	6,030	5,904	97.9%	22.2	2.2	C
12	SR-65 SB Ramps/Galleria Blvd	Signal	6,345	6,170	97.2%	22.9	1.9	C
13	Galleria Blvd/Antelope Creek Dr	Signal	4,345	3,925	90.3%	24.2	1.3	C
14	Galleria Blvd/Roseville Pkwy	Signal	8,125	7,401	91.1%	130.6	31.6	F
15	Creekside Ridge Dr/Roseville Pkwy	Signal	4,730	4,286	90.6%	71.9	25.4	E
16	Taylor Rd/East Roseville Pkwy	Signal	6,815	6,437	94.5%	52.5	6.3	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	6,375	6,316	99.1%	47.4	7.5	D
18	Wills Rd/Atlantic St	Signal	3,360	3,426	102.0%	29.3	4.9	C
19	I-80 WB Ramps/Atlantic St	Signal	4,855	4,869	100.3%	17.7	9.7	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	6,510	6,400	98.3%	103.2	12.7	F
21	North Sunrise Ave/Eureka Rd	Signal	6,755	6,840	101.3%	131.7	31.1	F
22	Harding Blvd/Wills Rd	Signal	3,000	3,050	101.7%	16.5	2.0	B
23	Harding Blvd/Douglas Blvd	Signal	3,890	3,754	96.5%	79.6	18.1	E
24	I-80 WB Ramps/Douglas Blvd	Signal	4,680	4,409	94.2%	21.0	8.5	C

Network Summary	
Total Demand Volume (veh/hr)	121,515
Total Volume Served (veh/hr)	118,704
Percent Served	97.7%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	67	8	330	122	NO
	Through						
	Right Turn	1,500	68	8	331	122	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	23	7	128	32	NO
	Through						
	Right Turn	1,500	23	7	128	32	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	63	12	210	75	NO
	Through						
	Right Turn	1,330	65	12	212	75	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,400	62	4	249	40	NO
	Through						
	Right Turn	1,400	14	3	107	32	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	82	44	605	349	MAX
	Through	2,260	138	80	774	306	NO
	Right Turn	200	22	35	494	306	MAX

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	43	3	200	39	NO
	Through						
	Right Turn	1,100	42	3	199	39	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	31	4	138	28	NO
	Through						
	Right Turn	1,130	33	4	140	28	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,420	46	1	168	23	NO
	Through						
	Right Turn	1,420	45	1	167	23	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
PM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1,800	17	1	112	20	NO
WB	Left Turn						
	Through						
	Right Turn	1,170	62	3	351	45	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1,130	75	3	314	19	NO
WB	Left Turn						
	Through						
	Right Turn	1,780	12	3	97	16	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1,150	11	15	166	524	NO
SB	Left Turn						
	Through						
	Right Turn	1,430	0	0	38	57	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
PM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	78	22	426	257	MAX
	Through	1,700	33	16	227	94	NO
	Right Turn	1,700	3	4	150	232	NO
SB	Left Turn	550	46	17	179	54	NO
	Through						
	Right Turn	550	60	17	346	90	NO
EB	Left Turn	1,120	56	3	185	26	NO
	Through	1,120	162	25	827	114	NO
	Right Turn	810	27	15	414	110	NO
WB	Left Turn						
	Through	1,370	666	409	1,522	10	MAX
	Right Turn	280	10	10	187	162	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1,530	91	88	409	83	NO
	Through	1,530	91	88	409	83	NO
	Right Turn	730	91	89	410	83	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 2 (CD Roadway)
PM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	22	43	432	583	NO
SB	Left Turn						
	Through						
	Right Turn	1250	19	1	132	22	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	71	52	376	117	NO
	Through						
	Right Turn	1230	83	56	396	117	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	67	10	252	44	NO
	Through						
	Right Turn	1080	44	4	260	54	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 2 (CD Roadway)
 PM Peak Hour

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	79	0	342	59	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	99	8	379	81	NO
	Through						
	Right Turn	1650	99	8	379	81	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	128	25	475	99	NO
	Through						
	Right Turn	1620	128	25	475	99	NO

Intersection 38

Taylor Rd/I-80 EB Off-ramp

Unsignalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn						
	Through						
	Right Turn	1100	0	0	53	42	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

I-80/SR 65 Interchange Improvements

**Vissim Model Results – Design Year Alternative 3
(Taylor Road Interchange Eliminated)**

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	206,767	103
Travel Distance [mi]	All Vehicles	915,788	1,384
Travel Time [h]	All Vehicles	21,450	71.2
Average Speed [mph]	All Vehicles	42.7	0.1
Total Delay [h]	All Vehicles	5,658	55.5
Average Delay per Vehicle [s]	All Vehicles	96	1.0
VHD/VMT [min/mile]	All Vehicles	0.37	0.00
Number of Vehicles Served	HOV	34,555	30
Travel Distance [mi]	HOV	165,912	744
Travel Time [h]	HOV	3,598	20
Average Speed [mph]	HOV	46.1	0.1
Total Delay [h]	HOV	767	12
Average Delay per Vehicle [s]	HOV	78	1
VHD/VMT [min/mile]	HOV	0.28	0.00
Number of Vehicles Served	Truck	7,617	6
Travel Distance [mi]	Truck	41,910	360
Travel Time [h]	Truck	972	8
Average Speed [mph]	Truck	43.1	0
Total Delay [h]	Truck	256	4
Average Delay per Vehicle [s]	Truck	118	2
VHD/VMT [min/mile]	Truck	0.37	0.01

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	34,560	7,620	206,770
Demand Volume	35,730	8,240	209,100
Percent Demand Served	96.7%	92.5%	98.9%
Vehicle Miles of Travel	165,910	41,910	915,790
Person Miles of Travel	348,420	44,010	1,100,400
Vehicle Hours of Travel	3,600	970	21,450
Vehicle Hours of Delay	770	260	5,660
VHD % of VHT	21.4%	26.8%	26.4%
Average Delay per Vehicle (min)	1.34	2.05	1.64
Person Hours of Delay	1,620	270	6,520
Average Travel Speed	46.1	43.1	42.7

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	300,688	222
Travel Distance [mi]	All Vehicles	1,110,482	1,878
Travel Time [h]	All Vehicles	30,680	279.0
Average Speed [mph]	All Vehicles	36.2	0.4
Total Delay [h]	All Vehicles	11,084	292.3
Average Delay per Vehicle [s]	All Vehicles	131	3.4
VHD/VMT [min/mile]	All Vehicles	0.60	0.02
Number of Vehicles Served	HOV	53,093	108
Travel Distance [mi]	HOV	218,022	737
Travel Time [h]	HOV	5,441	46
Average Speed [mph]	HOV	40.1	0.3
Total Delay [h]	HOV	1,639	46
Average Delay per Vehicle [s]	HOV	109	3
VHD/VMT [min/mile]	HOV	0.45	0.01
Number of Vehicles Served	Truck	154	15
Travel Distance [mi]	Truck	38,351	273
Travel Time [h]	Truck	1,009	13
Average Speed [mph]	Truck	38.0	1
Total Delay [h]	Truck	345	13
Average Delay per Vehicle [s]	Truck	150	6
VHD/VMT [min/mile]	Truck	0.54	0.02

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	53,090	150	300,690
Demand Volume	53,980	8,690	300,640
Percent Demand Served	98.4%	1.7%	100.0%
Vehicle Miles of Travel	218,020	38,350	1,110,480
Person Miles of Travel	457,850	40,270	1,352,230
Vehicle Hours of Travel	5,440	1,010	30,680
Vehicle Hours of Delay	1,640	340	11,080
VHD % of VHT	30.1%	33.7%	36.1%
Average Delay per Vehicle (min)	1.85	136.00	2.21
Person Hours of Delay	3,440	360	12,900
Average Travel Speed	40.1	38.0	36.2

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,478	42	110.5%	1,243	30	111.0%				59.6	5.1	33.1	4.1	D
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,721	90	110.5%							55.7	3.0	39.4	2.1	E
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,714	151	110.4%				1,403	82	109.6%	56.3	7.2	33.0	7.2	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,308	166	110.6%				367	68	104.9%	55.2	11.8	35.7	25.3	E
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,938	170	110.8%							62.7	0.2	28.1	0.7	D
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	6,939	162	110.9%	1,149	26	99.1%	1,574	67	104.2%	62.4	0.2	26.2	0.6	C
7 I-80 EB CD - Eureka Rd to SR-65	Weave	220	20	104.9%	1,275	46	104.5%	612	47	105.5%	60.5	1.0	13.1	0.4	B
8 I-80 EB - Eureka Rd to SR-65	Basic	6,523	170	110.4%							60.8	0.7	31.2	0.8	D
9 I-80 EB - HOV Connector Off-ramp	Diverge	6,524	169	110.4%				598	34	108.7%	58.4	1.3	31.7	1.1	D
10 I-80 EB - SR-65 Off-ramp	Diverge	5,931	168	110.7%				3,483	107	109.5%	63.4	0.3	25.4	0.6	C
11 I-80 EB - SR-65 Off-ramp to Eureka Rd On-ramp	Basic	2,449	110	112.3%							64.0	0.1	16.0	0.6	B
17 I-80 EB - Eureka Rd On-ramp	Merge	2,450	106	112.4%	612	48	105.5%				63.0	0.3	15.5	0.7	B
18 I-80 EB - Eureka Rd On-ramp to SR-65 On-ramp	Basic	3,066	120	111.1%							63.7	0.1	17.3	0.6	B
19 I-80 EB - SR-65 On-ramp	Merge	3,065	119	111.0%	1,960	82	106.5%				60.2	0.4	30.1	0.9	D
20 I-80 EB - SR-65 to Rocklin Rd	Basic	5,025	125	109.2%							62.7	0.3	25.3	0.7	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	5,031	165	109.4%				1,579	73	107.4%	63.1	0.3	24.0	0.7	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,463	130	110.6%							63.0	0.5	22.7	0.9	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,465	134	110.7%	192	24	100.8%				60.6	0.7	22.8	1.1	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,663	137	110.3%							63.0	0.2	23.3	1.0	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,665	137	110.4%				753	67	110.7%	59.9	5.5	25.7	3.1	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,918	122	110.5%							63.1	0.7	19.4	0.7	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,918	124	110.5%	139	6	92.5%				62.5	0.6	17.9	0.7	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	3,058	121	109.6%	500	8	106.3%				61.7	0.2	20.3	0.9	C
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	5,374	27	105.8%				1,102	50	105.9%	52.6	3.8	32.8	2.4	D
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	4,270	66	105.7%							61.3	0.7	26.1	0.4	D
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	4,270	72	105.7%	50	3	83.7%				62.6	0.6	23.1	0.6	C
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	4,317	85	105.3%	320	12	103.1%				61.2	0.9	24.7	0.7	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,629	88	105.0%							62.4	0.3	27.6	0.4	D
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,629	80	105.0%				326	29	101.9%	60.4	1.6	28.7	1.0	D
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	4,299	90	105.1%							62.8	0.3	25.5	0.5	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	4,300	92	105.1%	1,178	17	98.1%				58.5	2.1	29.4	1.3	D
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,472	107	103.4%							60.3	1.1	31.9	0.9	D
47 I-80 WB - HOV Lane Start to SR-65	Basic	5,461	111	103.2%							61.3	0.3	25.5	0.6	C
48 I-80 WB - SR-65 Off-ramp	Diverge	5,460	108	103.2%				1,542	69	103.5%	63.4	0.2	23.3	0.6	C
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,912	112	102.9%							63.5	0.2	21.1	0.8	C
60 I-80 WB - SR-65 to Atlantic St	Weave	3,909	117	102.9%	4,674	174	103.4%	369	40	102.5%	28.9	8.7	78.1	19.4	F
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	8,016	202	100.7%				1,138	81	98.1%	22.0	0.6	110.6	4.2	F
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	6,819	145	100.3%							23.3	0.5	112.1	2.9	F
64 I-80 WB - Atlantic St On-ramp	Merge	6,796	149	99.9%	1,118	51	105.4%				22.6	0.8	76.6	1.7	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,899	158	100.5%				987	62	94.9%	36.7	1.6	63.5	3.5	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,912	133	101.3%							29.6	1.0	86.8	3.9	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,912	132	101.4%	977	28	107.4%				23.6	0.3	112.2	1.7	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,891	131	102.1%	471	24	112.1%				28.2	0.4	75.9	1.1	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,362	109	102.6%							58.4	0.6	34.4	0.9	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	8,364	135	102.6%				1,009	60	95.2%	62.0	0.1	28.6	0.7	D
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	7,354	145	103.7%							62.2	0.1	33.8	0.7	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	7,351	148	103.7%	188	6	75.1%				62.7	0.1	27.1	0.6	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,541	148	102.7%	756	19	93.4%				62.9	0.2	25.7	0.4	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	8,307	141	101.9%							62.2	0.1	31.3	0.6	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	8,316	148	102.0%				450	41	86.5%	61.1	1.9	31.9	1.5	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	7,876	138	103.2%							62.2	0.5	30.3	0.6	D
77 I-80 WB - Antelope Rd WB On-ramp	Merge	7,875	144	103.2%	535	12	100.9%				61.9	0.3	29.3	0.8	D
78 I-80 WB - Antelope Rd to Truck Scales	Weave	8,410	140	103.1%	448	14	89.6%	91	18	82.6%	61.0	0.8	30.9	0.8	D
79 I-80 WB - Truck Scales Off to On-ramp	Basic	8,784	144	102.7%							56.5	8.8	38.6	8.9	E
80 I-80 WB - Truck Scales On-ramp	Merge	8,803	135	103.0%	92	16	83.5%				38.6	11.1	63.3	18.8	F
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	8,954	158	103.4%							41.9	6.8	55.5	8.3	F
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	8,966	160	103.5%				1,078	76	104.7%	52.5	7.7	36.8	7.7	E
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	7,928	159	103.9%							37.1	14.0	65.5	21.6	F
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	7,958	164	104.3%	809	17	102.4%				32.1	11.9	80.3	23.2	F
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	8,827	167	104.8%	779	26	95.0%				35.6	9.4	70.6	12.0	F

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,425	9	112.2%				75	20	106.9%	63.8	0.2	19.0	0.2	B
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	1,351	30	112.6%							63.6	0.2	18.4	0.3	C
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	1,351	33	112.6%	897	4	91.6%				55.0	5.1	20.7	2.3	C
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	2,249	40	103.2%	1,198	44	108.9%				11.8	4.3	103.6	27.9	F
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	3,450	118	105.2%							12.6	3.6	116.9	18.7	F
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	3,450	127	105.2%							15.8	3.7	108.9	14.8	F
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	3,448	142	105.1%	1,339	62	107.1%	843	69	106.7%	20.1	1.5	87.1	4.2	F
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	3,892	103	104.1%							20.3	1.0	95.6	2.7	F
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	3,881	102	103.8%	644	34	114.9%				29.9	0.5	73.1	1.1	F
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	4,505	91	104.8%							59.1	4.4	39.0	4.6	E
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	4,500	88	104.7%				767	51	109.5%	61.5	0.5	35.2	0.6	E
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	3,728	80	103.6%							61.9	1.3	32.0	0.8	D
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	3,723	84	103.4%	445	34	108.4%				52.0	12.3	42.9	14.2	E
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	4,157	89	103.7%	520	35	110.6%	736	55	102.2%	60.1	1.2	33.5	0.9	D
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,931	99	104.5%							58.3	4.8	35.3	4.8	E
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,929	97	104.5%	410	20	108.0%				57.6	6.5	36.1	5.3	E
104 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	4,338	103	104.8%	575	23	106.5%	878	56	107.0%	60.0	1.4	30.7	1.5	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	4,016	101	104.0%							62.5	0.1	31.3	0.5	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	4,013	101	104.0%	533	41	106.6%				54.8	2.5	36.0	1.6	E
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	4,544	92	104.2%	1,236	83	100.5%	745	51	104.9%	56.5	1.7	34.8	1.4	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	5,043	127	103.3%							61.6	0.7	36.4	1.1	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	5,043	124	103.3%	623	48	102.0%				61.0	0.8	28.6	0.7	D
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	5,664	130	103.2%	810	33	102.5%				56.7	5.7	34.5	4.2	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	6,461	137	102.9%							58.9	1.7	33.3	1.7	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	6,460	136	102.9%				1,317	78	101.3%	61.2	0.8	29.3	1.0	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	5,140	148	103.2%							62.4	0.2	27.6	0.7	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	5,138	152	103.2%	1,466	70	106.3%	4,667	124	103.3%	57.9	1.1	27.6	1.0	C
120 SR-65 SB to EB I-80 Connector	Basic	1,953	81	106.2%							50.6	0.9	30.1	1.5	D
121 SR-65 SB to WB I-80 Connector	Basic	3,689	127	100.8%							50.9	5.9	27.4	9.6	D
123 SR-65 NB from WB I-80 Connector	Basic	1,542	69	103.5%							53.2	0.3	16.5	0.9	B
124 SR-65 NB from EB I-80 Connector	Basic	3,483	107	109.5%							62.3	0.2	31.0	1.0	D
125 SR-65 NB - Eureka Rd On-ramp	Merge	4,081	110	128.3%	884	46	104.0%				48.7	0.1	32.8	0.7	D
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,360	114	108.2%	2,141	79	105.0%	1,076	74	102.5%	59.9	0.2	26.3	0.5	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	5,419	126	107.9%							42.2	13.9	46.6	16.5	F
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	5,420	133	108.0%	520	38	98.2%				34.6	7.1	60.6	9.6	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	5,942	137	107.1%							48.7	4.5	45.1	4.5	F
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	5,943	135	107.1%				943	68	97.2%	53.0	3.7	39.6	3.7	E
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	5,008	118	109.3%							58.3	4.1	42.0	4.1	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	5,010	116	109.4%	333	24	97.8%	2,021	85	111.6%	61.6	1.1	30.9	0.8	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	3,325	78	106.9%							62.6	0.3	26.8	0.7	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	3,325	82	106.9%	564	40	100.6%				60.2	1.0	28.3	0.6	D
136 SR-65 NB - Blue Oaks Blvd to HOV Lane End	Basic	3,885	91	105.9%							62.6	0.3	29.8	0.6	D
162 SR-65 NB - HOV Lane End to Sunset Blvd	Basic	3,883	95	105.8%							62.9	0.2	25.4	0.3	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	3,883	101	105.8%				1,409	74	107.6%	63.5	0.1	24.0	0.4	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	2,472	86	104.8%							63.5	0.2	20.6	0.8	C
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	2,474	86	104.8%	130	22	99.6%				62.8	0.6	21.3	0.9	C
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	2,602	96	104.5%	411	31	114.1%	778	50	96.0%	63.2	0.4	19.8	0.7	B
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	2,235	89	109.5%							63.6	0.2	18.9	0.6	C
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	2,234	93	109.5%	512	34	106.7%				61.3	0.5	21.7	0.8	C
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	2,745	101	108.9%	466	30	113.7%				62.2	0.4	24.9	0.9	C
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	3,209	100	109.5%							62.3	0.3	27.6	0.9	D
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	3,211	98	109.6%				630	51	95.5%	62.1	0.2	28.3	0.9	D
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,589	84	114.1%							63.1	0.2	23.3	0.6	C
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,591	86	114.1%	767	57	105.0%	1,226	60	115.6%	63.1	0.2	20.4	0.6	C
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	2,128	85	109.7%							63.6	0.2	19.8	0.8	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	2,128	83	109.7%				1,168	64	103.4%	64.1	0.2	15.6	0.5	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	957	61	118.2%							64.3	0.2	9.5	0.3	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	958	63	118.3%	70	5	99.9%				63.6	0.2	9.7	0.4	A

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,809	189	101.8%	969	51	95.9%				58.4	12.3	36.1	35.5	E
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,765	316	101.0%							58.3	12.3	37.5	26.1	E
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,757	380	100.9%				1,139	102	99.1%	57.0	11.3	36.5	22.2	E
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,611	340	101.1%				398	67	102.1%	56.9	11.6	38.6	31.6	E
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	7,208	341	100.9%							62.1	2.3	26.5	2.3	D
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	7,207	352	100.9%	1,721	61	95.6%	1,190	83	99.1%	62.0	0.4	26.3	1.0	C
7 I-80 EB CD - Eureka Rd to SR-65	Weave	315	29	104.9%	1,557	65	94.4%	724	45	100.6%	57.9	8.6	18.2	5.6	B
8 I-80 EB - Eureka Rd to SR-65	Basic	7,728	307	99.8%							59.3	1.5	32.7	1.9	D
9 I-80 EB - HOV Connector Off-ramp	Diverge	7,732	309	99.9%				1,161	61	98.4%	54.4	2.2	35.9	3.0	E
10 I-80 EB - SR-65 Off-ramp	Diverge	6,577	289	100.3%				3,823	185	101.7%	61.2	4.0	27.6	3.3	C
11 I-80 EB - SR-65 Off-ramp to Eureka Rd On-ramp	Basic	2,749	149	98.2%							63.9	0.2	16.7	0.9	B
17 I-80 EB - Eureka Rd On-ramp	Merge	2,747	145	98.1%	729	45	101.3%				63.1	0.1	16.2	0.5	B
18 I-80 EB - Eureka Rd On-ramp to SR-65 On-ramp	Basic	3,476	150	98.8%							63.7	0.2	17.8	0.7	B
19 I-80 EB - SR-65 On-ramp	Merge	3,476	147	98.7%	2,545	94	97.5%				58.6	0.9	32.6	0.5	D
20 I-80 EB - SR-65 to Rocklin Rd	Basic	6,021	155	98.2%							62.4	0.3	27.5	0.6	D
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	6,011	144	98.1%				1,454	80	98.9%	63.0	0.2	26.5	0.5	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	4,545	124	97.5%							62.8	0.3	27.0	0.7	D
24 I-80 EB - Rocklin Rd On-ramp	Merge	4,541	128	97.4%	258	17	99.4%				59.0	0.3	27.5	0.7	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	4,791	120	97.4%							62.6	0.4	28.0	0.7	D
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	4,787	127	97.3%				709	53	90.9%	59.6	3.1	30.3	1.7	D
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	4,070	122	98.3%							62.7	0.4	23.7	0.7	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	4,068	121	98.3%	336	12	98.8%				59.9	1.0	22.7	1.2	C
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	4,403	115	98.3%	883	25	101.5%				58.5	1.5	28.2	1.7	D
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,077	25	105.9%				759	46	104.0%	59.5	0.8	22.0	0.3	C
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,310	61	106.1%							63.1	0.4	20.4	0.4	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,309	69	106.1%	426	9	104.0%				61.8	0.6	19.5	0.6	B
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,734	66	105.8%	453	16	103.0%				60.8	1.0	22.3	0.4	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,188	62	105.5%							63.0	0.2	24.1	0.3	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,188	59	105.5%				320	36	103.3%	62.1	0.7	25.1	0.5	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,865	72	105.6%							63.3	0.3	22.5	0.4	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,867	75	105.7%	1,720	89	104.9%				56.9	1.5	30.2	1.5	D
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,583	100	105.3%							50.6	9.3	39.6	8.6	E
47 I-80 WB - HOV Lane Start to SR-65	Basic	5,568	114	105.1%							60.8	0.7	24.4	0.6	C
48 I-80 WB - SR-65 Off-ramp	Diverge	5,568	118	105.1%				2,076	73	104.3%	63.7	0.1	22.3	0.4	C
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,493	102	105.5%							63.8	0.1	19.7	0.4	C
60 I-80 WB - SR-65 to Atlantic St	Weave	3,489	98	105.4%	4,281	111	99.6%	500	38	106.5%	56.7	9.0	28.1	13.4	D
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	7,250	147	101.5%				1,118	70	101.6%	48.7	16.5	39.3	32.3	E
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	6,089	156	100.8%							31.2	15.1	76.7	34.0	F
64 I-80 WB - Atlantic St On-ramp	Merge	6,055	176	100.2%	1,280	32	96.3%				25.2	11.8	61.4	15.9	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,252	209	98.4%				1,109	63	99.0%	34.3	9.8	69.5	13.9	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,082	166	97.3%							25.5	5.1	96.7	14.4	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,053	170	96.9%	1,318	41	96.9%				21.5	0.6	114.1	3.2	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,306	136	96.0%	698	17	87.3%				27.3	0.4	73.3	1.1	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,004	195	95.2%							59.8	0.8	32.4	1.2	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	7,986	126	95.0%				1,183	56	95.4%	62.3	0.3	27.8	0.9	C
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,806	125	94.9%							62.4	0.2	32.4	1.0	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,806	119	94.9%	194	12	97.0%				62.9	0.1	26.1	0.8	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	6,998	127	95.0%	608	16	106.6%				62.3	0.4	22.2	0.7	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	7,605	132	95.8%							62.3	0.3	28.0	0.6	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	7,602	141	95.7%				1,082	51	94.1%	62.0	0.8	28.8	0.7	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	6,517	131	96.0%							62.6	0.4	24.9	0.6	C
77 I-80 WB - Antelope Rd WB On-ramp	Merge	6,517	134	96.0%	345	8	98.6%				61.4	0.6	22.0	0.9	C
78 I-80 WB - Antelope Rd to Truck Scales	Weave	6,864	124	96.1%	528	14	99.5%	73	19	81.6%	62.4	0.3	24.1	0.5	C
79 I-80 WB - Truck Scales Off to On-ramp	Basic	7,315	125	96.5%							62.9	0.1	26.9	0.4	D
80 I-80 WB - Truck Scales On-ramp	Merge	7,314	129	96.5%	74	18	81.7%				62.5	0.2	27.2	0.6	C
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	7,392	132	96.4%							61.2	0.8	28.9	0.5	D
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	7,393	133	96.4%				1,178	78	94.2%	61.3	1.6	27.0	1.0	C
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	6,223	164	96.9%							62.7	0.6	23.9	0.8	C
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	6,226	155	97.0%	897	5	99.7%				56.4	1.4	26.3	1.2	C
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	7,127	142	97.4%	597	20	102.9%				61.7	1.0	28.3	0.7	D

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,127	10	99.8%				122	26	101.5%	64.4	0.2	10.1	0.1	B
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	1,006	32	99.6%							64.4	0.2	8.7	0.2	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	1,007	28	99.7%	689	19	99.8%				61.1	0.3	10.4	0.2	B
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,696	37	99.7%	679	18	99.9%				60.3	0.4	13.4	0.4	B
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,376	46	99.8%							63.1	0.3	22.6	0.5	C
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	2,376	48	99.8%							63.1	0.2	21.7	0.5	C
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	2,377	49	100.3%	1,462	36	101.5%	850	50	103.6%	60.7	0.7	22.8	0.5	C
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,989	81	100.0%							63.1	0.2	24.7	0.7	C
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,990	77	100.0%	587	46	96.2%				60.7	0.6	27.6	0.7	C
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	3,581	80	99.5%							62.3	0.3	29.6	0.9	D
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	3,582	80	99.5%				984	52	97.4%	62.7	0.2	26.6	0.9	C
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,592	98	100.1%							63.2	0.2	21.4	1.0	C
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,592	97	100.1%	457	35	106.2%				60.3	1.8	24.3	1.5	C
101 SR-65 SB - Sunset Blvd Off-ramp	Weave	3,052	112	81.4%	726	47		588	52	98.1%	61.7	0.4	25.3	1.2	C
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,190	107	101.3%							59.1	1.4	22.4	1.3	C
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,190	110	101.3%	554	45	106.4%				59.9	1.3	29.0	1.4	D
104 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	3,741	108	101.9%	1,009	51	101.9%	860	56	100.0%	61.4	0.6	28.9	1.2	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,884	107	102.2%							62.3	0.1	31.6	1.0	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,887	108	102.3%	358	39	94.2%				59.5	0.4	32.3	1.0	D
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	4,241	115	101.5%	1,359	63	98.5%	646	52	97.8%	59.4	1.1	32.7	1.2	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,956	137	101.1%							62.1	0.3	36.0	1.0	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,956	134	101.1%	488	42	101.7%				61.6	0.4	28.2	0.9	D
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	5,443	144	101.2%	1,097	43	98.8%				58.5	3.8	31.8	3.1	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	6,537	150	100.7%							59.0	1.2	33.7	1.0	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	6,537	152	100.7%				1,552	69	100.1%	61.2	0.5	29.6	0.9	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,982	123	100.9%							62.5	0.3	28.0	0.5	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,988	125	101.0%	1,857	63	94.3%	4,288	103	99.0%	60.7	0.5	25.5	0.6	C
120 SR-65 SB to EB I-80 Connector	Basic	2,556	93	97.9%							48.3	1.9	36.9	3.0	E
121 SR-65 SB to WB I-80 Connector	Basic	3,534	97	95.5%							53.4	5.6	24.4	7.1	C
123 SR-65 NB from WB I-80 Connector	Basic	2,077	73	104.4%							48.2	2.5	23.8	1.7	C
124 SR-65 NB from EB I-80 Connector	Basic	3,826	189	101.8%							51.6	14.8	38.9	21.9	E
125 SR-65 NB - Eureka Rd On-ramp	Merge	4,988	208	132.6%	1,141	60	92.7%				28.4	14.3	71.4	30.6	F
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,930	236	98.8%	3,234	88	102.0%	1,766	112	97.6%	31.8	10.8	64.9	15.2	F
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	6,289	148	99.0%							26.1	1.1	105.7	11.4	F
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	6,289	142	99.0%	999	55	90.0%				31.1	0.9	72.3	1.2	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	7,283	119	97.6%							52.5	1.7	39.1	2.2	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	7,283	119	97.6%				1,548	58	99.3%	57.3	0.8	34.2	0.9	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	5,737	96	97.2%							61.3	0.8	37.3	1.0	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	5,734	93	97.2%	615	44	99.2%	2,226	81	98.5%	61.2	0.9	31.8	0.6	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	4,130	103	96.9%							62.0	0.4	30.1	0.7	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	4,130	101	96.9%	633	51	95.9%				58.1	2.2	32.5	1.5	D
136 SR-65 NB - Blue Oaks Blvd to HOV Lane End	Basic	4,761	123	96.8%							62.2	0.4	32.7	1.0	D
162 SR-65 NB - HOV Lane End to Sunset Blvd	Basic	4,755	121	96.7%							61.9	0.6	29.2	0.8	D
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	4,754	120	96.6%				1,190	60	98.4%	62.8	0.3	27.3	0.6	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	3,564	98	96.1%							62.6	0.2	29.4	0.7	D
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	3,563	100	96.0%	348	30	102.3%				60.1	2.4	31.4	1.7	D
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	3,906	114	96.4%	794	40	105.9%	1,189	57	99.1%	61.6	0.4	28.9	1.0	D
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	3,515	115	97.6%							62.6	0.2	29.0	0.9	D
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	3,515	115	97.6%	280	33	99.9%				59.1	4.2	31.8	3.0	D
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,793	107	97.7%	492	34	100.4%				51.7	10.2	41.0	10.3	E
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	4,277	109	97.9%							56.9	2.6	39.1	2.4	E
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	4,276	110	97.8%				710	44	101.4%	58.6	2.5	38.1	1.6	E
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	3,566	112	97.2%							62.2	0.3	31.2	1.1	D
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	3,562	106	97.1%	938	40	95.7%	1,477	85	97.2%	62.3	0.3	27.2	0.7	C
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	3,019	100	96.4%							63.1	0.2	24.4	0.7	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	3,018	101	96.4%				1,844	81	97.0%	63.8	0.1	19.3	0.4	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	1,171	63	95.2%							64.3	0.1	9.9	0.6	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	1,172	64	95.2%	125	9	95.8%				63.1	0.2	10.1	0.5	B

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	3,740	4,153	111.0%	15.9	1.4	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	2,035	2,236	109.9%	16.0	1.2	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	2,070	2,165	104.6%	27.1	4.8	C
4	SR-65 SB Ramps/Sunset Blvd	Signal	3,340	3,566	106.8%	15.4	3.4	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	3,775	4,099	108.6%	11.6	1.0	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	5,425	5,664	104.4%	49.6	6.3	D
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,395	3,631	107.0%	11.9	0.7	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	4,440	4,552	102.5%	7.0	0.5	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	3,495	3,517	100.6%	15.3	0.4	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	3,370	3,530	104.8%	28.3	1.4	C
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	3,625	3,775	104.1%	19.0	3.2	B
12	SR-65 SB Ramps/Galleria Blvd	Signal	3,880	3,955	101.9%	25.0	1.6	C
13	Galleria Blvd/Antelope Creek Dr	Signal	2,476	2,425	97.9%	9.4	1.7	A
14	Galleria Blvd/Roseville Pkwy	Signal	5,321	5,654	106.3%	46.0	2.3	D
15	Creekside Ridge Dr/Roseville Pkwy	Signal	3,400	3,573	105.1%	7.0	2.8	A
16	Taylor Rd/East Roseville Pkwy	Signal	5,475	5,811	106.1%	94.8	21.9	F
17	North Sunrise Ave/East Roseville Pkwy	Signal	4,840	5,152	106.5%	32.4	3.8	C
18	Wills Rd/Atlantic St	Signal	2,250	2,424	107.7%	22.7	11.3	C
19	I-80 WB Ramps/Atlantic St	Signal	3,925	4,099	104.4%	38.3	10.9	D
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	5,940	6,185	104.1%	42.2	4.7	D
21	North Sunrise Ave/Eureka Rd	Signal	5,180	5,413	104.5%	39.2	6.0	D
22	Harding Blvd/Wills Rd	Signal	2,160	2,287	105.9%	15.0	6.2	B
23	Harding Blvd/Douglas Blvd	Signal	2,675	2,921	109.2%	29.6	4.9	C
24	I-80 WB Ramps/Douglas Blvd	Signal	3,810	4,024	105.6%	39.8	6.1	D

Network Summary	
Total Demand Volume (veh/hr)	90,042
Total Volume Served (veh/hr)	94,814
Percent Served	105.3%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
AM Peak Hour

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	55	4	265	44	NO
	Through						
	Right Turn	1500	55	4	265	44	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	16	3	88	21	NO
	Through						
	Right Turn	1500	16	3	88	21	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	63	3	224	28	NO
	Through						
	Right Turn	1330	65	3	226	28	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	52	1	213	50	NO
	Through						
	Right Turn	1400	24	4	155	29	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 3 (No Taylor)
 AM Peak Hour

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	36	15	194	70	NO
	Through	2260	116	12	492	198	NO
	Right Turn	200	6	2	218	198	MAX

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	43	15	236	32	NO
	Through						
	Right Turn	1100	42	15	235	32	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	25	6	153	34	NO
	Through						
	Right Turn	1130	28	6	155	34	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	44	7	186	31	NO
	Through						
	Right Turn	1420	43	7	185	31	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
AM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	7	2	59	10	NO
WB	Left Turn						
	Through						
	Right Turn	1170	15	1	148	46	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	53	4	297	67	NO
WB	Left Turn						
	Through						
	Right Turn	1780	2	1	51	7	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	21	67	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
AM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	54	10	262	230	MAX
	Through	1700	158	54	881	211	NO
	Right Turn	1700	35	35	578	222	NO
SB	Left Turn	550	47	14	172	30	NO
	Through						
	Right Turn	550	56	12	305	108	NO
EB	Left Turn	1120	36	4	141	28	NO
	Through	1120	154	44	811	145	NO
	Right Turn	810	24	17	413	140	NO
WB	Left Turn						
	Through	1370	157	56	751	103	NO
	Right Turn	280	1	0	36	12	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	71	72	369	65	NO
	Through	1530	71	72	369	65	NO
	Right Turn	730	71	72	370	65	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 3 (No Taylor)
 AM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	0	0	18	47	NO
SB	Left Turn						
	Through						
	Right Turn	1250	195	189	778	715	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	27	3	167	37	NO
	Through						
	Right Turn	1230	38	4	187	37	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	57	7	263	39	NO
	Through						
	Right Turn	1080	42	6	275	45	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 3 (No Taylor)
 AM Peak Hour

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	45	14	315	103	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	53	10	299	26	NO
	Through						
	Right Turn	1650	53	10	299	26	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	60	9	310	55	NO
	Through						
	Right Turn	1620	60	9	310	55	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	4,670	4,619	98.9%	24.4	1.1	C
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	2,210	2,205	99.8%	15.3	1.9	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	2,320	2,288	98.6%	18.4	2.0	B
4	SR-65 SB Ramps/Sunset Blvd	Signal	4,260	4,335	101.8%	9.2	0.6	A
5	SR-65 NB Ramps/Sunset Blvd	Signal	4,390	4,521	103.0%	20.4	6.9	C
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	7,040	6,922	98.3%	174.7	31.5	F
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	4,250	4,258	100.2%	79.8	39.5	E
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	6,135	6,405	104.4%	9.4	1.2	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	5,370	5,357	99.8%	11.6	0.5	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	5,295	5,167	97.6%	59.2	6.3	E
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	6,185	6,013	97.2%	22.1	0.7	C
12	SR-65 SB Ramps/Galleria Blvd	Signal	6,435	6,167	95.8%	24.6	1.8	C
13	Galleria Blvd/Antelope Creek Dr	Signal	4,320	3,866	89.5%	23.5	1.2	C
14	Galleria Blvd/Roseville Pkwy	Signal	8,105	7,585	93.6%	102.1	24.4	F
15	Creekside Ridge Dr/Roseville Pkwy	Signal	4,645	4,301	92.6%	40.4	13.2	D
16	Taylor Rd/East Roseville Pkwy	Signal	7,480	7,042	94.1%	70.5	5.6	E
17	North Sunrise Ave/East Roseville Pkwy	Signal	6,460	6,413	99.3%	77.8	20.9	E
18	Wills Rd/Atlantic St	Signal	3,335	3,365	100.9%	39.7	21.0	D
19	I-80 WB Ramps/Atlantic St	Signal	4,925	4,915	99.8%	33.9	12.7	C
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	6,980	6,831	97.9%	104.4	10.0	F
21	North Sunrise Ave/Eureka Rd	Signal	6,660	6,773	101.7%	112.9	24.2	F
22	Harding Blvd/Wills Rd	Signal	2,985	3,034	101.6%	22.2	12.0	C
23	Harding Blvd/Douglas Blvd	Signal	3,975	3,768	94.8%	111.3	11.5	F
24	I-80 WB Ramps/Douglas Blvd	Signal	4,695	4,571	97.4%	40.0	14.9	D

Network Summary	
Total Demand Volume (veh/hr)	123,125
Total Volume Served (veh/hr)	120,717
Percent Served	98.0%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	66	9	299	43	NO
	Through						
	Right Turn	1500	67	9	299	43	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	23	9	125	33	NO
	Through						
	Right Turn	1500	23	9	125	33	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	57	5	201	31	NO
	Through						
	Right Turn	1330	58	5	203	31	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	62	3	243	37	NO
	Through						
	Right Turn	1400	15	3	106	16	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	85	24	478	365	MAX
	Through	2260	161	101	956	332	NO
	Right Turn	200	39	52	682	332	MAX

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	44	2	200	30	NO
	Through						
	Right Turn	1100	44	2	199	30	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	30	4	140	35	NO
	Through						
	Right Turn	1130	33	4	142	35	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	45	2	183	35	NO
	Through						
	Right Turn	1420	45	2	182	35	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
PM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	16	2	109	26	NO
WB	Left Turn						
	Through						
	Right Turn	1170	72	1	383	63	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	74	4	340	30	NO
WB	Left Turn						
	Through						
	Right Turn	1780	11	3	104	25	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	22	69	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 3 (No Taylor)
 PM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	172	169	988	213	MAX
	Through	1700	158	134	962	231	NO
	Right Turn	1700	54	90	684	213	NO
SB	Left Turn	550	54	10	183	53	NO
	Through						
	Right Turn	550	108	27	545	118	NO
EB	Left Turn	1120	60	4	196	32	NO
	Through	1120	156	19	762	55	NO
	Right Turn	810	28	10	359	70	NO
WB	Left Turn						
	Through	1370	620	442	1524	16	MAX
	Right Turn	280	11	12	257	321	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	106	103	438	96	NO
	Through	1530	106	103	438	96	NO
	Right Turn	730	106	103	438	96	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Design Year - Alt 3 (No Taylor)
PM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	0	0	18	48	NO
SB	Left Turn						
	Through						
	Right Turn	1250	280	119	664	664	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	101	83	427	120	NO
	Through						
	Right Turn	1230	115	86	447	120	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	64	10	249	34	NO
	Through						
	Right Turn	1080	43	2	265	34	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Design Year - Alt 3 (No Taylor)
 PM Peak Hour

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	81	6	382	78	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	94	11	395	54	NO
	Through						
	Right Turn	1650	94	11	395	54	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	121	17	479	69	NO
	Through						
	Right Turn	1620	121	17	479	69	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

I-80/SR 65 Interchange Improvements

**Vissim Model Results – Design Year Alternative 5
(No Build)**

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 5 (No Build)
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	200,648	1,375
Travel Distance [mi]	All Vehicles	831,276	6,316
Travel Time [h]	All Vehicles	26,466	385.6
Average Speed [mph]	All Vehicles	31.4	0.6
Total Delay [h]	All Vehicles	12,038	468.4
Average Delay per Vehicle [s]	All Vehicles	207.8	8.6
VHD/VMT [min/mile]	All Vehicles	0.87	0.04
Number of Vehicles Served	HOVs	33,102	303
Travel Distance [mi]	HOVs	155,142	1,677
Travel Time [h]	HOVs	4,290	86.6
Average Speed [mph]	HOVs	36.2	0.9
Total Delay [h]	HOVs	1,644	99.6
Average Delay per Vehicle [s]	HOVs	172.2	11.0
VHD/VMT [min/mile]	HOVs	0.64	0.04
Number of Vehicles Served	Trucks	7,728	60
Travel Distance [mi]	Trucks	42,255	460
Travel Time [h]	Trucks	1,432	24.1
Average Speed [mph]	Trucks	29.5	0.8
Total Delay [h]	Trucks	708	30.2
Average Delay per Vehicle [s]	Trucks	311.4	13.4
VHD/VMT [min/mile]	Trucks	1.01	0.05

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	33,100	7,730	200,650
Demand Volume	35,595	8,802	210,465
Percent Demand Served	93.0%	87.8%	95.3%
Vehicle Miles of Travel	155,140	42,250	831,280
Person Miles of Travel	325,800	44,370	1,004,060
Vehicle Hours of Travel	4,290	1,430	26,470
Vehicle Hours of Delay	1,640	710	12,040
VHD % of VHT	38.2%	49.7%	45.5%
Average Delay per Vehicle (min)	2.97	5.51	3.60
Person Hours of Delay	3,440	750	13,880
Average Travel Speed	36.2	29.5	31.4

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Design Year - Alt 5 (No Build)
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	259,415	1,186
Travel Distance [mi]	All Vehicles	863,406	2,403
Travel Time [h]	All Vehicles	43,427	420.8
Average Speed [mph]	All Vehicles	19.9	0.2
Total Delay [h]	All Vehicles	28,067	437.9
Average Delay per Vehicle [s]	All Vehicles	375.7	6.5
VHD/VMT [min/mile]	All Vehicles	1.95	0.03
Number of Vehicles Served	HOVs	46,991	364
Travel Distance [mi]	HOVs	187,869	1,225
Travel Time [h]	HOVs	7,622	187.9
Average Speed [mph]	HOVs	24.7	0.5
Total Delay [h]	HOVs	4,355	175.2
Average Delay per Vehicle [s]	HOVs	323.3	12.3
VHD/VMT [min/mile]	HOVs	1.39	0.05
Number of Vehicles Served	Trucks	5,308	98
Travel Distance [mi]	Trucks	23,395	607
Travel Time [h]	Trucks	1,328	85.5
Average Speed [mph]	Trucks	17.7	0.7
Total Delay [h]	Trucks	917	75.5
Average Delay per Vehicle [s]	Trucks	589.3	37.0
VHD/VMT [min/mile]	Trucks	2.35	0.14

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	46,990	5,310	259,410
Demand Volume	53,496	6,723	303,572
Percent Demand Served	87.8%	79.0%	85.5%
Vehicle Miles of Travel	187,870	23,390	863,410
Person Miles of Travel	394,520	24,560	1,071,230
Vehicle Hours of Travel	7,620	1,330	43,430
Vehicle Hours of Delay	4,350	920	28,070
VHD % of VHT	57.1%	69.2%	64.6%
Average Delay per Vehicle (min)	5.55	10.40	6.49
Person Hours of Delay	9,140	970	32,910
Average Travel Speed	24.7	17.7	19.9

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 5 (No Build)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,239	129	109.8%	1,029	44	100.9%				45.5	17.3	55.3	42.2	F
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,143	276	107.0%							30.5	12.1	78.3	27.0	F
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,085	318	106.2%				1,500	139	114.5%	28.4	9.6	71.1	18.3	F
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	6,522	289	103.5%				482	91	87.6%	21.5	4.2	126.7	25.2	F
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	5,930	229	103.1%							21.5	2.6	116.8	23.9	F
6 I-80 EB - Douglas Blvd On-ramp	Merge	5,862	198	101.9%	581	48	57.0%				12.2	0.5	152.5	6.4	F
7 I-80 EB - Eureka Rd Off-ramp	Diverge	6,263	222	92.5%				1,137	76	92.5%	15.1	1.1	114.1	4.7	F
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	4,963	177	89.6%							16.7	0.4	137.9	3.3	F
9 I-80 EB - Eureka Rd EB On-ramp	Merge	4,902	180	88.5%	312	13	107.4%				14.0	0.6	131.8	3.0	F
10 I-80 EB - Eureka Rd to Taylor Rd	Weave	5,101	190	87.5%	546	31	97.4%	299	38	52.5%	14.3	0.4	130.6	1.9	F
11 I-80 EB - Taylor Rd to SR-65	Basic	5,129	214	88.1%							12.5	1.1	123.0	3.4	F
17 I-80 EB - SR-65 Off-ramp	Diverge	5,085	227	87.4%				2,534	66	87.7%	14.5	2.1	86.2	12.5	F
18 I-80 EB - SR-65 Off to On-ramp	Basic	2,479	184	84.6%							63.5	0.3	14.3	1.1	B
19 I-80 EB - SR-65 On-ramp	Merge	2,482	187	84.7%	1,604	82	101.5%				62.1	0.5	19.8	0.7	B
21 I-80 EB - SR-65 to Rocklin Rd	Basic	4,093	213	90.8%							63.4	0.1	18.8	0.8	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	4,097	210	90.8%				1,324	81	93.3%	63.4	0.2	18.5	1.0	B
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	2,777	154	89.9%							63.7	0.2	16.5	0.9	B
24 I-80 EB - Rocklin Rd On-ramp	Merge	2,781	151	90.0%	266	30	88.6%				59.5	0.8	17.7	0.8	B
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,054	144	90.1%							63.5	0.2	18.2	0.9	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,054	146	90.1%				750	59	110.3%	61.2	3.6	20.1	1.2	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,313	129	85.3%							63.5	0.5	14.7	0.9	B
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,314	130	85.4%	134	6	103.2%				62.8	0.2	13.7	0.6	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	2,449	122	86.2%	437	14	97.0%				61.1	0.6	15.4	0.5	B
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	5,377	19	105.2%				1,174	66	112.8%	51.3	2.6	32.9	1.5	D
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	4,201	69	103.2%							60.3	0.9	25.6	0.4	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	4,201	67	103.2%	48	3	80.5%				62.6	0.4	22.0	0.3	C
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	4,250	62	102.9%	324	12	104.6%				55.0	2.0	25.6	1.2	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,568	74	102.9%							62.8	0.3	25.7	0.3	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,568	74	102.9%				306	26	101.9%	62.5	0.5	25.5	0.6	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	4,266	78	103.0%							62.9	0.3	23.9	0.3	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	4,266	85	103.0%	1,011	48	101.1%				53.0	2.7	30.7	2.3	D
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,272	97	102.6%							61.8	1.0	29.3	1.1	D
47 I-80 WB - HOV Lane Start to SR-65	Basic	5,268	98	102.4%							61.5	0.8	23.2	0.5	C
48 I-80 WB - SR-65 Off-ramp	Diverge	5,265	98	102.4%				1,708	64	111.6%	60.9	4.7	27.4	10.8	C
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,552	69	98.4%							63.7	0.1	19.5	0.4	C
50 I-80 WB - SR-65 On-ramp	Merge	3,551	67	98.4%	3,478	136	92.0%				62.1	0.3	27.2	0.6	C
60 I-80 WB - Taylor Rd On-ramp	Merge	7,030	153	95.1%	657	22	96.7%				60.1	1.6	32.0	1.2	D
61 I-80 WB - Atlantic St WB Off-ramp	Diverge	7,685	159	95.2%				427	39	106.8%	54.5	12.8	41.9	22.4	E
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	7,258	180	94.6%				1,226	69	112.5%	43.3	7.1	53.4	9.5	F
63 I-80 WB - Atlantic St Off to On-ramp	Basic	6,031	188	91.7%							61.2	0.8	23.9	0.5	C
64 I-80 WB - Atlantic St On-ramp	Merge	6,029	185	91.6%	958	52	101.9%				53.3	4.0	27.5	2.1	C
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	6,990	189	92.9%				961	67	97.0%	54.6	4.3	20.9	1.3	C
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,031	175	92.4%							60.8	1.1	31.8	0.8	D
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,036	174	92.4%	781	37	100.2%				62.3	0.3	25.4	0.6	C
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	6,824	179	93.4%	390	19	95.2%				58.1	2.9	22.6	1.7	C
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	7,224	178	93.6%							61.6	0.6	28.0	0.7	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	7,229	184	93.6%				851	56	95.6%	62.1	0.8	20.3	0.6	C
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,386	184	93.5%							62.2	0.2	31.7	0.8	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,390	185	93.6%	212	5	81.4%				63.0	0.1	25.1	0.7	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	6,606	173	93.2%	896	7	90.5%				62.9	0.5	23.0	0.4	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	7,513	169	93.0%							62.5	0.3	27.8	0.5	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	7,517	174	93.0%				440	30	91.7%	62.3	0.6	27.6	0.6	C
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	7,082	177	93.2%							62.7	0.4	26.6	0.7	D
77 I-80 WB - Antelope Rd WB On-ramp	Merge	7,085	180	93.2%	513	12	96.7%				56.5	2.1	29.7	1.5	D
78 I-80 WB - Antelope Rd to Truck Scales	Weave	7,604	173	93.5%	446	19	89.1%	99	19	110.4%	60.1	0.7	28.2	0.5	D
79 I-80 WB - Truck Scales Off to On-ramp	Basic	7,964	172	93.3%							62.4	0.5	30.2	0.5	D
80 I-80 WB - Truck Scales On-ramp	Merge	7,974	158	93.4%	101	19	111.9%				57.0	6.1	34.8	5.7	D
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	8,109	155	94.0%							52.6	3.0	38.8	2.2	E
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	8,120	158	94.1%				1,078	59	104.7%	59.7	1.5	29.1	0.9	D
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	7,055	163	92.8%							62.6	0.4	28.1	0.5	D
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	7,058	162	92.9%	788	10	98.5%				58.1	1.2	27.9	1.1	C
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	7,854	180	93.5%	795	39	97.0%				53.7	8.6	39.5	8.3	E

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 5 (No Build)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR 65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,388	12	120.7%				78	20	111.0%	64.1	0.1	14.3	0.1	B
157 SR 65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	1,312	25	121.5%							63.9	0.1	13.8	0.3	B
158 SR 65 SB - Ferrari Ranch Rd WB On-ramp	Merge	1,313	28	121.6%	997	10	106.1%				61.0	0.2	18.2	0.3	B
159 SR 65 SB - Ferrari Ranch Rd EB On-ramp	Merge	2,309	32	114.3%	1,042	23	96.5%				59.4	0.2	24.2	0.3	C
160 SR 65 SB - Ferrari Ranch Rd to Lane Drop	Basic	3,354	41	108.2%							60.8	1.1	33.4	0.8	D
161 SR 65 SB - Lane Drop to Lincoln Blvd	Basic	3,357	46	108.3%							61.8	0.9	32.8	0.7	D
97 SR 65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	3,359	48	104.6%	1,143	23	89.3%	848	49	106.0%	45.2	9.0	36.7	8.9	E
98 SR 65 SB - Twelve Bridges Dr Off to On-ramp	Basic	3,661	70	99.2%							28.7	6.0	67.2	14.2	F
99 SR 65 SB - Twelve Bridges Dr On-ramp	Merge	3,663	78	99.3%	640	22	110.4%				33.6	2.6	61.3	6.4	F
100 SR 65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	4,304	79	100.8%							60.0	2.0	37.7	1.9	E
145 SR 65 SB - Placer Pkwy Off-ramp	Diverge	4,305	77	119.6%				747	57	105.1%	61.8	0.5	33.4	0.8	D
146 SR 65 SB - Placer Pkwy Off to On-ramp	Basic	3,562	81	123.2%							62.6	0.1	29.7	0.5	D
147 SR 65 SB - Placer Pkwy WB On-ramp	Merge	3,559	79	123.1%	480	37	117.1%				62.4	0.2	27.6	0.4	C
148 SR 65 SB - Placer Pkwy EB On-ramp	Merge	4,037	82	122.3%	499	28	101.9%				61.1	0.4	30.0	0.6	D
101 SR 65 SB - Sunset Blvd Off-ramp	Diverge	4,536	72	121.9%				772	48	102.9%	61.6	0.4	29.1	0.7	D
102 SR 65 SB - Sunset Blvd Off to On-ramp	Basic	3,766	89	126.8%							60.4	2.2	32.0	1.9	D
103 SR 65 SB - Sunset Blvd WB On-ramp	Merge	3,766	88	126.8%	395	63	106.6%				46.7	4.3	42.7	4.5	E
104 SR 65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	4,158	113	124.5%	501	25	92.7%	780	58	104.0%	60.3	1.1	27.1	0.9	C
107 SR 65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,884	104	124.1%							60.4	1.1	29.5	0.8	D
108 SR 65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,883	104	124.1%	422	56	91.8%				52.7	3.6	33.6	3.5	D
109 SR 65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	4,305	98	119.9%	1,051	22	91.4%	886	57	112.2%	59.7	1.4	29.5	1.1	D
110 SR 65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,470	108	113.2%							62.4	0.3	32.2	0.8	D
111 SR 65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,472	108	113.2%	521	30	93.0%				57.8	9.2	27.7	10.3	C
112 SR 65 SB - Pleasant Grove Blvd EB On-ramp	Merge	4,995	108	110.8%	618	36	99.7%				48.6	15.6	44.3	25.9	E
113 SR 65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	5,615	120	109.5%							45.3	15.0	49.5	21.3	F
114 SR 65 SB - Galleria Blvd Off-ramp	Diverge	5,615	120	109.4%				1,376	71	94.9%	42.0	12.0	54.9	19.6	F
115 SR 65 SB - Galleria Off to On-ramp	Basic	4,240	132	115.2%							30.2	3.7	80.1	12.9	F
117 SR 65 SB - Galleria Blvd On-ramp	Merge	4,244	141	115.3%	806	98	85.8%				31.5	1.5	77.5	7.8	F
118 SR 65 SB - I-80 WB Off-ramp	Diverge	5,067	143	109.7%				3,473	123	91.9%	54.9	1.5	32.6	1.2	D
125 SR 65 NB - I-80 WB On-ramp	Merge	2,514	55	58.1%	1,707	63	111.5%				36.0	9.6	56.8	17.4	F
126 SR 65 NB - I-80 to Stanford Ranch Rd	Basic	4,219	76	72.0%							59.3	1.8	34.9	1.2	D
127 SR 65 NB - Stanford Ranch Rd Off-ramp	Diverge	4,219	76	72.0%				683	46	93.6%	61.1	0.7	30.8	0.6	D
128 SR 65 NB - Stanford Ranch Rd Off to On-ramp	Basic	3,536	88	68.9%							62.9	0.2	27.1	0.6	D
129 SR 65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Weave	3,534	86	68.9%	1,068	42	92.1%	584	60	91.3%	60.6	0.5	29.6	0.7	D
132 SR 65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	4,018	87	71.1%							62.4	0.2	30.6	0.6	D
133 SR 65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	4,018	86	71.1%	348	18	93.9%	1,482	58	95.0%	62.7	0.2	24.6	0.4	C
134 SR 65 NB - Blue Oaks Blvd Off to On-ramp	Basic	2,881	75	64.6%							63.2	0.2	22.2	0.7	C
135 SR 65 NB - Blue Oaks Blvd On-ramp	Merge	2,879	71	64.5%	530	32	91.4%				57.8	1.3	25.7	0.9	C
136 SR 65 NB - Blue Oaks Blvd to HOV Lane End	Basic	3,405	82	67.6%							62.6	0.5	26.5	0.7	D
162 SR 65 NB - HOV Lane End to Sunset Blvd	Basic	3,405	77	70.1%							63.1	0.2	22.3	0.3	C
137 SR 65 NB - Sunset Blvd Off-ramp	Diverge	3,407	76	67.6%				1,321	67	107.4%	59.5	13.2	26.3	16.4	C
138 SR 65 NB - Sunset Blvd Off to On-ramp	Basic	2,082	68	54.7%							63.8	0.1	16.9	0.5	B
139 SR 65 NB - Sunset Blvd EB On-ramp	Merge	2,085	65	54.7%	109	19	109.3%				62.3	0.9	17.6	0.6	B
140 SR 65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	2,191	71	56.0%	290	21	90.6%	673	45	81.0%	63.6	0.1	16.3	0.7	B
141 SR 65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	1,809	67	53.2%							63.8	0.2	15.3	0.4	B
149 SR 65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	1,809	67	53.1%	652	45	98.8%				51.8	2.5	22.3	1.5	C
150 SR 65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	2,460	84	60.4%	439	29	109.6%				62.1	0.7	24.2	1.0	C
151 SR 65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	2,896	92	64.8%							62.6	0.5	25.1	0.9	C
142 SR 65 NB - Twelve Bridges Dr Off-ramp	Diverge	2,895	95	65.5%				597	50	85.3%	62.1	0.6	25.9	1.0	C
143 SR 65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,302	74	61.9%							63.4	0.2	19.8	0.6	C
144 SR 65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,303	75	61.9%	766	7	102.1%	1,150	51	101.8%	63.0	0.2	18.8	0.5	B
152 SR 65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	1,915	64	62.6%							64.0	0.1	16.4	0.6	B
153 SR 65 NB - Ferrari Ranch Rd Off-ramp	Diverge	1,915	66	62.6%				1,088	58	98.9%	63.8	0.1	16.8	0.6	B
154 SR 65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	825	56	42.1%							64.6	0.2	7.3	0.4	A
155 SR 65 NB - Ferrari Ranch Rd On-ramp	Merge	827	59	42.2%	65	5	93.3%				63.5	0.2	7.3	0.4	A

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VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 5 (No Build)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	4,363	308	57.1%	433	81	46.1%				19.9	6.9	163.8	4.5	F
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	4,866	364	56.7%							11.7	2.5	153.6	6.9	F
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	4,927	321	57.4%				718	114	60.8%	13.1	1.0	107.4	4.5	F
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	4,250	284	57.4%				290	64	66.0%	15.7	1.6	180.3	7.1	F
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	3,970	273	57.0%							17.8	3.2	170.8	4.5	F
6 I-80 EB - Douglas Blvd On-ramp	Merge	3,985	289	57.3%	399	42	27.3%				9.4	0.9	180.7	3.7	F
7 I-80 EB - Eureka Rd Off-ramp	Diverge	4,403	318	52.3%				564	83	56.4%	13.5	2.9	149.3	5.5	F
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	3,876	257	52.2%							18.8	3.0	141.3	4.4	F
9 I-80 EB - Eureka Rd EB On-ramp	Merge	3,882	247	52.3%	320	25	96.9%				13.4	1.4	96.3	9.5	F
10 I-80 EB - Eureka Rd to Taylor Rd	Weave	4,204	225	54.2%	857	76	78.6%	361	55	40.5%	10.2	1.7	141.6	5.0	F
11 I-80 EB - Taylor Rd to SR-65	Basic	4,706	184	59.2%							8.4	0.4	133.3	1.9	F
17 I-80 EB - SR-65 Off-ramp	Diverge	4,710	183	59.2%				2,643	80	61.0%	21.6	2.7	65.5	10.1	F
18 I-80 EB - SR-65 Off to On-ramp	Basic	2,044	142	56.5%							64.1	0.2	9.7	0.9	A
19 I-80 EB - SR-65 On-ramp	Merge	2,044	140	56.5%	1,863	78	85.9%				61.9	0.5	20.9	1.1	C
21 I-80 EB - SR-65 to Rocklin Rd	Basic	3,900	161	67.4%							63.6	0.2	18.3	0.7	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	3,903	164	67.4%				869	73	63.9%	63.6	0.2	15.3	0.8	B
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,033	130	68.5%							63.7	0.2	17.2	0.8	B
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,031	130	68.4%	142	55	52.7%				61.5	0.9	17.4	0.8	B
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,172	124	67.5%							63.7	0.1	17.6	1.0	B
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,173	125	67.5%				425	43	65.4%	63.0	0.5	18.8	1.2	B
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,744	123	67.8%							63.6	0.4	16.3	1.1	B
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,745	123	67.8%	334	9	98.1%				61.2	0.4	15.8	0.8	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	3,078	128	70.1%	903	24	103.8%				56.2	1.5	22.2	1.2	C
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,076	22	104.8%				822	43	112.6%	59.4	0.7	21.7	0.4	C
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,249	44	102.8%							63.2	0.2	19.9	0.2	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,249	49	102.8%	410	11	102.5%				61.2	0.4	18.4	0.3	B
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,661	48	102.8%	402	8	100.6%				60.0	0.8	20.7	0.3	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,061	57	102.6%							63.4	0.1	22.2	0.3	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,061	61	102.6%				393	37	122.9%	59.4	10.6	26.0	10.7	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,661	71	100.6%							42.4	16.7	38.6	30.0	E
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,638	81	100.0%	1,145	251	74.8%				17.3	13.1	116.8	43.5	F
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	4,648	297	89.9%							14.0	3.3	113.2	17.5	F
47 I-80 WB - HOV Lane Start to SR-65	Basic	4,591	290	88.8%							31.0	1.5	60.2	1.8	F
48 I-80 WB - SR-65 Off-ramp	Diverge	4,583	280	88.6%				1,873	115	92.3%	38.1	1.7	113.9	3.1	F
49 I-80 WB - SR-65 Off to On-ramp	Basic	2,686	201	85.6%							63.8	0.5	16.6	1.0	B
50 I-80 WB - SR-65 On-ramp	Merge	2,690	201	85.7%	2,987	164	83.7%				48.6	21.4	41.5	35.8	E
60 I-80 WB - Taylor Rd On-ramp	Merge	5,665	384	84.4%	510	29	85.0%				44.8	22.8	61.4	55.8	F
61 I-80 WB - Atlantic St WB Off-ramp	Diverge	6,159	494	84.3%				538	71	96.0%	43.1	25.5	71.6	63.3	F
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	5,605	507	83.0%				863	103	84.6%	42.7	24.1	61.3	47.6	F
63 I-80 WB - Atlantic St Off to On-ramp	Basic	4,715	554	82.3%							34.8	24.8	77.2	58.9	F
64 I-80 WB - Atlantic St On-ramp	Merge	4,696	631	82.0%	994	175	74.2%				26.4	20.3	99.7	59.7	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	5,670	854	80.2%				1,008	142	90.8%	29.5	17.9	107.6	62.7	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	4,661	735	78.2%							57.4	3.5	26.4	5.2	D
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	4,658	734	78.2%	391	109	31.5%				62.3	0.6	20.4	3.4	C
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	5,046	736	70.1%	424	84	58.0%				61.4	0.9	15.4	3.0	B
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	5,460	753	68.8%							63.0	0.5	21.4	3.1	C
70 I-80 WB - Riverside Ave Off-ramp	Diverge	5,456	748	68.8%				1,005	148	90.6%	63.0	0.4	16.3	3.0	B
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	4,442	608	65.1%							63.1	0.4	22.9	3.7	C
72 I-80 WB - Riverside Ave NB On-ramp	Merge	4,439	607	65.1%	197	10	94.0%				63.5	0.3	18.6	2.9	B
73 I-80 WB - Riverside Ave SB On-ramp	Merge	4,635	611	65.9%	850	12	97.7%				62.8	0.7	17.6	2.3	B
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	5,474	609	69.3%							63.0	0.6	21.8	3.0	C
75 I-80 WB - Antelope Rd Off-ramp	Diverge	5,470	615	69.2%				1,106	141	97.8%	62.7	0.9	24.4	3.1	C
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	4,364	483	64.5%							63.3	0.8	17.6	2.6	B
77 I-80 WB - Antelope Rd WB On-ramp	Merge	4,366	479	64.5%	341	11	97.5%				61.8	0.7	16.1	1.9	B
78 I-80 WB - Antelope Rd to Truck Scales	Weave	4,706	476	66.1%	531	23	100.2%	59	14	98.0%	63.2	0.4	17.4	2.3	B
79 I-80 WB - Truck Scales Off to On-ramp	Basic	5,174	484	68.2%							63.6	0.3	19.1	2.5	C
80 I-80 WB - Truck Scales On-ramp	Merge	5,172	477	68.1%	57	13	95.3%				63.4	0.3	19.7	1.5	B
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	5,230	471	68.4%							62.6	0.6	20.6	2.6	C
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	5,228	477	68.3%				1,088	111	87.0%	63.1	0.4	19.8	2.1	B
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	4,143	395	64.7%							63.8	0.3	16.5	1.3	B
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	4,144	396	64.7%	920	22	102.2%				60.0	0.7	18.2	1.0	B
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	5,067	385	69.4%	582	9	100.3%				63.0	0.5	21.7	1.0	C

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VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Design Year - Alt 5 (No Build)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	1,147	11	99.7%				142	20	118.6%	64.4	0.2	9.7	0.1	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	1,005	26	97.6%							64.5	0.3	8.2	0.3	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	1,006	25	97.6%	682	22	100.3%				61.4	0.3	12.0	0.3	B
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,689	33	98.8%	678	26	101.2%				60.6	0.2	15.5	0.4	B
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,368	50	99.5%							63.3	1.3	20.4	0.7	C
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	2,368	51	99.5%							63.6	0.7	20.2	0.5	C
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	2,370	49	99.6%	1,186	16	82.4%	877	46	106.9%	60.4	0.6	20.8	0.3	C
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,679	54	89.3%							63.5	0.3	21.9	0.5	C
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,679	54	89.3%	545	41	90.9%				60.8	0.6	25.3	0.7	C
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	3,226	74	89.6%							62.8	0.2	26.8	0.7	D
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	3,226	76	89.6%				934	61	91.6%	63.0	0.1	24.1	0.7	C
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,288	77	88.7%							63.5	0.2	18.6	0.6	C
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,288	77	88.7%	391	35	91.0%				62.9	0.2	18.1	0.7	B
148 SR-65 SB - Placer Pkwy EB On-ramp	Merge	2,680	90	89.0%	669	45	94.2%				61.7	0.2	20.7	0.9	C
101 SR-65 SB - Sunset Blvd Off-ramp	Diverge	3,348	94	90.0%				578	38	94.7%	62.8	0.2	21.9	0.8	C
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	2,770	84	89.1%							62.9	0.2	22.4	0.9	C
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	2,769	81	89.0%	741	57	114.0%				50.5	3.7	32.4	4.8	D
104 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Weave	3,503	102	93.2%	806	40	93.7%	818	56	94.1%	62.2	0.3	24.0	0.6	C
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,482	105	92.9%							62.1	0.6	25.9	0.5	C
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,482	106	92.8%	366	28	96.2%				56.8	1.0	27.9	0.8	C
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	3,843	113	93.1%	1,014	70	74.0%	731	62	97.5%	61.0	0.3	26.3	0.7	C
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,119	117	86.7%							62.8	0.2	29.2	0.9	D
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,119	114	86.7%	332	27	79.0%				62.1	0.3	22.3	0.6	C
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	4,452	118	86.1%	1,012	50	95.5%				59.1	1.5	28.8	0.8	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	5,461	122	87.7%							60.5	1.1	32.0	0.9	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	5,461	122	87.7%				1,411	78	86.6%	60.2	7.6	32.7	8.4	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,046	99	88.0%							56.9	10.6	38.5	15.0	E
117 SR-65 SB - Galleria Blvd On-ramp	Merge	4,040	109	87.8%	828	66	72.6%				50.7	9.0	39.5	9.7	E
118 SR-65 SB - I-80 WB Off-ramp	Diverge	4,866	123	84.8%				2,994	108	83.9%	57.4	12.1	30.6	13.1	D
125 SR-65 NB - I-80 WB On-ramp	Merge	2,543	79	58.7%	1,857	124	91.5%				27.1	0.5	83.6	1.5	F
126 SR-65 NB - I-80 to Stanford Ranch Rd	Basic	4,397	85	69.1%							60.0	1.8	36.0	2.0	E
127 SR-65 NB - Stanford Ranch Rd Off-ramp	Diverge	4,397	85	69.1%				804	56	56.2%	61.0	1.3	32.4	1.1	D
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	3,594	85	72.9%							63.2	0.1	27.1	0.6	D
129 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Weave	3,593	86	72.9%	1,453	57	91.9%	842	55	83.4%	60.8	0.4	29.8	0.7	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	4,203	93	76.4%							62.7	0.2	30.2	0.7	D
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	4,200	92	76.4%	741	49	102.9%	1,847	93	91.0%	62.7	0.1	25.2	0.5	C
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	3,095	88	73.9%							63.5	0.1	21.3	0.7	C
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	3,095	84	73.9%	331	42	49.5%				60.4	0.7	23.1	0.9	C
136 SR-65 NB - Blue Oaks Blvd to HOV Lane End	Basic	3,424	101	70.5%							63.2	0.2	24.3	0.9	C
162 SR-65 NB - HOV Lane End to Sunset Blvd	Basic	3,422	99	70.4%							63.1	0.2	22.2	0.7	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	3,423	100	70.4%				931	60	82.4%	63.6	0.1	21.0	0.5	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	2,492	91	66.8%							63.5	0.2	20.4	1.0	C
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	2,491	89	66.8%	257	22	102.6%				62.2	0.5	21.4	1.1	C
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	2,746	96	69.0%	712	46	101.7%	994	66	78.3%	63.2	0.2	20.5	0.7	C
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	2,459	91	72.1%							63.6	0.2	20.0	0.8	C
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	2,459	91	72.1%	588	25	103.1%				55.4	1.5	25.2	1.2	C
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,047	88	76.6%	487	13	110.7%				62.1	0.4	28.7	0.8	D
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	3,533	90	79.9%							62.6	0.2	29.9	0.8	D
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	3,532	87	79.9%				529	36	67.8%	62.1	0.5	30.4	0.8	D
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	3,001	91	82.5%							62.9	0.4	25.8	0.7	C
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,997	90	82.3%	1,021	14	102.1%	1,307	57	82.7%	62.8	0.3	23.8	0.5	C
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	2,709	67	88.5%							63.8	0.1	21.4	0.4	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	2,707	66	88.5%				1,653	48	88.8%	63.5	0.2	21.1	0.4	C
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	1,055	55	87.9%							64.4	0.1	9.1	0.5	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	1,055	53	87.9%	117	5	97.3%				63.2	0.2	9.1	0.5	A

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 5 (No Build)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Parkway	Signal	3,834	3,899	101.7%	88.0	12.7	F
2	SR 65 SB Ramps/Twelve Bridges Dr	Signal	2,106	2,271	107.8%	56.6	21.7	E
3	SR 65 NB Ramps/Twelve Bridges Dr	Signal	2,223	2,219	99.8%	50.6	8.5	D
4	SR 65 SB Ramps/Sunset Blvd	Signal	3,337	3,422	102.6%	29.4	19.3	C
5	SR 65 NB Ramps/Sunset Blvd	Signal	3,598	3,883	107.9%	56.3	73.6	E
6	SR 65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	6,004	5,015	83.5%	136.3	22.8	F
7	SR 65 NB Ramps/Blue Oaks Blvd	Signal	3,280	3,152	96.1%	115.5	19.8	F
8	SR 65 SB Ramps/Pleasant Grove Blvd	Signal	4,220	4,370	103.6%	12.3	8.6	B
9	SR 65 NB Ramps/Pleasant Grove Blvd	Signal	3,324	3,345	100.6%	30.4	12.9	C
10	Stanford Ranch Road/Five Star Blvd	Signal	3,228	2,901	89.9%	150.9	45.4	F
11	SR 65 NB Ramps/Stanford Ranch Rd	Signal	3,873	3,615	93.3%	126.9	20.2	F
12	SR 65 SB Ramps/Galleria Blvd	Signal	4,427	4,189	94.6%	37.7	18.3	D
13	Galleria Blvd/Antelope Creek Dr	Signal	3,438	3,327	96.8%	10.8	1.8	B
14	Galleria Blvd/Roseville Pkwy	Signal	6,731	6,923	102.9%	39.3	3.0	D
15	Creekside Ridge Dr/Roseville Pkwy	Signal	4,357	4,290	98.5%	10.2	2.4	B
16	Taylor Road/East Roseville Pkwy	Signal	5,810	5,918	101.9%	98.2	16.4	F
17	North Sunrise Ave/East Roseville Pkwy	Signal	5,411	5,456	100.8%	29.7	3.0	C
18	Wills Rd/Atlantic St	Signal	2,499	2,605	104.3%	20.1	2.4	C
19	I-80 WB Ramps/Atlantic St	Signal	3,959	4,160	105.1%	12.0	6.9	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	6,193	5,181	83.7%	55.3	11.9	E
21	North Sunrise Ave/Eureka Rd	Signal	4,583	4,750	103.6%	29.2	2.0	C
22	Harding Blvd/Wills Rd	Signal	2,662	2,812	105.6%	17.7	2.4	B
23	Harding Blvd/Douglas Blvd	Signal	3,363	3,120	92.8%	24.8	2.2	C
24	I-80 WB Ramps/Douglas Blvd	Signal	3,849	3,825	99.4%	49.7	12.5	D

Network Summary	
Total Demand Volume (veh/hr)	96,309
Total Volume Served (veh/hr)	94,648
Percent Served	98.3%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Design Year - Alt 5 (No Build)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	4,705	4,064	86.4%	94.3	2.6	F
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	2,236	2,261	101.1%	25.7	30.6	C
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	2,492	2,218	89.0%	77.2	21.7	E
4	SR-65 SB Ramps/Sunset Blvd	Signal	4,238	4,167	98.3%	23.4	9.8	C
5	SR-65 NB Ramps/Sunset Blvd	Signal	4,445	4,449	100.1%	23.4	24.5	C
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	7,081	5,090	71.9%	441.5	19.3	F
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	4,189	3,166	75.6%	115.2	10.6	F
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	6,352	6,323	99.5%	9.0	0.8	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	5,215	5,123	98.2%	10.4	0.6	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	4,967	4,297	86.5%	36.1	2.0	D
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	6,233	5,327	85.5%	35.6	10.5	D
12	SR-65 SB Ramps/Galleria Blvd	Signal	6,476	5,808	89.7%	28.5	17.9	C
13	Galleria Blvd/Antelope Creek Dr	Signal	4,957	4,271	86.2%	23.7	2.3	C
14	Galleria Blvd/Roseville Pkwy	Signal	9,326	6,768	72.6%	213.2	15.2	F
15	Creekside Ridge Dr/Roseville Pkwy	Signal	5,414	3,755	69.4%	23.9	5.9	C
16	Taylor Rd/East Roseville Pkwy	Signal	7,545	5,719	75.8%	48.2	3.6	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	6,475	5,026	77.6%	251.4	16.0	F
18	Wills Rd/Atlantic St	Signal	3,587	3,263	91.0%	49.0	31.8	D
19	I-80 WB Ramps/Atlantic St	Signal	5,165	4,410	85.4%	51.3	39.9	D
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	6,750	5,732	84.9%	91.9	21.9	F
21	North Sunrise Ave/Eureka Rd	Signal	6,472	6,039	93.3%	183.6	19.1	F
22	Harding Blvd/Wills Rd	Signal	3,601	3,217	89.3%	27.1	14.0	C
23	Harding Blvd/Douglas Blvd	Signal	4,006	2,460	61.4%	292.7	63.2	F
24	I-80 WB Ramps/Douglas Blvd	Signal	4,647	2,707	58.2%	236.6	48.7	F

Network Summary	
Total Demand Volume (veh/hr)	126,574
Total Volume Served (veh/hr)	105,660
Percent Served	83.5%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

I-80/SR 65 Interchange Improvements

**Vissim Model Results – Construction Year Alternative 1
(Taylor Road Full Access Interchange)**

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	168,987	26
Travel Distance [mi]	All Vehicles	794,081	1,325
Travel Time [h]	All Vehicles	16,987	122.5
Average Speed [mph]	All Vehicles	46.7	0.3
Total Delay [h]	All Vehicles	3,365	107.1
Average Delay per Vehicle [s]	All Vehicles	70	2.2
VHD/VMT [min/mile]	All Vehicles	0.25	0.01
Number of Vehicles Served	HOV	32,849	15
Travel Distance [mi]	HOV	164,392	414
Travel Time [h]	HOV	3,353	18
Average Speed [mph]	HOV	49.0	0.2
Total Delay [h]	HOV	562	15
Average Delay per Vehicle [s]	HOV	60	2
VHD/VMT [min/mile]	HOV	0.21	0.01
Number of Vehicles Served	Truck	7,706	12
Travel Distance [mi]	Truck	38,361	333
Travel Time [h]	Truck	836	9
Average Speed [mph]	Truck	45.9	0
Total Delay [h]	Truck	173	7
Average Delay per Vehicle [s]	Truck	79	3
VHD/VMT [min/mile]	Truck	0.27	0.01

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	32,850	7,710	168,990
Demand Volume	33,900	8,270	169,890
Percent Demand Served	96.9%	93.2%	99.5%
Vehicle Miles of Travel	164,390	38,360	794,080
Person Miles of Travel	345,220	40,280	976,830
Vehicle Hours of Travel	3,350	840	16,990
Vehicle Hours of Delay	560	170	3,360
VHD % of VHT	16.7%	20.2%	19.8%
Average Delay per Vehicle (min)	1.02	1.32	1.19
Person Hours of Delay	1,180	180	3,990
Average Travel Speed	49.0	45.9	46.7

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	234,966	53
Travel Distance [mi]	All Vehicles	934,494	1,185
Travel Time [h]	All Vehicles	21,495	40.3
Average Speed [mph]	All Vehicles	43.5	0.1
Total Delay [h]	All Vehicles	5,075	37.3
Average Delay per Vehicle [s]	All Vehicles	77	0.6
VHD/VMT [min/mile]	All Vehicles	0.33	0.00
Number of Vehicles Served	HOV	46,863	36
Travel Distance [mi]	HOV	199,173	471
Travel Time [h]	HOV	4,409	9
Average Speed [mph]	HOV	45.2	0.1
Total Delay [h]	HOV	952	6
Average Delay per Vehicle [s]	HOV	72	0
VHD/VMT [min/mile]	HOV	0.29	0.00
Number of Vehicles Served	Truck	9,239	7
Travel Distance [mi]	Truck	37,417	160
Travel Time [h]	Truck	870	3
Average Speed [mph]	Truck	43.0	0
Total Delay [h]	Truck	208	1
Average Delay per Vehicle [s]	Truck	80	0
VHD/VMT [min/mile]	Truck	0.33	0.00

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	46,860	9,240	234,970
Demand Volume	47,310	9,720	233,220
Percent Demand Served	99.0%	95.1%	100.8%
Vehicle Miles of Travel	199,170	37,420	934,490
Person Miles of Travel	418,260	39,290	1,155,450
Vehicle Hours of Travel	4,410	870	21,500
Vehicle Hours of Delay	950	210	5,080
VHD % of VHT	21.5%	24.1%	23.6%
Average Delay per Vehicle (min)	1.22	1.36	1.30
Person Hours of Delay	2,000	220	6,140
Average Travel Speed	45.2	43.0	43.5

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,343	52	110.1%	1,105	26	111.6%				61.8	0.8	29.1	0.6	D
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,442	76	110.2%							58.4	2.4	35.6	2.0	E
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,430	87	110.1%				1,382	79	108.0%	60.6	1.4	29.8	0.8	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,044	64	110.4%				425	38	111.9%	62.0	1.4	24.4	1.2	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,618	68	110.3%							62.9	0.3	25.9	0.3	C
6 I-80 EB - Douglas Blvd On-ramp	Merge	6,618	71	110.3%	1,071	35	100.1%				58.7	4.0	35.3	4.8	E
7 I-80 EB - Eureka Rd Off-ramp	Diverge	7,691	91	108.8%				1,599	84	105.9%	58.1	3.6	37.5	4.5	E
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	6,083	114	109.4%							63.0	0.2	24.9	0.3	C
9 I-80 EB - Eureka Rd EB On-ramp	Merge	6,083	119	109.4%	182	31	107.2%				62.8	0.1	22.6	0.3	C
10 I-80 EB - Eureka Rd to SR-65	Weave	6,264	120	109.3%	810	47	106.6%	4,232	88	108.2%	62.9	0.2	20.0	0.2	C
11 I-80 EB - SR-65 Off-ramp to Taylor Rd Off-ramp	Basic	2,844	118	110.2%							63.7	0.3	15.2	0.7	B
12 I-80 EB - Taylor Rd Off-ramp	Diverge	2,844	117	110.2%				314	35	104.8%	63.9	0.1	14.7	0.6	B
13 I-80 EB - Taylor Rd Off to On-ramp	Basic	2,536	96	111.2%							64.0	0.1	14.6	0.5	B
14 I-80 EB - Taylor Rd On-ramp	Merge	2,536	99	111.2%	193	26	92.0%				64.0	0.1	15.9	0.6	B
19 I-80 EB - SR-65 On-ramp	Merge	2,731	107	109.7%	1,654	71	109.6%				62.2	0.3	26.6	0.7	C
20 I-80 EB - SR-65 to Rocklin Rd	Basic	4,385	115	109.6%							63.1	0.1	22.1	0.6	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	4,402	136	110.0%				1,353	86	107.4%	63.6	0.1	21.2	0.5	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,050	97	111.3%							63.6	0.2	19.2	0.6	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,054	97	111.5%	203	30	106.7%				60.8	0.9	19.8	0.7	B
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,261	103	111.3%							63.4	0.1	20.1	0.7	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,262	104	111.3%				437	32	109.4%	62.8	0.3	21.3	0.9	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,826	103	111.7%							63.6	0.2	18.2	0.7	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,830	106	111.8%	130	7	100.3%				62.7	0.3	17.1	0.7	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	2,962	106	111.3%	418	16	112.9%				62.2	0.3	18.9	0.7	B
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,803	21	105.8%				817	50	106.1%	56.7	1.8	27.6	0.8	C
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,983	62	105.7%							62.2	0.5	24.2	0.5	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,985	68	105.7%	50	4	82.8%				63.1	0.2	21.5	0.4	C
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	4,033	72	105.3%	304	9	104.8%				61.5	0.8	23.0	0.4	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,331	74	105.1%							62.5	0.4	25.8	0.4	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,328	71	105.0%				249	31	103.8%	61.7	0.4	26.5	0.3	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	4,074	82	105.0%							63.1	0.2	24.4	0.5	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	4,076	80	105.0%	887	51	98.6%				60.0	1.2	25.8	0.5	C
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	4,953	95	103.6%							61.3	0.5	28.4	0.4	D
47 I-80 WB - SR-65 Off-ramp	Diverge	4,953	90	103.6%				1,315	70	103.6%	63.4	0.3	22.3	0.4	C
48 I-80 WB - Taylor Rd Off-ramp	Diverge	3,633	92	103.5%				428	41	97.2%	63.2	0.3	19.4	0.5	B
49 I-80 WB - Taylor Rd Off to On-ramp	Basic	3,201	99	104.3%							63.7	0.1	17.3	0.3	B
50 I-80 WB - Taylor Rd On-ramp	Merge	3,197	102	104.1%	777	55	110.9%				62.2	0.4	20.3	0.6	C
60 I-80 WB - SR-65 to Atlantic St	Weave	3,969	120	105.3%	4,176	118	104.7%	307	29	99.0%	59.6	1.0	24.9	0.6	C
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	7,835	155	105.2%				920	61	107.0%	59.8	2.2	29.0	2.8	D
63 I-80 WB - Atlantic St Off to On-ramp	Basic	6,916	146	104.9%							57.4	6.4	33.7	5.5	D
64 I-80 WB - Atlantic St On-ramp	Merge	6,915	145	104.9%	883	36	109.0%				39.4	11.5	47.1	14.0	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,792	149	105.3%				1,033	54	104.4%	44.5	4.8	51.0	7.0	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,765	172	105.5%							39.1	10.2	63.5	17.8	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,767	185	105.6%	995	64	107.0%				25.8	3.4	98.7	15.7	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,762	196	105.7%	458	25	108.9%				28.3	0.7	77.1	1.5	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,219	189	105.9%							59.0	1.3	35.6	1.4	E
70 I-80 WB - Riverside Ave Off-ramp	Diverge	8,189	158	105.5%				771	50	97.6%	62.0	0.1	30.0	0.9	D
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	7,416	150	106.4%							62.1	0.1	35.0	0.6	E
72 I-80 WB - Riverside Ave NB On-ramp	Merge	7,416	154	106.4%	242	12	73.4%				62.7	0.1	28.1	0.5	D
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,660	147	104.9%	936	19	94.6%				62.5	0.3	27.1	0.8	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	8,601	157	103.7%							62.0	0.2	31.8	0.5	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	8,603	151	103.8%				385	32	96.2%	61.5	0.5	32.7	0.6	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	8,223	155	104.2%							62.2	0.3	30.8	0.4	D
77 I-80 WB - Antelope Rd WB On-ramp	Merge	8,225	155	104.2%	579	21	99.8%				61.1	1.0	30.9	1.0	D
78 I-80 WB - Antelope Rd to Truck Scales	Weave	8,807	154	104.0%	408	11	88.7%	91	21	90.9%	51.8	7.8	39.7	8.5	E
79 I-80 WB - Truck Scales Off to On-ramp	Basic	9,210	176	104.3%							35.8	10.3	70.1	17.6	F
80 I-80 WB - Truck Scales On-ramp	Merge	9,253	192	104.8%	92	17	91.8%				27.3	8.7	87.5	16.0	F
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	9,422	167	105.5%							35.5	4.5	66.7	8.1	F
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	9,433	166	105.6%				797	54	107.7%	35.2	2.8	56.0	5.1	F
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	8,726	154	106.5%							26.9	0.5	91.9	2.1	F
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	8,768	162	107.1%	860	18	102.3%				27.0	0.5	95.6	1.5	F
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	9,685	138	107.3%	878	27	95.4%				33.0	0.3	76.3	1.0	F

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
AM Peak Period

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	526	6	116.9%				19	8	93.0%	64.6	0.2	7.2	0.1	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	509	16	118.5%							64.5	0.2	7.0	0.2	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	510	17	118.5%	889	22	107.1%				59.7	0.3	11.3	0.1	B
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,400	30	111.1%	832	15	109.5%				59.1	0.5	16.3	0.4	B
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,232	39	110.5%							61.9	1.2	26.5	0.8	D
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	2,233	45	110.5%							62.3	0.6	25.3	0.5	C
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	2,234	44	110.6%	1,278	53	105.6%	341	39	106.5%	58.3	2.0	26.7	0.9	C
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	3,169	73	108.9%							57.2	8.4	33.4	6.2	D
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	3,170	80	108.9%	657	39	113.2%				50.3	7.9	40.4	6.9	E
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	3,826	102	109.6%							60.3	0.8	36.0	0.9	E
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	3,825	99	109.6%				430	48	113.0%	61.6	0.9	32.9	0.8	D
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	3,396	88	109.2%							62.2	0.7	30.0	0.7	D
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	3,393	92	109.1%	350	27	106.0%				55.7	8.2	35.2	6.6	E
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	3,740	91	108.7%	148	21	105.4%	440	43	107.4%	60.6	0.9	30.8	0.9	D
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,441	110	108.6%							57.3	9.1	33.1	8.2	D
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,441	107	108.5%	361	27	112.7%				47.2	13.8	44.9	17.9	E
104 SR-65 SB - Sunset Blvd EB On-ramp	Merge	3,802	112	108.9%	452	24	105.0%				43.6	7.2	50.6	8.8	F
105 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	4,256	126	108.6%							54.2	3.3	42.3	3.2	E
106 SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	4,257	123	108.6%				829	49	109.1%	58.7	3.4	38.8	2.4	E
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,426	104	108.4%							61.5	3.0	30.5	2.3	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,424	107	108.4%	412	40	105.6%				49.9	8.9	39.5	9.5	E
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	3,834	94	108.0%	1,135	52	102.3%	727	65	110.1%	50.3	6.5	40.1	6.5	E
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,241	106	106.0%							60.4	1.1	37.5	1.2	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,240	110	106.0%	660	39	104.8%				60.4	0.4	29.0	0.6	D
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	4,901	124	105.8%	741	37	104.4%				58.4	3.2	31.6	2.1	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	5,646	130	105.7%							60.4	0.9	33.0	0.8	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	5,647	129	105.7%				917	58	103.0%	62.2	0.4	28.0	0.6	C
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,736	112	106.4%							62.6	0.2	26.8	0.6	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,739	114	106.5%	1,071	51	102.0%	4,165	112	104.4%	60.5	0.5	24.3	0.4	C
120 SR-65 SB to EB I-80 Connector	Basic	1,645	68	108.9%							56.3	0.4	17.4	0.7	B
121 SR-65 SB to WB I-80 Connector	Basic	3,312	101	98.6%							55.3	0.4	23.2	0.4	C
123 SR-65 NB from WB I-80 Connector	Basic	1,316	73	103.7%							56.7	0.1	13.9	0.8	B
125 SR-65 NB from EB I-80 Connector	Basic	3,498	83	108.3%							54.1	0.1	23.9	0.4	C
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	3,501	87	108.4%	2,051	83	105.2%	1,073	65	104.1%	60.9	0.2	21.1	0.4	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	4,486	105	108.1%							62.5	0.4	23.1	0.5	C
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	4,486	115	108.1%	407	47	101.6%				55.9	4.0	11.2	1.7	B
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	4,894	125	107.6%							54.6	4.6	37.2	3.7	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	4,894	125	107.6%				898	57	99.8%	57.2	3.6	34.6	2.9	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	3,996	106	109.5%							61.2	0.7	37.0	0.8	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	4,000	99	109.6%	216	30	98.0%	1,904	79	111.4%	62.6	0.2	27.7	0.5	C
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	2,318	100	107.3%							63.5	0.2	20.3	1.0	C
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	2,319	100	107.4%	540	29	98.1%				59.9	0.9	22.9	1.1	C
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	2,860	111	105.5%							62.1	0.5	25.1	1.2	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	2,858	106	105.4%				1,214	73	104.7%	63.5	0.2	19.6	0.8	B
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	1,641	70	105.9%							63.7	0.2	15.0	0.6	B
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	1,641	70	105.9%	59	16	99.0%				63.6	0.2	14.8	0.6	B
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	1,702	77	105.7%	192	26	113.1%	325	38	98.5%	63.5	0.2	14.4	0.5	B
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	1,570	71	108.2%							63.6	0.2	14.4	0.5	B
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	1,571	74	108.3%	200	19	105.0%				63.1	0.2	14.8	0.6	B
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	1,771	74	108.0%	209	30	110.2%				62.8	0.3	16.3	0.5	B
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	1,978	77	108.1%							63.0	0.4	18.0	0.6	B
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	1,977	78	108.1%				404	44	96.3%	63.1	0.2	18.1	0.6	B
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	1,576	73	111.8%							63.6	0.2	15.1	0.5	B
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	1,578	71	111.9%	266	26	106.5%	867	46	114.1%	63.8	0.1	12.6	0.4	B
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	978	52	108.7%							64.0	0.2	10.8	0.6	A
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	979	52	108.7%				687	47	107.3%	64.4	0.1	8.9	0.5	A
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	292	32	112.4%							64.7	0.3	3.0	0.3	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	293	34	112.6%	15	3	74.5%				64.3	0.2	3.0	0.2	A

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,711	43	102.0%	980	21	96.1%				61.5	1.0	27.4	0.4	C
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,695	51	101.3%							60.9	0.7	32.2	0.4	D
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,689	68	101.3%				1,163	62	101.1%	61.5	0.9	28.8	0.6	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,529	84	101.3%				647	47	102.7%	62.0	1.2	25.0	0.8	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,881	93	101.2%							63.0	0.2	25.0	0.4	C
6 I-80 EB - Douglas Blvd On-ramp	Merge	6,885	87	101.2%	1,772	49	101.8%				60.5	1.1	32.6	1.0	D
7 I-80 EB - Eureka Rd Off-ramp	Diverge	8,659	115	101.4%							60.3	0.9	35.2	0.9	E
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	7,467	118	101.5%							62.8	0.2	27.3	0.4	D
9 I-80 EB - Eureka Rd EB On-ramp	Merge	7,469	119	101.5%	241	31	104.9%				62.2	0.2	26.2	0.4	C
10 I-80 EB - Eureka Rd to SR-65	Weave	7,708	123	101.6%	1,269	68	99.1%	5,291	112	101.8%	61.5	0.5	23.8	0.6	C
11 I-80 EB - SR-65 Off-ramp to Taylor Rd Off-ramp	Basic	3,686	137	100.4%							63.5	0.1	16.6	0.8	B
12 I-80 EB - Taylor Rd Off-ramp	Diverge	3,685	136	100.4%				577	50	97.8%	63.9	0.2	15.8	0.7	B
13 I-80 EB - Taylor Rd Off to On-ramp	Basic	3,105	123	100.8%							63.8	0.3	15.4	0.6	B
18 I-80 EB - Taylor Rd On-ramp	Merge	3,104	123	100.8%	128	22	91.6%				64.1	0.1	16.5	0.7	B
19 I-80 EB - SR-65 On-ramp	Merge	3,231	121	100.3%	2,067	69	99.4%				61.8	0.4	28.2	0.6	D
20 I-80 EB - SR-65 to Rocklin Rd	Basic	5,299	120	100.0%							62.8	0.2	23.6	0.5	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	5,295	149	99.9%				1,353	61	99.5%	63.4	0.1	22.8	0.5	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,937	130	99.9%							63.4	0.2	21.7	0.6	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,936	125	99.9%	259	21	99.6%				60.5	0.5	22.3	0.5	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	4,193	131	99.8%							63.2	0.1	22.9	0.6	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	4,195	128	99.9%				316	33	98.6%	62.2	1.0	24.3	0.8	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	3,879	119	100.0%							63.3	0.2	21.8	0.7	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	3,878	122	100.0%	255	9	102.1%				61.3	0.4	20.8	0.7	C
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	4,134	136	100.1%	598	12	101.3%				60.9	0.4	24.1	0.8	C
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	3,601	23	105.9%				563	45	106.2%	61.1	0.5	19.0	0.2	B
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,034	59	105.7%							63.8	0.3	17.9	0.3	B
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,035	57	105.7%	150	7	99.9%				63.5	0.1	16.6	0.5	B
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,183	55	105.4%	251	8	100.6%				62.7	0.2	17.6	0.4	B
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	3,431	62	104.9%							63.4	0.1	19.7	0.4	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	3,429	64	104.9%				275	37	102.0%	63.0	0.2	20.6	0.4	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,148	60	104.9%							63.6	0.2	18.6	0.4	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,147	59	104.9%	1,463	67	102.3%				59.1	1.2	24.2	0.7	C
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	4,607	106	104.0%							61.6	0.5	26.7	0.7	D
47 I-80 WB - SR-65 Off-ramp	Diverge	4,602	100	103.9%				1,581	71	102.0%	63.7	0.1	20.1	0.3	C
48 I-80 WB - Taylor Rd Off-ramp	Diverge	3,018	86	104.8%				268	26	103.0%	63.7	0.4	15.6	0.7	B
49 I-80 WB - Taylor Rd Off to On-ramp	Basic	2,749	78	104.9%							64.0	0.2	14.8	0.5	B
50 I-80 WB - Taylor Rd On-ramp	Merge	2,748	79	104.9%	594	43	100.6%				62.8	0.5	16.2	0.6	B
60 I-80 WB - SR-65 to Atlantic St	Weave	3,340	82	104.1%	3,611	115	98.6%	369	44	97.1%	61.6	0.4	20.4	0.4	C
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	6,584	139	101.5%				904	55	101.5%	62.3	0.5	22.0	0.5	C
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	5,680	135	101.4%							62.2	0.3	26.0	0.6	D
64 I-80 WB - Atlantic St On-ramp	Merge	5,678	132	101.4%	1,188	56	100.7%				61.2	0.6	24.8	0.8	C
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	6,869	145	101.3%				1,061	64	99.2%	60.4	0.6	31.5	1.0	D
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	5,810	141	101.7%							62.8	0.4	29.1	0.7	D
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	5,807	146	101.7%	1,284	54	100.3%				61.4	0.1	26.2	0.5	C
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,092	159	101.5%	612	26	92.7%				56.0	4.9	25.9	2.8	C
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	7,705	115	100.7%							61.2	0.5	31.3	0.7	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	7,705	151	100.7%				999	54	100.9%	62.5	0.1	27.6	0.5	C
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,705	139	100.7%							62.5	0.1	32.1	0.6	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,705	144	100.7%	203	9	96.7%				62.9	0.1	25.7	0.5	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	6,909	146	100.6%	746	20	108.2%				61.7	0.7	23.3	0.8	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	7,650	144	101.2%							62.4	0.2	28.5	0.9	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	7,649	150	101.2%				951	76	101.1%	61.9	0.8	29.3	1.1	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	6,702	142	101.2%							62.8	0.4	25.6	0.8	C
77 I-80 WB - Antelope Rd WB On-ramp	Merge	6,698	137	101.2%	359	3	94.4%				60.1	1.3	23.5	1.0	C
78 I-80 WB - Antelope Rd to Truck Scales	Weave	7,058	129	100.8%	367	12	99.1%	64	14	106.5%	62.3	0.5	24.7	0.4	C
79 I-80 WB - Truck Scales Off to On-ramp	Basic	7,361	146	100.7%							62.7	0.3	27.1	0.4	D
80 I-80 WB - Truck Scales On-ramp	Merge	7,363	147	100.7%	64	14	106.0%				62.4	0.3	26.6	0.5	C
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	7,424	151	100.7%							61.5	0.7	28.6	0.4	D
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	7,429	148	100.8%				1,089	73	99.0%	62.0	0.4	26.4	0.6	C
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	6,334	146	101.0%							62.8	0.4	24.2	0.4	C
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	6,333	144	101.0%	898	4	99.8%				56.4	1.1	26.5	1.0	C
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	7,228	150	100.8%	660	22	103.1%				61.6	0.9	28.8	0.7	D

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
PM Peak Period

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	379	5	34.1%				30	13	98.3%	64.6	0.3	3.3	0.1	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	350	17	32.4%							64.7	0.3	3.0	0.1	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	350	18	32.4%	475	12	101.0%				60.1	0.3	5.2	0.1	A
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	825	25	53.3%	348	11	99.4%				61.1	0.2	6.9	0.2	A
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	1,173	33	61.7%							64.1	0.2	11.7	0.4	B
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	1,173	33	61.8%							64.2	0.2	11.1	0.4	B
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	1,174	33	98.6%	1,169	58	99.9%	262	26	97.0%	61.3	0.5	14.2	0.4	B
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,080	61	99.5%							63.5	0.4	17.1	0.4	B
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,080	58	99.5%	412	33	98.2%				61.3	0.5	19.2	0.4	B
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	2,491	65	99.2%							63.0	0.2	20.6	0.4	C
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	2,492	64	99.3%				460	39	97.9%	63.2	0.2	19.2	0.3	B
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,033	65	99.6%							63.4	0.2	16.8	0.5	B
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,035	65	99.8%	339	28	99.7%				62.2	0.3	18.4	0.5	B
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	2,376	72	99.8%	303	26	101.0%	245	30	98.1%	62.2	0.6	19.8	0.2	B
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	2,436	80	100.2%							62.9	0.3	20.5	0.3	C
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	2,434	83	100.2%	613	32	107.5%				60.1	0.9	24.4	0.5	C
104 SR-65 SB - Sunset Blvd EB On-ramp	Merge	3,044	92	101.5%	716	38	100.8%				56.0	4.8	33.8	3.8	D
105 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	3,756	111	101.2%							60.2	1.1	33.0	1.8	D
106 SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	3,755	111	101.2%				735	54	96.7%	62.3	0.2	31.4	1.5	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,014	103	102.2%							63.0	0.2	25.4	0.8	C
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,015	105	102.2%	377	17	99.1%				59.8	0.7	27.2	1.0	C
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	3,393	110	101.9%	1,106	49	102.4%	569	49	98.1%	59.9	0.7	28.6	1.0	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	3,924	106	102.5%							62.0	0.4	32.6	1.1	D
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	3,923	106	102.4%	482	43	100.3%				61.3	0.4	25.6	0.7	C
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	4,401	109	102.1%	869	48	98.8%				60.6	1.6	27.0	0.9	C
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	5,272	124	101.6%							61.6	0.6	29.3	0.6	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	5,272	125	101.6%				1,032	69	102.2%	62.8	0.3	25.0	0.5	C
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,242	91	101.5%							63.0	0.2	24.3	0.8	C
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,245	93	101.5%	1,435	78	92.0%	3,609	116	98.6%	60.3	0.8	22.4	0.5	C
120 SR-65 SB to EB I-80 Connector	Basic	2,068	80	99.4%							56.1	0.3	18.7	0.8	C
121 SR-65 SB to WB I-80 Connector	Basic	3,025	98	90.6%							56.1	0.5	20.1	0.8	C
123 SR-65 NB from WB I-80 Connector	Basic	1,579	69	101.9%							56.4	0.2	16.6	0.7	B
125 SR-65 NB from EB I-80 Connector	Basic	4,276	106	101.6%							53.8	0.2	28.0	0.9	D
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,283	117	101.7%	2,592	93	102.1%	1,752	68	100.1%	59.9	0.3	24.3	0.6	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	5,123	107	102.5%							62.1	0.5	24.9	0.7	C
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	5,122	107	102.4%	787	39	92.6%				53.1	5.0	18.0	2.6	B
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	5,905	112	100.9%							54.3	3.1	38.4	2.9	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	5,905	110	100.9%				1,486	62	101.8%	57.1	2.2	34.9	1.8	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	4,415	87	100.6%							60.8	1.6	37.1	1.3	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	4,415	89	100.6%	587	41	101.2%	1,675	77	100.3%	61.9	0.5	30.2	0.7	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	3,327	85	100.8%							62.4	0.6	27.8	1.0	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	3,326	89	100.8%	706	45	105.3%				51.1	3.9	36.1	3.3	E
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	4,029	107	101.5%							61.0	0.6	34.0	1.4	D
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	4,029	109	101.5%				842	47	102.7%	62.7	0.2	28.9	0.9	D
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	3,185	94	101.1%							62.9	0.1	26.2	0.9	D
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	3,187	91	101.2%	57	18	94.3%				62.5	0.9	26.3	0.7	C
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	3,240	86	100.9%	359	34	105.5%	571	53		62.2	0.3	25.2	0.9	C
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	3,028	97	100.9%							62.7	0.3	25.4	1.1	C
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	3,026	93	100.9%	235	29	98.0%				62.0	0.4	26.1	0.9	C
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,261	89	100.7%	255	27	98.2%				61.5	0.3	27.9	0.9	C
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	3,520	98	100.6%							61.3	0.3	30.1	1.0	D
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	3,519	97	100.6%				718	46	102.5%	61.3	0.3	30.4	1.0	D
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,795	90	99.8%							63.0	0.2	23.1	0.7	C
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,790	90	99.6%	294	26	91.9%	1,267	67	100.6%	63.2	0.1	18.7	0.5	B
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	1,815	79	97.6%							63.5	0.1	17.7	0.6	B
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	1,815	79	97.6%				1,393	60	98.8%	64.1	0.2	13.8	0.4	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	421	46	93.6%							64.7	0.2	3.7	0.6	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	421	44	93.6%	29	3	97.3%				64.0	0.2	3.8	0.5	A

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	2,445	2,691	110.1%	11.4	1.2	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,165	1,295	111.2%	11.8	1.4	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,300	1,383	106.4%	10.4	0.8	B
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,330	2,500	107.3%	10.8	1.3	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,505	2,698	107.7%	13.8	1.0	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks	Signal	4,645	4,857	104.6%	33.1	2.7	C
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,050	3,281	107.6%	11.5	1.2	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	3,905	4,460	114.2%	11.0	4.9	B
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	3,070	3,118	101.6%	14.0	0.6	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	2,900	3,011	103.8%	24.3	1.2	C
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	3,075	3,228	105.0%	6.6	0.9	A
12	SR-65 SB Ramps/Galleria Blvd	Signal	2,980	3,035	101.8%	19.6	1.3	B
13	Galleria Blvd/Antelope Creek Dr	Signal	1,945	1,940	99.7%	9.3	1.9	A
14	Galleria Blvd/Roseville Pkwy	Signal	4,196	4,525	107.8%	31.3	1.6	C
15	Creekside Ridge Dr/Roseville Pkwy	Signal	2,830	3,020	106.7%	6.2	1.1	A
16	Taylor Rd/East Roseville Pkwy	Signal	4,365	4,597	105.3%	46.6	7.6	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	4,150	4,400	106.0%	27.7	3.0	C
18	Wills Rd/Atlantic St	Signal	1,905	2,102	110.3%	18.9	15.3	B
19	I-80 WB Ramps/Atlantic St	Signal	3,015	3,263	108.2%	28.7	17.4	C
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	4,561	4,860	106.6%	25.5	3.5	C
21	North Sunrise Ave/Eureka Rd	Signal	4,370	4,635	106.1%	36.2	5.3	D
22	Harding Blvd/Wills Rd	Signal	1,730	1,863	107.7%	15.5	3.8	B
23	Harding Blvd/Douglas Blvd	Signal	2,625	2,875	109.5%	21.7	4.7	C
24	I-80 WB Ramps/Douglas Blvd	Signal	3,705	4,018	108.4%	11.8	1.0	B

Network Summary	
Total Demand Volume (veh/hr)	72,767
Total Volume Served (veh/hr)	77,655
Percent Served	106.7%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
25	I-80 EB Ramps/Douglas Blvd	Signal	4,070	4,412	108.4%	8.7	0.5	A
26	North Sunrise Ave/Douglas Blvd	Signal	4,385	4,699	107.2%	35.4	2.3	D
27	Pacific St/Woodside Dr	Signal	1,895	2,099	110.8%	7.0	0.4	A
28	Pacific St/Sunset Blvd	Signal	2,695	2,983	110.7%	21.5	1.4	C
29	Granite Dr/Rocklin Rd	Signal	2,146	2,238	104.3%	18.2	1.0	B
30	I-80 WB Ramps/Rocklin Rd	Signal	2,465	2,578	104.6%	29.2	3.3	C
31	I-80 EB Ramps/Rocklin Rd	Signal	2,590	2,815	108.7%	38.8	9.8	D
32	Aguilar Rd/Rocklin Rd	Signal	1,990	2,182	109.7%	19.5	13.2	B
33	Lincoln Blvd/SR-65 NB Off-Ramp	Signal	2,390	2,617	109.5%	9.1	0.8	A
34	Lincoln Blvd/SR-65 SB On-Ramp	Signal	1,630	1,739	106.7%	26.1	2.5	C
35	SR-65 SB Ramps/Placer Pkwy	Signal	1,680	1,839	109.5%	11.9	0.7	B
36	SR-65 NB Ramps/Whitney Ranch Pkwy	Signal	1,645	1,763	107.2%	8.9	1.1	A
37	Taylor Rd/I-80 Ramps	Signal	2,535	2,706	106.7%	21.0	1.5	C
40	Galleria Blvd/Berry St	Signal	1,590	1,696	106.7%	10.7	13.0	B

Network Summary	
Total Demand Volume (veh/hr)	33,706
Total Volume Served (veh/hr)	36,366
Percent Served	107.9%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	27	8	167	48	NO
	Through						
	Right Turn	1500	28	8	167	48	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	7	2	61	15	NO
	Through						
	Right Turn	1500	7	2	61	15	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	49	7	171	24	NO
	Through						
	Right Turn	1330	51	7	173	24	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	71	6	279	40	NO
	Through						
	Right Turn	1400	9	2	89	23	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	28	6	141	21	NO
	Through	2260	69	5	266	33	NO
	Right Turn	200	0	0	21	35	NO

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	30	13	206	31	NO
	Through						
	Right Turn	1100	30	13	205	31	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	26	4	148	17	NO
	Through						
	Right Turn	1130	29	4	150	17	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	40	6	159	24	NO
	Through						
	Right Turn	1420	40	6	159	24	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
AM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	0	0	49	24	NO
WB	Left Turn						
	Through						
	Right Turn	1170	0	0	0	0	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	42	3	215	27	NO
WB	Left Turn						
	Through						
	Right Turn	1780	0	0	44	35	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 1 (Full Taylor)
 AM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	95	19	511	553	MAX
	Through	1700	68	5	378	337	NO
	Right Turn	1700	16	10	315	595	NO
SB	Left Turn	550	16	5	67	18	NO
	Through						
	Right Turn	550	22	2	111	29	NO
EB	Left Turn	1120	38	3	133	34	NO
	Through	1120	56	14	508	96	NO
	Right Turn	810	2	2	149	84	NO
WB	Left Turn						
	Through	1370	55	13	401	55	NO
	Right Turn	280	1	0	43	22	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	68	70	343	70	NO
	Through	1530	68	70	343	70	NO
	Right Turn	730	68	70	343	70	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
AM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	0	0	35	76	NO
SB	Left Turn						
	Through						
	Right Turn	1250	15	3	123	22	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	19	11	183	74	NO
	Through						
	Right Turn	1230	27	14	204	74	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	57	7	258	62	NO
	Through						
	Right Turn	1080	35	12	271	65	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
AM Peak Hour

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	21	6	158	24	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	27	10	210	38	NO
	Through						
	Right Turn	1650	27	10	210	38	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	32	4	151	31	NO
	Through						
	Right Turn	1620	32	4	151	31	NO

Intersection 37

Taylor Rd/I-80 Ramps

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	700	54	25	389	35	NO
	Through						
	Right Turn	700	3	1	60	15	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	3,020	3,030	100.3%	12.4	1.2	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,055	1,023	97.0%	10.7	1.4	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,485	1,475	99.3%	12.0	0.9	B
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,670	2,779	104.1%	6.5	0.5	A
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,595	2,718	104.7%	11.5	0.8	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks	Signal	5,585	5,816	104.1%	39.3	5.7	D
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,850	4,063	105.5%	10.9	0.8	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	4,975	5,180	104.1%	6.1	0.5	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	4,555	4,600	101.0%	11.7	0.6	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	4,310	4,271	99.1%	42.5	4.7	D
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	5,245	5,157	98.3%	10.7	1.3	B
12	SR-65 SB Ramps/Galleria Blvd	Signal	5,110	4,919	96.3%	16.7	1.2	B
13	Galleria Blvd/Antelope Creek Dr	Signal	3,815	3,537	92.7%	20.8	1.2	C
14	Galleria Blvd/Roseville Pkwy	Signal	6,545	6,494	99.2%	61.1	6.1	E
15	Creekside Ridge Dr/Roseville Pkwy	Signal	4,030	4,031	100.0%	18.0	2.6	B
16	Taylor Rd/East Roseville Pkwy	Signal	5,905	5,959	100.9%	48.4	6.1	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	5,560	5,682	102.2%	37.5	3.1	D
18	Wills Rd/Atlantic St	Signal	2,595	2,719	104.8%	22.7	3.7	C
19	I-80 WB Ramps/Atlantic St	Signal	3,835	3,951	103.0%	17.1	5.0	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	5,500	5,670	103.1%	62.9	13.4	E
21	North Sunrise Ave/Eureka Rd	Signal	5,805	6,066	104.5%	52.2	2.9	D
22	Harding Blvd/Wills Rd	Signal	2,635	2,743	104.1%	15.7	1.5	B
23	Harding Blvd/Douglas Blvd	Signal	3,600	3,593	99.8%	41.5	9.4	D
24	I-80 WB Ramps/Douglas Blvd	Signal	4,470	4,498	100.6%	15.9	2.9	B

Network Summary	
Total Demand Volume (veh/hr)	98,750
Total Volume Served (veh/hr)	99,973
Percent Served	101.2%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
25	I-80 EB Ramps/Douglas Blvd	Signal	5,115	5,187	101.4%	15.5	5.2	B
26	North Sunrise Ave/Douglas Blvd	Signal	5,705	5,793	101.5%	49.9	3.9	D
27	Pacific St/Woodside Dr	Signal	2,845	2,870	100.9%	7.9	1.4	A
28	Pacific St/Sunset Blvd	Signal	4,050	4,062	100.3%	38.9	9.1	D
29	Granite Dr/Rocklin Rd	Signal	3,220	3,309	102.8%	100.7	22.5	F
30	I-80 WB Ramps/Rocklin Rd	Signal	3,340	3,443	103.1%	40.4	4.6	D
31	I-80 EB Ramps/Rocklin Rd	Signal	3,085	3,164	102.6%	37.5	12.4	D
32	Aguilar Rd/Rocklin Rd	Signal	2,300	2,362	102.7%	16.7	3.5	B
33	Lincoln Blvd/SR-65 NB Off-Ramp	Signal	2,880	2,886	100.2%	9.0	0.8	A
34	Lincoln Blvd/SR-65 SB On-Ramp	Signal	1,640	1,637	99.8%	30.4	2.7	C
35	SR-65 SB Ramps/Placer Pkwy	Signal	2,040	2,070	101.5%	13.6	0.8	B
36	SR-65 NB Ramps/Whitney Ranch Pkwy	Signal	2,080	2,119	101.9%	12.6	0.7	B
37	Taylor Rd/I-80 Ramps	Signal	3,235	3,259	100.8%	21.6	1.1	C
40	Galleria Blvd/Berry St	Signal	2,485	2,529	101.8%	8.1	1.1	A

Network Summary	
Total Demand Volume (veh/hr)	44,020
Total Volume Served (veh/hr)	44,689
Percent Served	101.5%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	25	5	127	26	NO
	Through						
	Right Turn	1500	25	5	127	26	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	20	3	93	14	NO
	Through						
	Right Turn	1500	20	3	93	14	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	30	5	123	18	NO
	Through						
	Right Turn	1330	31	5	125	18	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	52	4	196	36	NO
	Through						
	Right Turn	1400	6	0	60	13	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	50	8	187	54	NO
	Through	2260	58	13	251	58	NO
	Right Turn	200	0	0	17	23	NO

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	35	5	185	42	NO
	Through						
	Right Turn	1100	35	5	185	42	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	21	3	116	23	NO
	Through						
	Right Turn	1130	23	4	118	23	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	44	1	154	18	NO
	Through						
	Right Turn	1420	44	1	154	18	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Construction Year - Alt 1 (Full Taylor)
PM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	4	1	152	69	NO
WB	Left Turn						
	Through						
	Right Turn	1170	0	0	10	33	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	46	3	227	30	NO
WB	Left Turn						
	Through						
	Right Turn	1780	2	0	100	20	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 1 (Full Taylor)
 PM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	120	57	876	422	MAX
	Through	1700	55	16	402	269	NO
	Right Turn	1700	22	27	618	477	NO
SB	Left Turn	550	18	7	87	21	NO
	Through						
	Right Turn	550	37	12	229	61	NO
EB	Left Turn	1120	53	3	161	37	NO
	Through	1120	69	10	470	86	NO
	Right Turn	810	1	1	91	48	NO
WB	Left Turn						
	Through	1370	321	283	1259	175	NO
	Right Turn	280	4	4	144	119	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	75	78	351	78	NO
	Through	1530	75	78	351	78	NO
	Right Turn	730	76	78	352	78	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 1 (Full Taylor)
 PM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1250	30	1	209	95	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	37	12	195	83	NO
	Through						
	Right Turn	1230	49	13	216	83	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	134	32	392	107	NO
	Through						
	Right Turn	1080	90	29	398	112	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 1 (Full Taylor)
 PM Peak Hour

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	60	2	269	39	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	28	2	188	37	NO
	Through						
	Right Turn	1650	28	2	188	37	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	59	1	235	38	NO
	Through						
	Right Turn	1620	59	1	235	38	NO

Intersection 37

Taylor Rd/I-80 Ramps

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	700	40	7	221	30	NO
	Through						
	Right Turn	700	21	5	170	37	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

I-80/SR 65 Interchange Improvements

**Vissim Model Results – Construction Year Alternative 2
(Collector-Distributor System Ramps)**

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Construction Year - Alt 2 (CD Roadway)
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	167,770	47
Travel Distance [mi]	All Vehicles	788,247	1,344
Travel Time [h]	All Vehicles	16,803	66.2
Average Speed [mph]	All Vehicles	46.9	0.1
Total Delay [h]	All Vehicles	3,300	55.4
Average Delay per Vehicle [s]	All Vehicles	69	1.2
VHD/VMT [min/mile]	All Vehicles	0.25	0.00
Number of Vehicles Served	HOV	32,808	27
Travel Distance [mi]	HOV	163,945	488
Travel Time [h]	HOV	3,335	13
Average Speed [mph]	HOV	49.2	0.1
Total Delay [h]	HOV	556	8
Average Delay per Vehicle [s]	HOV	60	1
VHD/VMT [min/mile]	HOV	0.20	0.00
Number of Vehicles Served	Truck	7,661	10
Travel Distance [mi]	Truck	37,803	240
Travel Time [h]	Truck	821	7
Average Speed [mph]	Truck	46.0	0
Total Delay [h]	Truck	169	4
Average Delay per Vehicle [s]	Truck	78	2
VHD/VMT [min/mile]	Truck	0.27	0.01

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	32,810	7,660	167,770
Demand Volume	33,920	8,250	169,090
Percent Demand Served	96.7%	92.8%	99.2%
Vehicle Miles of Travel	163,940	37,800	788,250
Person Miles of Travel	344,280	39,690	970,480
Vehicle Hours of Travel	3,340	820	16,800
Vehicle Hours of Delay	560	170	3,300
VHD % of VHT	16.8%	20.7%	19.6%
Average Delay per Vehicle (min)	1.02	1.33	1.18
Person Hours of Delay	1,180	180	3,930
Average Travel Speed	49.2	46.0	46.9

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Construction Year - Alt 2 (CD Roadway)
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	235,227	61
Travel Distance [mi]	All Vehicles	931,461	773
Travel Time [h]	All Vehicles	21,294	51.9
Average Speed [mph]	All Vehicles	43.7	0.1
Total Delay [h]	All Vehicles	4,940	54.4
Average Delay per Vehicle [s]	All Vehicles	74	0.8
VHD/VMT [min/mile]	All Vehicles	0.32	0.00
Number of Vehicles Served	HOV	46,915	36
Travel Distance [mi]	HOV	199,159	556
Travel Time [h]	HOV	4,383	15
Average Speed [mph]	HOV	45.4	0.1
Total Delay [h]	HOV	931	11
Average Delay per Vehicle [s]	HOV	70	1
VHD/VMT [min/mile]	HOV	0.28	0.00
Number of Vehicles Served	Truck	9,202	12
Travel Distance [mi]	Truck	37,333	190
Travel Time [h]	Truck	863	5
Average Speed [mph]	Truck	43.3	0
Total Delay [h]	Truck	203	3
Average Delay per Vehicle [s]	Truck	78	1
VHD/VMT [min/mile]	Truck	0.33	0.00

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	46,920	9,200	235,230
Demand Volume	47,340	9,690	233,500
Percent Demand Served	99.1%	94.9%	100.7%
Vehicle Miles of Travel	199,160	37,330	931,460
Person Miles of Travel	418,230	39,200	1,152,400
Vehicle Hours of Travel	4,380	860	21,290
Vehicle Hours of Delay	930	200	4,940
VHD % of VHT	21.2%	23.3%	23.2%
Average Delay per Vehicle (min)	1.19	1.30	1.26
Person Hours of Delay	1,950	210	5,970
Average Travel Speed	45.4	43.3	43.7

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 2 (CD Roadway)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,372	50	110.0%	1,108	25	111.9%				61.8	0.5	29.3	0.5	D
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,467	68	110.1%							57.6	2.1	36.2	1.7	E
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,459	82	110.0%				1,380	73	107.8%	60.4	1.2	29.7	1.3	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,074	83	110.4%				420	40	110.5%	61.8	1.3	24.3	1.4	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,657	71	110.4%							62.8	0.3	26.0	0.4	D
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	6,658	67	110.4%	1,078	43	100.7%	1,892	74	105.7%	62.6	0.2	23.6	0.3	C
7 I-80 EB CD - Eureka Rd to Taylor Rd/SR-65	Weave	430	39	102.3%	965	53	103.8%	771	52	104.1%	62.7	0.6	10.8	0.6	B
8 I-80 EB - Eureka Rd to SR-65	Basic	5,828	126	109.8%							62.4	0.2	27.4	0.6	D
9 I-80 EB - HOV Connector Off-ramp	Diverge	5,825	122	109.7%				757	50	108.1%	60.0	1.0	27.4	0.8	C
10 I-80 EB - SR-65 Off-ramp	Diverge	5,067	116	109.9%				2,823	84	109.4%	62.9	0.5	22.1	0.4	C
11 I-80 EB - SR-65 Off-ramp to Eureka Rd On-ramp	Basic	2,247	100	110.7%							64.1	0.2	13.2	0.5	B
17 I-80 EB - Eureka Rd On-ramp	Merge	2,251	96	110.9%	500	40	106.4%				63.1	0.4	13.6	0.4	B
18 I-80 EB - Eureka Rd On-ramp to SR-65 On-ramp	Basic	2,753	99	110.1%							64.0	0.2	14.8	0.4	B
19 I-80 EB - SR-65 On-ramp	Merge	2,753	99	110.1%	1,593	81	108.4%				61.6	0.4	25.7	0.6	C
20 I-80 EB - SR-65 to Rocklin Rd	Basic	4,346	118	109.5%							63.4	0.2	21.8	0.5	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	4,355	132	109.7%				1,407	93	107.4%	63.6	0.1	20.7	0.6	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	2,949	115	110.9%							63.6	0.1	18.6	0.7	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	2,951	116	110.9%	202	22	106.5%				61.6	0.5	18.8	0.8	B
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,162	110	110.9%							63.5	0.2	19.2	0.7	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,163	107	111.0%				452	40	110.1%	63.0	0.3	20.3	0.8	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,718	105	111.4%							63.7	0.2	17.5	0.6	B
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,720	108	111.5%	131	6	100.5%				62.6	0.4	16.5	0.5	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	2,853	100	111.0%	427	16	109.5%				62.2	0.4	18.1	0.6	B
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,760	27	105.8%				837	49	104.6%	57.8	1.9	26.6	0.9	C
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,921	69	106.0%							62.4	0.8	23.6	0.3	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,921	72	106.0%	50	4	83.2%				63.0	0.3	21.2	0.5	C
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,968	72	105.5%	299	10	103.0%				61.6	1.1	22.6	0.7	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,261	74	105.2%							62.5	0.3	25.4	0.6	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,257	80	105.1%				238	29	103.3%	61.9	0.4	26.0	0.5	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	4,013	93	105.0%							63.2	0.2	23.9	0.6	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	4,013	96	105.0%	815	51	99.3%				60.8	0.5	25.0	0.8	C
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	4,813	99	103.7%							61.9	0.4	27.3	0.7	D
47 I-80 WB - HOV Lane Start to SR-65	Basic	4,811	89	103.7%							62.6	0.3	22.5	0.3	C
48 I-80 WB - SR-65 Off-ramp	Diverge	4,810	97	103.7%				1,396	78	104.9%	63.6	0.2	20.9	0.4	C
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,407	91	102.9%							63.7	0.2	18.7	0.3	C
60 I-80 WB - SR-65 to Atlantic St	Weave	3,403	97	102.8%	4,930	117	106.0%	340	35	99.9%	58.7	0.7	23.3	0.6	C
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	7,931	149	104.1%				1,052	64	107.3%	57.4	4.3	29.8	2.3	D
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	6,871	143	103.5%							59.7	0.8	32.5	0.7	D
64 I-80 WB - Atlantic St On-ramp	Merge	6,867	151	103.4%	868	46	109.9%				41.5	7.9	41.1	9.5	E
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,736	150	104.1%				1,074	62	101.3%	49.5	5.3	43.4	6.9	E
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,665	143	104.6%							45.6	12.6	52.5	19.9	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,667	133	104.7%	993	52	106.8%				29.4	7.1	85.5	22.7	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,659	138	104.9%	470	27	109.3%				28.4	0.6	75.9	1.7	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,129	192	105.2%							58.7	1.1	35.9	0.8	E
70 I-80 WB - Riverside Ave Off-ramp	Diverge	8,141	148	105.3%				771	56	98.9%	62.0	0.3	30.2	0.8	D
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	7,369	158	106.0%							62.1	0.1	35.3	0.7	E
72 I-80 WB - Riverside Ave NB On-ramp	Merge	7,370	155	106.0%	245	6	76.5%				62.7	0.1	28.1	0.5	D
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,618	150	104.8%	939	26	94.9%				62.5	0.7	27.3	0.8	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	8,559	172	103.6%							62.1	0.1	31.5	0.7	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	8,567	167	103.7%				339	25	91.6%	61.6	0.6	32.4	0.7	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	8,245	150	104.5%							62.2	0.4	30.8	0.6	D
77 I-80 WB - Antelope Rd WB On-ramp	Merge	8,247	151	104.5%	578	16	99.7%				60.4	1.5	31.2	1.5	D
78 I-80 WB - Antelope Rd to Truck Scales	Weave	8,833	134	104.3%	407	13	88.5%	87	18	87.3%	56.1	3.9	34.5	2.5	D
79 I-80 WB - Truck Scales Off to On-ramp	Basic	9,223	153	104.4%							38.0	9.8	64.2	15.4	F
80 I-80 WB - Truck Scales On-ramp	Merge	9,257	160	104.8%	88	17	87.7%				26.2	3.2	87.5	8.8	F
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	9,421	161	105.5%							35.5	4.1	66.2	8.1	F
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	9,434	162	105.6%				801	62	108.3%	37.5	6.5	53.0	9.8	F
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	8,714	149	106.4%							27.0	1.0	90.8	4.4	F
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	8,754	142	106.9%	861	18	102.5%				26.9	0.4	95.6	2.0	F
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	9,672	111	107.1%	877	20	95.3%				32.9	0.4	76.1	0.6	F

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	526	6	43.1%				19	8	93.0%	64.5	0.2	7.2	0.1	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	508	18	42.3%							64.4	0.2	7.0	0.2	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	509	19	42.4%	850	17	102.4%				60.1	0.5	10.0	0.2	A
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,360	28	67.0%	832	12	109.4%				58.9	0.8	15.3	0.4	B
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,193	35	78.6%							61.8	1.9	25.0	0.6	C
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	2,192	35	78.6%							62.4	0.4	23.6	0.4	C
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	2,193	39	108.6%	1,282	62	106.8%	336	31	104.9%	59.2	1.5	25.3	0.7	C
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	3,138	88	108.2%							62.1	0.4	29.2	1.0	D
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	3,137	93	108.2%	660	35	113.8%				56.7	2.4	34.5	2.2	D
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	3,796	86	109.1%							61.1	0.4	34.9	0.9	D
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	3,796	88	109.1%				428	41	112.5%	62.0	0.3	32.3	0.7	D
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	3,371	81	108.7%							62.4	0.3	29.5	0.6	D
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	3,369	81	108.7%	344	29	107.5%				56.4	7.7	34.0	6.8	D
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	3,707	93	108.4%	144	20	102.8%	438	43	106.8%	61.1	0.8	30.1	0.4	D
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,411	92	108.3%							57.1	10.3	33.3	9.8	D
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,410	93	108.3%	357	22	108.0%				52.0	4.6	40.5	17.1	E
104 SR-65 SB - Sunset Blvd EB On-ramp	Merge	3,766	103	108.2%	445	27	103.4%				49.8	8.9	44.9	10.5	E
105 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	4,208	119	107.6%							57.5	2.6	39.2	2.8	E
106 SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	4,208	121	107.6%				811	54	108.1%	60.2	2.0	37.1	2.2	E
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,394	107	107.4%							62.3	1.2	29.3	1.1	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,390	107	107.3%	407	35	104.2%				53.3	7.6	35.1	6.6	E
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	3,800	122	107.0%	1,131	41	101.8%	706	55	106.9%	51.6	5.1	37.7	5.1	E
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,219	100	105.5%							61.2	0.7	36.9	0.9	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,216	101	105.4%	645	41	104.1%				60.2	0.3	29.1	0.6	D
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	4,863	104	105.3%	728	39	102.5%				58.1	4.4	32.1	3.0	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	5,586	112	104.8%							60.8	0.6	33.1	0.9	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	5,586	111	104.8%				915	49	100.6%	62.2	0.4	28.3	0.8	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,676	99	105.8%							62.5	0.2	27.0	0.5	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,682	99	105.9%	1,014	59	100.4%	4,115	99	103.9%	60.5	1.0	24.1	0.5	C
120 SR-65 SB to EB I-80 Connector	Basic	1,591	80	108.2%							52.7	0.8	23.3	1.2	C
121 SR-65 SB to WB I-80 Connector	Basic	3,263	87	98.0%							54.5	0.5	22.6	0.5	C
123 SR-65 NB from WB I-80 Connector	Basic	1,397	84	105.0%							53.3	0.2	15.7	0.8	B
124 SR-65 NB from EB I-80 Connector	Basic	2,823	84	109.4%							62.5	0.7	25.8	0.6	C
125 SR-65 NB - Eureka Rd On-ramp	Merge	2,823	84	109.4%	630	48	103.3%				49.2	0.1	26.5	0.6	C
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	3,447	100	108.1%	2,153	84	106.1%	1,132	71	105.7%	60.8	0.3	21.3	0.5	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	4,462	135	107.5%							62.5	0.5	23.1	0.8	C
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	4,464	134	107.6%	402	40	100.5%				58.4	2.8	10.2	1.2	B
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	4,869	140	107.0%							54.8	3.0	36.8	1.9	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	4,869	140	107.0%				886	67	99.5%	57.4	2.4	33.9	1.7	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	3,991	114	109.0%							60.6	2.8	37.5	2.4	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	3,996	112	109.2%	219	26	99.7%	1,895	80	110.8%	62.4	0.5	27.8	0.8	C
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	2,322	102	107.0%							63.6	0.2	20.2	1.0	C
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	2,321	103	107.0%	542	50	100.3%				60.7	0.3	22.5	1.1	C
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	2,860	124	105.5%							62.1	0.4	25.1	1.1	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	2,858	113	105.5%				1,217	73	104.9%	63.6	0.1	19.4	0.6	B
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	1,642	71	105.9%							63.8	0.1	14.4	0.3	B
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	1,643	72	106.0%	54	16	108.2%				63.8	0.2	14.1	0.2	B
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	1,699	72	106.2%	192	24	112.6%	319	39	96.6%	63.6	0.2	13.7	0.4	B
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	1,572	78	109.2%							63.7	0.1	13.7	0.5	B
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	1,573	78	109.2%	157	20	104.6%				63.2	0.2	14.2	0.5	B
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	1,729	78	108.7%	210	29	110.5%				62.7	0.4	15.8	0.5	B
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	1,937	80	108.8%							63.0	0.2	17.5	0.5	B
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	1,938	77	65.7%				380	39	97.5%	63.1	0.1	17.7	0.5	B
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	1,563	75	61.0%							63.6	0.2	14.9	0.4	B
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	1,566	77	61.2%	267	23	106.7%	851	45	112.0%	63.8	0.1	12.5	0.3	B
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	983	57	48.0%							64.0	0.1	10.9	0.5	A
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	983	56	48.0%				690	45	107.8%	64.4	0.1	8.8	0.4	A
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	293	35	20.8%							64.8	0.3	3.1	0.2	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	293	37	20.8%	15	2	75.5%				64.4	0.3	3.1	0.2	A

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 2 (CD Roadway)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,729	46	102.1%	975	18	96.5%				61.6	0.8	27.1	0.6	C
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,705	58	101.5%							61.2	1.1	32.1	0.9	D
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,700	86	101.4%				1,149	80	99.9%	61.3	1.3	28.9	0.9	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,549	98	101.6%				636	45	102.6%	62.7	0.5	24.9	0.6	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,913	107	101.5%							63.1	0.2	25.0	0.3	C
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	6,914	111	101.5%	1,747	45	101.0%	1,808	82	101.0%	62.4	0.2	24.8	0.4	C
7 I-80 EB CD - Eureka Rd to Taylor Rd/SR-65	Weave	857	60	102.0%	1,407	60	98.4%	1,280	71	101.6%	60.7	1.2	19.1	0.7	B
8 I-80 EB - Eureka Rd to SR-65	Basic	6,855	147	101.6%							61.5	1.2	30.3	0.9	D
9 I-80 EB - HOV Connector Off-ramp	Diverge	6,856	151	101.6%				1,098	58	102.6%	57.2	1.9	31.5	1.5	D
10 I-80 EB - SR-65 Off-ramp	Diverge	5,764	160	101.5%				3,231	125	103.2%	62.2	0.5	24.0	0.6	C
11 I-80 EB - SR-65 Off-ramp to Eureka Rd On-ramp	Basic	2,533	92	99.3%							64.1	0.1	13.9	0.5	B
17 I-80 EB - Eureka Rd On-ramp	Merge	2,530	90	99.2%	718	50	104.0%				62.5	0.5	14.7	0.7	B
18 I-80 EB - Eureka Rd On-ramp to SR-65 On-ramp	Basic	3,246	104	100.2%							63.9	0.1	15.9	0.6	B
19 I-80 EB - SR-65 On-ramp	Merge	3,246	105	100.2%	2,020	86	99.5%				61.4	0.3	27.5	0.8	C
20 I-80 EB - SR-65 to Rocklin Rd	Basic	5,266	128	99.9%							63.2	0.1	23.2	0.5	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	5,262	128	99.9%				1,367	73	99.8%	63.4	0.1	22.4	0.5	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,896	99	99.9%							63.4	0.2	21.5	0.4	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,893	100	99.8%	260	22	99.9%				60.8	0.6	21.5	0.5	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	4,156	101	99.9%							63.3	0.2	22.4	0.5	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	4,155	104	99.9%				327	41	99.0%	62.5	0.4	23.6	0.7	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	3,832	105	100.1%							63.3	0.2	21.6	0.5	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	3,831	105	100.0%	255	9	102.1%				61.2	0.6	20.5	0.7	C
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	4,086	111	100.1%	621	16	101.9%				60.8	0.4	23.5	0.7	C
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	3,586	23	105.8%				588	45	106.9%	61.1	0.5	18.9	0.2	B
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	2,994	64	105.4%							63.7	0.2	17.9	0.4	B
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	2,996	65	105.5%	132	5	101.3%				63.5	0.2	16.3	0.5	B
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,125	68	105.2%	252	8	100.8%				62.6	0.4	17.3	0.4	B
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	3,373	70	104.8%							63.5	0.2	19.3	0.4	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	3,373	75	104.7%				275	32	101.7%	63.1	0.2	20.3	0.7	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,093	67	104.9%							63.8	0.1	18.1	0.3	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,090	65	104.8%	1,441	69	103.6%				59.5	0.4	23.6	0.6	C
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	4,527	109	104.3%							62.2	0.3	25.4	0.6	C
47 I-80 WB - HOV Lane Start to SR-65	Basic	4,521	109	104.2%							62.8	0.3	20.4	0.5	C
48 I-80 WB - SR-65 Off-ramp	Diverge	4,520	111	104.1%				1,666	70	103.5%	63.9	0.1	18.8	0.5	B
49 I-80 WB - SR-65 Off to On-ramp	Basic	2,853	98	104.5%							64.0	0.2	16.2	0.5	B
60 I-80 WB - SR-65 to Atlantic St	Weave	2,851	97	104.4%	4,193	107	98.2%	421	45	105.3%	60.4	0.2	19.6	0.4	B
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	6,684	121	101.3%				971	54	100.1%	62.1	0.9	23.1	0.6	C
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	5,715	105	101.5%							62.6	0.1	26.3	0.6	D
64 I-80 WB - Atlantic St On-ramp	Merge	5,715	101	101.5%	1,156	58	98.8%				61.4	0.4	25.1	0.4	C
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	6,868	130	101.0%				1,096	69	99.6%	60.8	0.8	31.4	1.1	D
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	5,774	118	101.3%							62.8	0.4	29.3	0.5	D
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	5,772	116	101.3%	1,274	56	99.5%				61.4	0.1	26.4	0.4	C
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,045	139	100.9%	621	25	94.1%				58.1	3.1	24.9	1.7	C
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	7,667	115	100.3%							61.5	0.5	31.1	0.4	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	7,670	136	100.4%				992	85	100.2%	62.4	0.5	27.6	0.5	C
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,677	137	100.4%							62.5	0.1	32.0	0.6	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,676	136	100.4%	204	10	97.1%				63.0	0.1	25.7	0.5	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	6,879	137	100.3%	742	25	106.0%				61.7	0.8	23.3	0.8	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	7,609	131	100.6%							62.3	0.3	28.5	0.5	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	7,611	124	100.7%				952	56	101.3%	62.3	0.5	29.0	0.8	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	6,657	121	100.6%							62.8	0.3	25.8	0.5	C
77 I-80 WB - Antelope Rd WB On-ramp	Merge	6,659	123	100.6%	359	2	94.4%				60.2	1.1	23.6	0.8	C
78 I-80 WB - Antelope Rd to Truck Scales	Weave	7,023	133	100.3%	367	13	99.3%	66	12	110.3%	62.1	0.4	24.9	0.5	C
79 I-80 WB - Truck Scales Off to On-ramp	Basic	7,320	146	100.1%							62.7	0.2	26.9	0.6	D
80 I-80 WB - Truck Scales On-ramp	Merge	7,318	147	100.1%	66	15	110.2%				62.5	0.1	26.4	0.6	C
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	7,383	146	100.2%							61.7	0.3	28.3	0.4	D
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	7,383	148	100.2%				1,077	61	97.9%	62.0	0.6	26.3	0.4	C
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	6,305	146	100.6%							62.9	0.4	24.0	0.6	C
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	6,306	143	100.6%	898	5	99.8%				57.4	0.7	26.0	0.8	C
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	7,199	150	100.4%	658	26	102.9%				61.4	0.6	29.0	0.8	D

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 2 (CD Roadway)
PM Peak Period

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	379	6	35.0%				29	11	96.7%	64.8	0.3	3.3	0.1	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	349	16	33.2%							64.9	0.3	3.0	0.2	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	349	17	33.2%	475	11	101.0%				60.3	0.2	5.2	0.1	A
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	824	24	54.2%	347	9	99.1%				61.2	0.2	6.8	0.2	A
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	1,170	32	62.6%							64.2	0.2	11.6	0.5	B
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	1,171	33	62.6%							64.3	0.2	11.0	0.4	B
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	1,171	33	99.2%	1,145	50	99.6%	269	32	96.1%	61.7	0.5	14.0	0.3	B
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,048	49	99.9%							63.7	0.2	16.9	0.4	B
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,048	47	99.9%	408	34	97.2%				62.1	0.3	18.6	0.5	B
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	2,456	72	99.4%							63.3	0.2	20.0	0.5	C
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	2,458	77	99.5%				441	42	97.9%	63.3	0.1	19.0	0.4	B
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,021	74	100.1%							63.4	0.1	16.7	0.6	B
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,023	77	100.1%	340	29	99.9%				62.3	0.4	18.3	0.7	B
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	2,363	87	100.1%	313	31	100.8%	247	33	98.9%	62.5	0.3	19.5	0.5	B
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	2,429	97	100.4%							63.1	0.2	20.2	0.6	C
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	2,430	98	100.4%	617	34	106.4%				60.4	0.8	24.0	0.8	C
104 SR-65 SB - Sunset Blvd EB On-ramp	Merge	3,046	106	101.5%	711	33	101.5%				58.0	1.7	32.6	1.3	D
105 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	3,753	118	101.4%							60.9	0.6	32.2	1.1	D
106 SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	3,752	118	101.4%				735	41	96.7%	62.4	0.2	30.9	1.2	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,014	108	102.5%							62.9	0.2	25.4	1.2	C
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,014	109	102.5%	392	24	103.0%				59.4	0.8	27.4	1.3	C
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	3,407	109	102.6%	1,101	50	101.9%	561	43	96.8%	59.8	0.6	28.7	1.1	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	3,936	127	103.0%							61.9	0.7	32.7	1.4	D
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	3,935	128	103.0%	481	35	100.2%				61.5	0.3	25.7	0.9	C
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	4,411	129	102.6%	847	44	99.6%				61.1	1.0	26.4	1.1	C
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	5,253	130	102.0%							61.7	0.4	28.9	0.7	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	5,252	131	102.0%				1,016	77	100.6%	62.7	0.4	24.8	0.6	C
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,234	100	102.3%							62.9	0.1	24.2	0.4	C
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,233	100	102.2%	1,432	82	92.4%	3,649	109	99.7%	60.7	0.7	22.4	0.3	C
120 SR-65 SB to EB I-80 Connector	Basic	2,021	74	99.6%							52.4	0.4	25.6	1.2	C
121 SR-65 SB to WB I-80 Connector	Basic	3,075	104	91.8%							54.9	0.4	19.7	0.7	C
123 SR-65 NB from WB I-80 Connector	Basic	1,665	68	103.4%							53.0	0.2	17.5	0.9	B
124 SR-65 NB from EB I-80 Connector	Basic	3,233	129	103.3%							61.8	0.9	29.9	1.1	D
125 SR-65 NB - Eureka Rd On-ramp	Merge	3,236	129	103.4%	979	59	96.9%				49.0	0.1	30.6	0.6	D
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,216	123	101.8%	2,764	99	103.1%	1,763	71	100.7%	59.8	0.3	24.6	0.6	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	5,208	118	102.7%							62.2	0.3	25.3	0.6	C
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	5,209	109	102.7%	675	41	91.2%				54.1	3.1	17.8	1.6	B
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	5,881	122	101.2%							53.6	2.7	38.6	2.3	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	5,881	123	101.2%				1,459	80	102.7%	56.1	2.4	35.5	1.7	E
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	4,423	111	100.7%							60.7	2.5	37.4	1.8	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	4,422	110	100.7%	582	34	100.4%	1,683	68	99.6%	62.1	0.2	30.2	0.8	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	3,321	101	101.3%							61.8	2.2	28.1	1.4	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	3,321	103	101.3%	760	50	105.6%				51.8	9.9	37.8	10.8	E
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	4,082	114	102.1%							60.8	1.5	34.4	1.4	D
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	4,082	124	102.1%				856	43	103.1%	62.8	0.1	28.7	1.2	D
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	3,233	115	102.0%							62.8	0.2	26.2	1.0	D
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	3,230	118	101.9%	60	15	100.3%				62.9	0.3	26.1	1.0	C
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	3,288	122	101.8%	339	28	106.0%	537	41	103.2%	62.4	0.1	25.1	0.8	C
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	3,085	121	101.8%							62.7	0.2	25.3	1.0	C
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	3,085	124	101.8%	115	22	96.2%				62.4	0.3	25.5	1.0	C
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,200	126	101.6%	266	30	102.4%				61.2	1.1	27.0	0.9	C
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	3,463	136	101.6%							61.3	0.7	29.0	1.2	D
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	3,464	131	101.6%				720	49	100.0%	61.4	0.4	29.3	1.2	D
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,738	112	101.8%							63.0	0.1	23.0	0.7	C
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,734	109	101.6%	296	36	95.4%	1,187	81	101.5%	63.3	0.1	18.8	0.4	B
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	1,838	69	100.4%							63.5	0.2	18.3	0.7	C
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	1,838	68	100.5%				1,414	70	100.3%	64.0	0.1	14.1	0.4	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	425	31	101.1%							64.8	0.4	3.7	0.4	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	424	34	101.0%	29	3	97.7%				64.2	0.3	3.7	0.3	A

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 2 (CD Roadway)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	2,445	2,677	109.5%	10.9	0.7	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,160	1,287	111.0%	10.1	0.9	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,265	1,357	107.3%	9.6	0.8	A
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,340	2,500	106.8%	11.5	0.9	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,500	2,705	108.2%	12.8	0.8	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks	Signal	4,645	4,825	103.9%	33.4	3.3	C
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,055	3,283	107.5%	11.2	0.6	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	3,895	4,010	102.9%	6.5	0.5	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	3,060	3,106	101.5%	13.8	0.8	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	2,895	3,042	105.1%	24.5	1.7	C
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	3,120	3,263	104.6%	7.1	0.8	A
12	SR-65 SB Ramps/Galleria Blvd	Signal	3,015	3,057	101.4%	18.6	0.7	B
13	Galleria Blvd/Antelope Creek Dr	Signal	1,990	1,979	99.4%	10.8	1.7	B
14	Galleria Blvd/Roseville Pkwy	Signal	4,226	4,519	106.9%	35.9	1.4	D
15	Creekside Ridge Dr/Roseville Pkwy	Signal	2,875	3,026	105.2%	5.3	2.3	A
16	Taylor Rd/East Roseville Pkwy	Signal	2,885	3,033	105.1%	45.7	5.1	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	3,845	4,140	107.7%	29.1	3.3	C
18	Wills Rd/Atlantic St	Signal	1,905	2,073	108.8%	15.5	2.1	B
19	I-80 WB Ramps/Atlantic St	Signal	3,115	3,373	108.3%	12.4	3.0	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	4,825	5,094	105.6%	28.0	7.5	C
21	North Sunrise Ave/Eureka Rd	Signal	4,460	4,719	105.8%	33.7	3.8	C
22	Harding Blvd/Wills Rd	Signal	1,755	1,878	107.0%	13.1	1.5	B
23	Harding Blvd/Douglas Blvd	Signal	2,650	2,889	109.0%	24.6	3.4	C
24	I-80 WB Ramps/Douglas Blvd	Signal	3,770	4,043	107.2%	12.1	2.0	B

Network Summary	
Total Demand Volume (veh/hr)	71,696
Total Volume Served (veh/hr)	75,874
Percent Served	105.8%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	23	6	157	58	NO
	Through						
	Right Turn	1500	24	6	158	58	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	5	2	59	19	NO
	Through						
	Right Turn	1500	5	2	59	19	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	43	6	165	32	NO
	Through						
	Right Turn	1330	45	6	167	32	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	63	5	254	30	NO
	Through						
	Right Turn	1400	9	1	75	12	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	28	5	128	22	NO
	Through	2260	69	6	264	27	NO
	Right Turn	200	0	0	4	13	NO

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	29	14	206	40	NO
	Through						
	Right Turn	1100	29	14	206	40	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	25	5	141	20	NO
	Through						
	Right Turn	1130	28	5	143	20	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	39	4	143	8	NO
	Through						
	Right Turn	1420	39	5	142	8	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	0	0	62	31	NO
WB	Left Turn						
	Through						
	Right Turn	1170	0	0	0	0	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	42	3	232	31	NO
WB	Left Turn						
	Through						
	Right Turn	1780	0	0	20	16	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	5	16	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 2 (CD Roadway)
 AM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	157	26	685	490	MAX
	Through	1700	91	16	594	430	NO
	Right Turn	1700	60	37	592	731	NO
SB	Left Turn	550	17	6	77	13	NO
	Through						
	Right Turn	550	19	7	121	34	NO
EB	Left Turn	1120	34	4	119	17	NO
	Through	1120	65	19	558	115	NO
	Right Turn	810	2	2	147	114	NO
WB	Left Turn						
	Through	1370	55	11	458	81	NO
	Right Turn	280	0	0	43	37	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	72	76	379	110	NO
	Through	1530	72	76	379	110	NO
	Right Turn	730	72	77	379	110	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Construction Year - Alt 2 (CD Roadway)
AM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1,400	1	2	101	277	NO
SB	Left Turn						
	Through						
	Right Turn	1,250	15	3	119	12	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	18	7	159	44	NO
	Through						
	Right Turn	1,230	26	10	181	44	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,080	52	3	235	29	NO
	Through						
	Right Turn	1,080	34	4	247	32	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1,940	0	0	0	0	NO
	Through						
	Right Turn	1,940	21	5	156	18	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1,650	24	7	205	40	NO
	Through						
	Right Turn	1,650	24	7	205	40	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,620	32	4	144	22	NO
	Through						
	Right Turn	1,620	32	4	144	22	NO

Intersection 38

Taylor Rd/I-80 EB Off-ramp

Unsignalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn						
	Through						
	Right Turn	1,000	0	0	6	17	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 2 (CD Roadway)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	3,030	3,049	100.6%	14.7	1.2	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,060	1,034	97.5%	10.9	1.0	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,505	1,480	98.3%	12.2	0.9	B
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,690	2,785	103.5%	5.9	0.5	A
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,580	2,715	105.2%	14.0	0.9	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	5,560	5,789	104.1%	42.6	5.2	D
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,890	4,109	105.6%	11.8	0.9	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	4,960	4,953	99.9%	7.3	0.4	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	4,600	4,639	100.8%	12.6	0.6	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	4,290	4,297	100.2%	36.8	1.8	D
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	5,150	5,109	99.2%	9.6	2.7	A
12	SR-65 SB Ramps/Galleria Blvd	Signal	5,190	5,021	96.7%	16.4	1.4	B
13	Galleria Blvd/Antelope Creek Dr	Signal	3,900	3,646	93.5%	20.2	1.2	C
14	Galleria Blvd/Roseville Pkwy	Signal	6,540	6,540	100.0%	55.8	4.1	E
15	Creekside Ridge Dr/Roseville Pkwy	Signal	3,995	4,012	100.4%	17.5	3.1	B
16	Taylor Rd/East Roseville Pkwy	Signal	5,635	5,709	101.3%	42.1	4.5	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	5,440	5,570	102.4%	37.2	3.0	D
18	Wills Rd/Atlantic St	Signal	2,570	2,683	104.4%	21.4	2.8	C
19	I-80 WB Ramps/Atlantic St	Signal	3,880	3,959	102.0%	12.2	2.1	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	5,665	5,754	101.6%	76.8	16.3	E
21	North Sunrise Ave/Eureka Rd	Signal	5,865	6,120	104.3%	63.1	11.7	E
22	Harding Blvd/Wills Rd	Signal	2,635	2,741	104.0%	14.1	1.1	B
23	Harding Blvd/Douglas Blvd	Signal	3,600	3,602	100.0%	38.9	8.2	D
24	I-80 WB Ramps/Douglas Blvd	Signal	4,490	4,513	100.5%	16.6	3.8	B

Network Summary	
Total Demand Volume (veh/hr)	98,720
Total Volume Served (veh/hr)	99,828
Percent Served	101.1%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 2 (CD Roadway)
 PM Peak Hour

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	25	5	131	28	NO
	Through						
	Right Turn	1500	25	5	132	28	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	19	3	92	14	NO
	Through						
	Right Turn	1500	19	3	92	14	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	30	3	111	14	NO
	Through						
	Right Turn	1330	32	3	113	14	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	54	4	203	26	NO
	Through						
	Right Turn	1400	5	1	62	14	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 2 (CD Roadway)
 PM Peak Hour

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	55	9	203	69	MAX
	Through	2260	58	12	250	49	NO
	Right Turn	200	0	0	14	44	NO

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	38	7	226	38	NO
	Through						
	Right Turn	1100	38	7	225	38	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	25	4	119	20	NO
	Through						
	Right Turn	1130	28	4	121	20	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	43	1	168	21	NO
	Through						
	Right Turn	1420	42	1	167	21	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 2 (CD Roadway)
 PM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	6	1	199	82	NO
WB	Left Turn						
	Through						
	Right Turn	1170	3	5	123	390	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	43	2	206	24	NO
WB	Left Turn						
	Through						
	Right Turn	1780	3	0	109	35	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	17	23	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 2 (CD Roadway)
 PM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	91	15	518	226	MAX
	Through	1700	51	14	223	34	NO
	Right Turn	1700	3	3	217	219	NO
SB	Left Turn	550	18	2	81	23	NO
	Through						
	Right Turn	550	48	11	289	56	NO
EB	Left Turn	1120	53	4	172	23	NO
	Through	1120	79	6	520	62	NO
	Right Turn	810	1	0	108	59	NO
WB	Left Turn						
	Through	1370	436	369	1401	136	MAX
	Right Turn	280	4	4	121	63	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	75	76	333	71	NO
	Through	1530	75	76	333	71	NO
	Right Turn	730	76	76	333	71	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 2 (CD Roadway)
 PM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1,400	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1,250	30	5	264	195	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	47	12	226	96	NO
	Through						
	Right Turn	1,230	59	14	247	96	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,080	75	11	263	35	NO
	Through						
	Right Turn	1,080	34	5	269	41	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1,940	0	0	0	0	NO
	Through						
	Right Turn	1,940	53	2	242	51	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1,650	29	4	168	35	NO
	Through						
	Right Turn	1,650	29	4	168	35	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,620	64	3	275	53	NO
	Through						
	Right Turn	1,620	64	3	275	53	NO

Intersection 38

Taylor Rd/I-80 EB Off-ramp

Unsignalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn						
	Through						
	Right Turn	1,100	1	1	103	99	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

I-80/SR 65 Interchange Improvements

**Vissim Model Results – Construction Year Alternative 3
(Taylor Road Interchange Eliminated)**

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	167,860	22
Travel Distance [mi]	All Vehicles	788,063	1,033
Travel Time [h]	All Vehicles	16,757	59.7
Average Speed [mph]	All Vehicles	47.0	0.1
Total Delay [h]	All Vehicles	3,258	52.6
Average Delay per Vehicle [s]	All Vehicles	68	1.1
VHD/VMT [min/mile]	All Vehicles	0.25	0.00
Number of Vehicles Served	HOV	32,845	20
Travel Distance [mi]	HOV	164,276	578
Travel Time [h]	HOV	3,343	18
Average Speed [mph]	HOV	49.1	0.1
Total Delay [h]	HOV	557	10
Average Delay per Vehicle [s]	HOV	60	1
VHD/VMT [min/mile]	HOV	0.20	0.00
Number of Vehicles Served	Truck	7,658	10
Travel Distance [mi]	Truck	37,981	237
Travel Time [h]	Truck	821	6
Average Speed [mph]	Truck	46.2	0
Total Delay [h]	Truck	166	4
Average Delay per Vehicle [s]	Truck	76	2
VHD/VMT [min/mile]	Truck	0.26	0.01

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	32,850	7,660	167,860
Demand Volume	33,940	8,240	169,110
Percent Demand Served	96.8%	93.0%	99.3%
Vehicle Miles of Travel	164,280	37,980	788,060
Person Miles of Travel	344,980	39,880	970,660
Vehicle Hours of Travel	3,340	820	16,760
Vehicle Hours of Delay	560	170	3,260
VHD % of VHT	16.8%	20.7%	19.5%
Average Delay per Vehicle (min)	1.02	1.33	1.17
Person Hours of Delay	1,180	180	3,890
Average Travel Speed	49.1	46.2	47.0

VISSIM Post-Processor
Average Values from 10 Runs
Peak Hour Travel Time

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
AM Peak Period

Mode	Description	Distance (ft)	Volume (vehicles)		Travel Time (min.:sec.)		Speed (mph)
			Average	Std. Dev.	Average	Std. Dev.	Average
SOV	SR-65 at Blue Oaks to I-80 at Antelope	43,093	742	14	09:22	00:25	20.9
	I-80 at Auburn to SR-65 at Blue Oaks	32,850	1502	20	06:29	00:08	23.0
	I-80 at Sierra College to I-80 at Antelope	45,844	1130	14	09:14	00:22	22.6
	I-80 at Auburn to I-80 at Sierra College	36,738	664	11	06:41	00:08	25.0
HOV	SR-65 at Blue Oaks to I-80 at Antelope	43,093	256	6	08:39	00:05	22.6
	I-80 at Auburn to SR-65 at Blue Oaks	32,850	410	8	06:21	00:04	23.5
	I-80 at Sierra College to I-80 at Antelope	45,844	499	7	08:33	00:07	24.4
	I-80 at Auburn to I-80 at Sierra College	36,738	232	7	06:34	00:03	25.4

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	235,095	75
Travel Distance [mi]	All Vehicles	930,076	1,154
Travel Time [h]	All Vehicles	21,617	74.4
Average Speed [mph]	All Vehicles	43.0	0.2
Total Delay [h]	All Vehicles	5,295	80.2
Average Delay per Vehicle [s]	All Vehicles	80	1.2
VHD/VMT [min/mile]	All Vehicles	0.34	0.01
Number of Vehicles Served	HOV	46,850	40
Travel Distance [mi]	HOV	199,570	644
Travel Time [h]	HOV	4,465	20
Average Speed [mph]	HOV	44.7	0.2
Total Delay [h]	HOV	1,006	18
Average Delay per Vehicle [s]	HOV	76	1
VHD/VMT [min/mile]	HOV	0.30	0.01
Number of Vehicles Served	Truck	9,251	8
Travel Distance [mi]	Truck	37,309	344
Travel Time [h]	Truck	877	8
Average Speed [mph]	Truck	42.6	0
Total Delay [h]	Truck	217	4
Average Delay per Vehicle [s]	Truck	83	1
VHD/VMT [min/mile]	Truck	0.35	0.01

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	46,850	9,250	235,090
Demand Volume	47,330	9,750	233,500
Percent Demand Served	99.0%	94.9%	100.7%
Vehicle Miles of Travel	199,570	37,310	930,080
Person Miles of Travel	419,100	39,170	1,151,470
Vehicle Hours of Travel	4,470	880	21,620
Vehicle Hours of Delay	1,010	220	5,300
VHD % of VHT	22.6%	25.0%	24.5%
Average Delay per Vehicle (min)	1.29	1.43	1.35
Person Hours of Delay	2,120	230	6,420
Average Travel Speed	44.7	42.6	43.0

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,341	47	110.1%	1,104	26	111.5%				61.8	0.8	29.3	0.4	D
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,435	83	110.1%							58.0	3.0	35.9	2.4	E
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,424	103	110.0%				1,397	79	109.1%	59.5	3.7	30.5	3.1	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,023	93	110.1%				419	40	110.3%	61.2	1.8	24.7	1.1	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,602	82	110.0%							62.8	0.4	26.2	0.3	D
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	6,604	81	110.1%	1,066	39	100.5%	1,747	73	107.2%	62.8	0.2	23.9	0.2	C
7 I-80 EB CD - Eureka Rd to SR-65	Weave	175	23	103.1%	964	45	102.6%	513	40	109.1%	60.9	1.0	9.8	0.3	A
8 I-80 EB - Eureka Rd to SR-65	Basic	5,922	105	109.1%							62.3	0.3	27.2	0.4	D
9 I-80 EB - HOV Connector Off-ramp	Diverge	5,921	103	109.0%				748	38	106.9%	60.9	0.7	27.1	0.5	C
10 I-80 EB - SR-65 Off-ramp	Diverge	5,171	101	109.3%				2,940	89	108.9%	63.8	0.3	22.5	0.3	C
11 I-80 EB - SR-65 Off-ramp to Eureka Rd On-ramp	Basic	2,237	84	110.2%							64.1	0.1	13.5	0.4	B
17 I-80 EB - Eureka Rd On-ramp	Merge	2,241	79	110.4%	512	41	108.9%				63.0	0.3	13.9	0.8	B
18 I-80 EB - Eureka Rd On-ramp to SR-65 On-ramp	Basic	2,753	95	110.1%							63.9	0.1	15.2	0.7	B
19 I-80 EB - SR-65 On-ramp	Merge	2,751	94	110.1%	1,630	78	108.0%				61.5	0.3	26.4	0.6	C
20 I-80 EB - SR-65 to Rocklin Rd	Basic	4,382	117	109.3%							63.2	0.1	22.4	0.4	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	4,394	118	109.6%				1,385	84	105.7%	63.5	0.1	21.5	0.4	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,014	87	111.6%							63.6	0.1	19.4	0.4	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,016	84	111.7%	204	17	107.2%				61.4	0.3	19.6	0.4	B
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,224	87	111.5%							63.4	0.2	20.1	0.4	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,226	89	111.6%				445	39	108.4%	62.8	0.3	21.2	0.5	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,788	93	112.4%							63.5	0.2	18.4	0.4	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,791	88	112.5%	131	6	101.1%				62.8	0.1	17.2	0.6	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	2,926	91	112.1%	428	14	109.6%				62.3	0.4	18.9	0.6	B
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,740	25	105.8%				858	56	107.2%	57.7	1.3	26.5	0.7	C
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,881	73	105.5%							62.6	0.5	23.4	0.4	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,890	79	105.4%	50	3	83.2%				63.2	0.3	20.8	0.6	C
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,928	75	105.0%	300	9	103.4%				62.2	0.4	22.2	0.6	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,221	83	104.7%							62.7	0.1	25.1	0.4	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,219	83	104.7%				245	26	101.9%	61.7	0.6	26.1	0.6	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,967	85	104.7%							63.0	0.4	23.6	0.5	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,967	87	104.7%	1,123	34	102.1%				59.1	1.5	27.1	1.0	C
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,082	78	103.9%							61.5	0.3	28.9	0.5	D
47 I-80 WB - HOV Lane Start to SR-65	Basic	5,077	75	103.8%							62.3	0.3	23.9	0.6	C
48 I-80 WB - SR-65 Off-ramp	Diverge	5,074	75	103.8%				1,348	82	104.5%	63.5	0.1	22.1	0.3	C
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,718	86	103.3%							63.6	0.1	20.0	0.3	C
60 I-80 WB - SR-65 to Atlantic St	Weave	3,711	87	103.1%	4,174	116	104.4%	307	33	99.2%	60.0	0.9	23.0	0.7	C
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	7,566	139	103.8%				997	53	104.9%	58.3	4.1	28.1	4.3	D
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	6,565	130	103.5%							60.2	1.4	30.2	0.7	D
64 I-80 WB - Atlantic St On-ramp	Merge	6,566	125	103.6%	1,061	40	108.3%				54.9	5.1	22.2	2.2	C
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	7,630	128	104.2%				989	61	100.9%	56.3	3.8	37.0	3.9	E
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,637	155	104.7%							48.9	10.3	46.7	16.3	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,640	169	104.7%	1,001	54	107.6%				28.7	8.3	87.3	22.2	F
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	7,643	186	105.1%	468	21	108.7%				28.7	0.9	74.4	5.6	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	8,110	232	105.3%							59.0	1.2	35.5	1.2	E
70 I-80 WB - Riverside Ave Off-ramp	Diverge	8,098	174	105.2%				756	61	98.2%	62.1	0.1	30.1	0.5	D
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	7,340	171	105.9%							62.1	0.1	35.0	0.5	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	7,338	168	105.9%	245	7	74.1%				62.8	0.1	27.7	0.6	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,583	168	104.5%	936	24	94.5%				62.5	0.2	27.0	0.6	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	8,534	185	103.4%							62.1	0.1	31.4	0.7	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	8,540	192	103.5%				326	35	90.5%	61.8	0.4	32.3	0.5	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	8,219	181	104.2%							62.3	0.2	30.6	0.5	D
77 I-80 WB - Antelope Rd WB On-ramp	Merge	8,219	177	104.2%	579	19	99.8%				59.7	3.1	31.0	2.5	D
78 I-80 WB - Antelope Rd to Truck Scales	Weave	8,797	168	103.9%	409	12	88.8%	87	16	86.8%	58.2	5.6	33.6	6.1	D
79 I-80 WB - Truck Scales Off to On-ramp	Basic	9,167	181	103.8%							45.5	9.8	51.3	14.6	F
80 I-80 WB - Truck Scales On-ramp	Merge	9,214	204	104.3%	87	18	87.1%				30.2	5.0	78.0	11.4	F
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	9,375	210	105.0%							36.6	2.9	63.9	4.7	F
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	9,393	207	105.2%				796	53	107.5%	38.7	7.6	51.3	8.7	F
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	8,670	161	105.9%							28.6	1.2	86.1	5.8	F
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	8,720	147	106.5%	861	15	102.5%				27.7	0.9	92.5	4.3	F
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	9,638	144	106.7%	878	27	95.4%				33.2	0.3	75.8	1.2	F

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	526	7	46.6%				20	10	97.5%	64.5	0.2	7.2	0.1	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	507	14	45.7%							64.5	0.2	6.9	0.1	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	508	15	45.7%	849	16	102.2%				60.2	0.3	10.0	0.1	A
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,358	29	70.0%	831	15	109.4%				59.1	0.8	15.2	0.3	B
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,190	35	81.1%							62.1	0.8	24.7	0.4	C
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	2,189	35	81.1%							62.5	0.4	23.4	0.3	C
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	2,191	38	109.0%	1,281	58	105.9%	331	36	103.3%	59.5	0.9	25.0	0.7	C
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	3,137	78	108.2%							61.9	0.6	29.2	0.8	D
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	3,134	82	108.1%	650	36	114.0%				55.4	3.6	35.1	2.0	E
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	3,785	90	109.1%							60.7	1.0	35.2	1.5	E
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	3,786	93	109.1%				423	49	111.2%	62.2	0.1	32.2	1.0	D
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	3,360	92	108.7%							62.6	0.1	29.4	0.9	D
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	3,356	96	108.6%	342	26	107.0%				59.3	3.3	31.4	2.0	D
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	3,694	99	108.3%	149	16	106.7%	431	43	105.1%	61.3	0.6	30.0	1.1	D
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	3,414	107	108.7%							60.4	5.9	30.1	4.2	D
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	3,412	106	108.7%	358	20	108.4%				57.0	10.4	35.0	12.4	D
104 SR-65 SB - Sunset Blvd EB On-ramp	Merge	3,768	100	108.6%	442	25	102.9%				50.5	6.9	43.4	7.9	E
105 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	4,210	105	108.0%							56.9	2.2	39.7	2.3	E
106 SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	4,211	105	108.0%				817	43	108.9%	60.3	1.6	36.9	1.4	E
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,391	95	107.7%							62.2	1.6	29.3	0.9	D
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,389	98	107.6%	415	33	106.3%				52.5	7.0	35.8	5.7	E
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	3,803	111	107.4%	1,131	45	100.9%	707	60	107.1%	52.9	5.2	36.6	5.4	E
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	4,224	112	105.6%							60.9	1.1	36.9	1.2	E
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	4,221	117	105.5%	638	38	102.8%				59.6	1.1	29.2	0.6	D
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	4,860	123	105.2%	719	38	102.7%				55.7	5.3	33.2	3.7	D
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	5,575	115	104.8%							60.3	0.8	33.1	0.8	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	5,574	114	104.8%				926	68	100.7%	61.9	0.4	28.1	0.7	D
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,657	111	105.8%							62.5	0.3	26.7	0.7	D
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,667	105	106.1%	1,129	67	101.7%	4,170	103	104.2%	61.0	0.7	24.1	0.5	C
120 SR-65 SB to EB I-80 Connector	Basic	1,625	79	107.6%							52.8	0.8	23.9	1.1	C
121 SR-65 SB to WB I-80 Connector	Basic	3,317	81	98.1%							54.6	0.4	23.1	0.3	C
123 SR-65 NB from WB I-80 Connector	Basic	1,348	84	104.5%							53.3	0.2	15.1	0.8	B
124 SR-65 NB from EB I-80 Connector	Basic	2,941	91	108.9%							62.4	0.6	27.0	0.8	D
125 SR-65 NB - Eureka Rd On-ramp	Merge	3,688	93	136.6%	630	44	101.6%				49.1	0.2	27.5	0.7	C
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	3,568	104	107.5%	2,096	91	105.3%	1,216	76	105.8%	60.6	0.4	21.7	0.6	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	4,448	144	106.9%							62.4	0.3	23.1	0.6	C
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	4,454	142	107.1%	408	38	102.0%				54.6	6.2	11.4	2.6	B
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	4,870	141	106.8%							53.9	4.8	37.4	3.9	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	4,871	142	106.8%							57.0	2.7	34.1	2.2	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	3,962	112	108.6%				908	66	99.8%	59.8	4.0	37.7	3.6	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	3,963	112	108.6%	221	31	100.4%	1,884	99	110.1%	62.0	1.4	27.9	1.2	C
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	2,305	102	106.7%							63.6	0.1	20.2	0.9	C
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	2,304	100	106.7%	539	46	99.8%				60.6	0.5	22.5	1.1	C
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	2,841	128	105.2%							62.5	0.2	24.9	1.3	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	2,839	128	105.1%				1,214	81	104.6%	63.6	0.2	19.4	0.8	B
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	1,626	65	105.6%							63.9	0.2	14.4	0.4	B
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	1,626	65	105.6%	57	16	113.4%				63.9	0.3	14.2	0.5	B
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	1,687	68	106.1%	190	24	111.8%	314	39	98.1%	63.5	0.3	13.8	0.5	B
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	1,562	71	108.5%							63.6	0.2	13.9	0.6	B
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	1,562	72	108.5%	161	25	107.0%				63.2	0.4	14.3	0.6	B
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	1,723	74	108.3%	207	26	108.7%				62.7	0.9	15.8	0.4	B
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	1,930	79	108.4%							62.9	0.7	17.5	0.5	B
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	1,931	80	56.5%				368	38	94.4%	63.0	0.3	17.6	0.5	B
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	1,566	76	51.7%							63.6	0.2	14.9	0.3	B
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	1,571	81	51.9%	267	25	107.0%	855	57	112.5%	63.8	0.2	12.5	0.3	B
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	986	71	39.1%							64.2	0.1	11.0	0.8	A
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	985	71	39.1%				682	56	106.6%	64.5	0.1	9.0	0.6	A
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	302	38	16.1%							64.6	0.3	3.2	0.3	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	303	38	16.1%	15	3	75.0%				64.2	0.3	3.2	0.3	A

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,711	44	102.1%	970	20	96.0%				61.7	1.0	27.2	0.8	C
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,678	56	101.4%							61.3	1.1	31.9	0.8	D
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	8,674	58	101.3%				1,159	61	100.8%	61.6	0.7	28.6	0.5	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	7,514	88	101.4%				640	45	101.6%	61.4	4.8	25.0	1.9	C
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,881	83	101.5%							63.0	0.3	25.3	0.4	C
6 I-80 EB - Douglas Blvd to Eureka Rd	Weave	6,885	81	101.5%	1,702	67	100.7%	1,436	74	99.0%	62.5	0.2	25.1	0.3	C
7 I-80 EB CD - Eureka Rd to SR-65	Weave	236	27	102.7%	1,390	58	100.0%	664	50	102.2%	60.9	0.8	15.6	0.3	B
8 I-80 EB - Eureka Rd to SR-65	Basic	7,153	140	101.9%							60.3	2.5	31.2	1.2	D
9 I-80 EB - HOV Connector Off-ramp	Diverge	7,151	134	101.9%				1,118	47	102.6%	57.8	1.6	32.2	1.0	D
10 I-80 EB - SR-65 Off-ramp	Diverge	6,036	143	101.8%				3,503	89	103.3%	63.3	0.5	25.0	0.4	C
11 I-80 EB - SR-65 Off-ramp to Eureka Rd On-ramp	Basic	2,533	116	99.7%							64.2	0.1	14.2	0.6	B
17 I-80 EB - Eureka Rd On-ramp	Merge	2,532	110	99.7%	669	50	102.9%				63.3	0.3	14.8	0.6	B
18 I-80 EB - Eureka Rd On-ramp to SR-65 On-ramp	Basic	3,199	112	100.3%							63.9	0.1	15.9	0.5	B
19 I-80 EB - SR-65 On-ramp	Merge	3,199	113	100.3%	2,052	70	99.6%				61.0	0.4	27.7	0.8	C
20 I-80 EB - SR-65 to Rocklin Rd	Basic	5,250	121	100.0%							63.1	0.2	23.5	0.6	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	5,244	128	99.9%				1,361	76	99.3%	63.5	0.1	22.7	0.4	C
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	3,878	101	99.9%							63.4	0.3	21.8	0.6	C
24 I-80 EB - Rocklin Rd On-ramp	Merge	3,875	101	99.9%	268	13	103.0%				60.5	0.5	22.2	0.6	C
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	4,139	100	100.0%							63.2	0.2	23.0	0.5	C
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	4,140	96	100.0%				320	28	96.8%	62.6	0.4	24.2	0.8	C
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	3,821	95	100.3%							63.3	0.2	21.9	0.4	C
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	3,823	86	100.3%	256	9	102.4%				61.4	0.6	20.9	0.6	C
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	4,078	87	100.4%	598	14	101.4%				60.4	0.8	24.2	0.6	C
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	3,578	22	105.8%				592	44	107.6%	60.7	0.8	18.9	0.2	B
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	2,980	58	105.3%							63.7	0.2	17.7	0.3	B
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	2,979	60	105.3%	209	7	99.5%				62.6	0.6	16.6	0.5	B
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,187	66	104.8%	247	8	102.8%				63.0	0.4	17.6	0.6	B
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	3,429	71	104.5%							63.3	0.3	19.7	0.4	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	3,427	70	104.5%				280	31	99.9%	63.1	0.2	20.7	0.6	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,146	72	104.9%							63.7	0.2	18.5	0.3	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,146	68	104.9%	1,568	59	101.8%				58.6	1.2	24.6	1.0	C
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	4,708	87	103.7%							61.9	0.5	26.3	0.7	D
47 I-80 WB - HOV Lane Start to SR-65	Basic	4,703	88	103.6%							62.6	0.3	21.2	0.5	C
48 I-80 WB - SR-65 Off-ramp	Diverge	4,701	87	103.5%				1,598	68	103.1%	63.8	0.2	19.5	0.6	B
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,099	102	103.7%							63.9	0.1	17.2	0.6	B
60 I-80 WB - SR-65 to Atlantic St	Weave	3,094	104	103.5%	3,706	110	99.9%	395	37	103.8%	61.7	0.2	19.6	0.4	B
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	6,408	133	101.4%				963	67	100.3%	62.7	0.4	20.5	0.5	C
63 I-80 WB - Atlantic St EB Off to On-ramp	Basic	5,448	125	101.6%							62.8	0.3	24.8	0.7	C
64 I-80 WB - Atlantic St On-ramp	Merge	5,451	125	101.7%	1,265	34	98.8%				61.3	0.4	19.7	0.7	B
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	6,716	133	101.1%				1,057	65	98.8%	61.3	0.7	30.5	0.8	D
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	5,654	121	101.5%							63.0	0.3	28.7	0.7	D
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	5,652	114	101.5%	1,312	54	101.0%				61.3	0.1	25.9	0.3	C
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	6,966	131	101.4%	638	24	91.2%				59.6	2.5	23.9	1.4	C
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	7,605	104	100.5%							61.4	0.9	31.0	0.8	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	7,607	138	100.5%				996	61	102.7%	62.1	0.9	27.7	0.6	C
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,616	133	100.2%							62.3	0.4	32.0	0.4	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,615	131	100.2%	204	12	97.0%				62.9	0.1	25.6	0.4	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	6,818	140	100.1%	743	24	106.1%				61.7	1.0	23.0	0.7	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	7,557	145	100.6%							62.3	0.2	28.1	0.8	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	7,550	149	100.5%				961	73	102.2%	60.8	2.9	29.4	1.4	D
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	6,591	167	100.3%							62.5	0.8	25.3	0.4	C
77 I-80 WB - Antelope Rd WB On-ramp	Merge	6,593	165	100.3%	359	3	94.4%				60.3	1.2	23.3	1.0	C
78 I-80 WB - Antelope Rd to Truck Scales	Weave	6,955	159	100.1%	367	13	99.1%	65	14	71.9%	62.3	0.4	24.6	0.5	C
79 I-80 WB - Truck Scales Off to On-ramp	Basic	7,257	158	100.4%							62.8	0.4	26.9	0.6	D
80 I-80 WB - Truck Scales On-ramp	Merge	7,254	158	100.3%	64	16	70.8%				62.6	0.1	26.5	0.9	C
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	7,316	144	99.9%							61.8	0.2	28.1	0.7	D
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	7,313	143	99.9%				1,080	72	98.2%	62.2	0.4	26.2	0.7	C
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	6,230	141	100.2%							63.0	0.2	23.9	0.6	C
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	6,229	135	100.1%	898	4	99.8%				56.9	1.7	26.2	1.5	C
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	7,127	137	100.1%	659	22	103.0%				61.2	1.2	28.9	0.9	D

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	379	5	33.5%				27	11	88.3%	64.8	0.4	3.3	0.0	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	352	14	32.0%							64.8	0.4	3.0	0.1	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	353	14	32.0%	476	12	101.3%				60.2	0.3	5.2	0.1	A
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	828	20	52.7%	349	10	99.7%				61.3	0.3	6.8	0.2	A
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	1,177	24	61.3%							64.2	0.2	11.6	0.4	B
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	1,177	27	61.3%							64.4	0.2	10.9	0.4	A
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	1,176	27	98.8%	1,151	46	100.1%	267	35	95.5%	61.8	0.5	13.9	0.4	B
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,059	47	100.0%							63.8	0.2	16.8	0.4	B
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,058	48	99.9%	413	34	98.4%				61.8	0.2	18.7	0.6	B
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	2,473	61	99.7%							63.4	0.2	20.1	0.6	C
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	2,473	67	99.7%				444	44	98.7%	63.4	0.2	19.0	0.5	B
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,029	60	99.9%							63.6	0.2	16.6	0.4	B
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,031	62	100.0%	344	28	104.3%				62.2	0.5	18.4	0.5	B
101 SR-65 SB - Placer Pkwy to Sunset Blvd	Weave	2,377	65	100.7%	309	32	99.8%	245	29	98.2%	62.6	0.3	19.5	0.5	B
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	2,437	75	100.7%							63.1	0.2	20.4	0.6	C
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	2,438	76	100.7%	618	35	106.6%				60.3	0.9	24.2	0.8	C
104 SR-65 SB - Sunset Blvd EB On-ramp	Merge	3,057	86	101.9%	719	28	102.7%				56.7	2.9	33.1	1.4	D
105 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	3,778	94	102.1%							60.3	0.8	32.8	1.0	D
106 SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	3,776	96	102.0%				734	43	96.6%	62.2	0.2	31.2	0.9	D
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	3,036	97	103.2%							63.0	0.2	25.5	0.9	C
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	3,036	96	103.3%	396	28	104.1%				59.3	0.7	27.5	1.1	C
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	3,435	93	103.5%	1,100	61	101.8%	573	52	98.8%	60.3	0.4	28.6	0.9	D
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	3,951	128	103.4%							61.9	0.5	32.8	1.1	D
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	3,948	128	103.4%	486	36	101.2%				61.2	0.3	25.8	0.8	C
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	4,432	128	103.1%	838	49	99.8%				61.0	0.8	26.4	0.9	C
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	5,265	127	102.4%							61.5	0.3	29.1	0.4	D
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	5,264	127	102.4%				1,004	59	100.4%	62.5	0.3	25.0	0.7	C
115 SR-65 SB - Galleria Off to On-ramp	Basic	4,265	107	103.0%							62.8	0.3	24.4	0.4	C
117 SR-65 SB - Galleria Blvd to I-80	Weave	4,264	113	103.0%	1,501	60	92.1%	3,708	108	100.0%	59.9	1.2	22.8	0.6	C
120 SR-65 SB to EB I-80 Connector	Basic	2,056	64	99.8%							51.9	0.6	26.3	1.2	D
121 SR-65 SB to WB I-80 Connector	Basic	3,109	113	91.7%							55.2	0.4	20.2	0.9	C
123 SR-65 NB from WB I-80 Connector	Basic	1,600	68	103.2%							53.1	0.2	17.2	0.5	B
124 SR-65 NB from EB I-80 Connector	Basic	3,505	90	103.4%							62.0	0.4	32.3	0.8	D
125 SR-65 NB - Eureka Rd On-ramp	Merge	4,628	97	136.5%	957	56	98.6%				48.8	0.1	32.8	0.8	D
126 SR-65 NB - I-80 to Stanford Ranch Rd	Weave	4,468	113	102.5%	2,721	89	103.1%	1,954	97	101.2%	59.5	0.4	25.6	0.6	C
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	5,238	99	103.3%							62.1	0.3	25.2	0.4	C
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	5,235	101	103.2%	677	47	91.5%				53.2	4.6	17.8	2.3	B
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	5,915	129	101.8%							52.8	4.0	39.6	2.7	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	5,916	129	101.8%				1,474	52	103.1%	56.8	2.1	35.3	1.5	E
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	4,437	114	101.3%							60.4	2.3	37.5	2.5	E
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	4,437	111	101.3%	586	47	99.3%	1,714	77	100.8%	62.0	0.3	30.1	0.9	D
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	3,304	98	101.0%							60.7	5.8	27.8	3.9	D
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	3,306	98	101.1%	757	60	105.1%				48.8	9.3	38.8	10.4	E
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	4,052	130	101.6%							61.2	0.5	34.0	1.6	D
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	4,049	133	101.5%				860	59	103.7%	62.7	0.1	28.8	1.2	D
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	3,187	120	100.9%							62.9	0.1	25.9	1.3	C
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	3,188	125	100.9%	53	14	88.2%				62.2	1.5	26.2	1.1	C
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	3,239	129	100.6%	355	30	104.3%	534	42	102.8%	62.3	0.2	24.9	1.0	C
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	3,061	121	100.7%							62.7	0.2	25.5	1.1	C
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	3,061	115	100.7%	122	25	101.7%				62.6	0.3	25.7	1.1	C
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	3,181	112	100.6%	283	29	101.0%				61.6	0.3	27.2	1.0	C
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	3,442	123	100.6%							61.5	0.3	29.1	1.2	D
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	3,441	122	100.6%				728	53	101.1%	61.1	0.9	29.7	1.1	D
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,710	112	100.4%							63.0	0.2	22.6	0.7	C
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,706	110	100.2%	295	36	95.2%	1,175	78	100.4%	63.3	0.2	18.6	0.6	B
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	1,823	87	99.1%							63.5	0.1	17.9	0.8	B
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	1,824	86	99.1%				1,402	80	99.5%	64.1	0.2	14.0	0.7	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	421	37	98.0%							64.7	0.2	3.7	0.4	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	421	38	98.0%	29	3	97.7%				64.0	0.3	3.7	0.4	A

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	2,445	2,683	109.7%	11.0	0.8	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,150	1,274	110.8%	10.0	1.9	A
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,265	1,335	105.5%	10.0	0.6	A
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,335	2,497	106.9%	10.9	0.9	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,505	2,710	108.2%	12.4	0.4	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks	Signal	4,655	4,830	103.8%	33.1	2.1	C
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,065	3,275	106.8%	10.8	0.9	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	3,905	4,483	114.8%	6.5	0.5	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	3,080	3,134	101.7%	14.3	0.8	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	2,990	3,126	104.5%	23.9	0.9	C
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	3,215	3,389	105.4%	8.4	0.6	A
12	SR-65 SB Ramps/Galleria Blvd	Signal	3,050	3,093	101.4%	18.6	1.0	B
13	Galleria Blvd/Antelope Creek Dr	Signal	1,935	1,906	98.5%	9.6	1.5	A
14	Galleria Blvd/Roseville Pkwy	Signal	4,136	4,452	107.6%	32.9	1.1	C
15	Creekside Ridge Dr/Roseville Pkwy	Signal	2,780	2,944	105.9%	5.9	1.8	A
16	Taylor Rd/East Roseville Pkwy	Signal	4,410	4,689	106.3%	48.8	5.5	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	3,895	4,168	107.0%	29.8	5.0	C
18	Wills Rd/Atlantic St	Signal	1,985	2,163	109.0%	18.9	4.2	B
19	I-80 WB Ramps/Atlantic St	Signal	3,350	3,591	107.2%	25.5	12.3	C
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	5,185	5,470	105.5%	30.5	5.6	C
21	North Sunrise Ave/Eureka Rd	Signal	4,435	4,698	105.9%	35.1	5.3	D
22	Harding Blvd/Wills Rd	Signal	1,795	1,922	107.1%	14.4	2.4	B
23	Harding Blvd/Douglas Blvd	Signal	2,595	2,828	109.0%	23.1	5.2	C
24	I-80 WB Ramps/Douglas Blvd	Signal	3,705	3,973	107.2%	11.8	1.6	B

Network Summary	
Total Demand Volume (veh/hr)	73,866
Total Volume Served (veh/hr)	78,630
Percent Served	106.4%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	23	5	140	23	NO
	Through						
	Right Turn	1500	23	5	140	23	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	5	2	51	13	NO
	Through						
	Right Turn	1500	5	2	51	13	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	41	5	164	29	NO
	Through						
	Right Turn	1330	43	5	166	29	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1400	60	5	277	100	NO
	Through						
	Right Turn	1400	9	1	78	11	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	28	6	133	24	NO
	Through	2260	69	6	275	74	NO
	Right Turn	200	0	0	31	52	NO

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	30	13	194	34	NO
	Through						
	Right Turn	1100	30	13	194	34	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	26	4	145	40	NO
	Through						
	Right Turn	1130	29	3	147	40	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1420	40	6	167	18	NO
	Through						
	Right Turn	1420	39	6	166	18	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
AM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1800	0	0	80	28	NO
WB	Left Turn						
	Through						
	Right Turn	1170	0	0	0	0	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1130	43	4	211	28	NO
WB	Left Turn						
	Through						
	Right Turn	1780	0	0	30	36	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 3 (No Taylor)
 AM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	57	5	223	193	MAX
	Through	1700	113	38	821	259	NO
	Right Turn	1700	20	23	521	252	NO
SB	Left Turn	550	19	3	87	26	NO
	Through						
	Right Turn	550	63	14	316	96	NO
EB	Left Turn	1120	32	4	131	38	NO
	Through	1120	79	19	584	121	NO
	Right Turn	810	3	3	182	120	NO
WB	Left Turn						
	Through	1370	71	15	477	98	NO
	Right Turn	280	0	0	44	29	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1530	72	73	363	74	NO
	Through	1530	72	73	363	74	NO
	Right Turn	730	72	74	363	74	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
AM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	0	0	21	60	NO
SB	Left Turn						
	Through						
	Right Turn	1250	15	3	104	14	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	25	14	212	62	NO
	Through						
	Right Turn	1230	34	18	233	62	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	58	6	260	67	NO
	Through						
	Right Turn	1080	35	7	273	70	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 3 (No Taylor)
 AM Peak Hour

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	21	5	160	18	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	23	8	207	54	NO
	Through						
	Right Turn	1650	23	8	207	54	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	32	4	164	34	NO
	Through						
	Right Turn	1620	32	4	164	34	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	3,030	3,028	99.9%	14.2	1.3	B
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,060	1,038	97.9%	10.5	0.8	B
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,505	1,483	98.5%	12.4	1.0	B
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,690	2,786	103.6%	6.1	0.6	A
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,610	2,738	104.9%	13.8	0.7	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks	Signal	5,570	5,813	104.4%	39.9	3.9	D
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,920	4,144	105.7%	12.0	1.0	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	4,970	5,199	104.6%	7.9	0.8	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	4,605	4,665	101.3%	12.7	0.8	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	4,540	4,529	99.8%	37.2	4.6	D
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	5,390	5,333	98.9%	10.1	1.1	B
12	SR-65 SB Ramps/Galleria Blvd	Signal	5,250	5,039	96.0%	17.0	1.2	B
13	Galleria Blvd/Antelope Creek Dr	Signal	3,870	3,619	93.5%	19.6	1.3	B
14	Galleria Blvd/Roseville Pkwy	Signal	6,525	6,486	99.4%	58.1	5.8	E
15	Creekside Ridge Dr/Roseville Pkwy	Signal	3,970	3,949	99.5%	17.3	3.6	B
16	Taylor Rd/East Roseville Pkwy	Signal	6,265	6,230	99.4%	53.4	8.9	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	5,490	5,588	101.8%	36.8	3.7	D
18	Wills Rd/Atlantic St	Signal	2,655	2,749	103.6%	28.5	10.8	C
19	I-80 WB Ramps/Atlantic St	Signal	4,080	4,126	101.1%	28.5	15.3	C
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	6,105	6,146	100.7%	77.7	9.2	E
21	North Sunrise Ave/Eureka Rd	Signal	5,785	6,033	104.3%	48.0	3.5	D
22	Harding Blvd/Wills Rd	Signal	2,650	2,739	103.3%	15.7	4.9	B
23	Harding Blvd/Douglas Blvd	Signal	3,615	3,575	98.9%	49.2	10.2	D
24	I-80 WB Ramps/Douglas Blvd	Signal	4,490	4,508	100.4%	17.7	4.5	B

Network Summary	
Total Demand Volume (veh/hr)	100,640
Total Volume Served (veh/hr)	101,540
Percent Served	100.9%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

Intersection 2

SR-65 SB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	440	24	5	155	52	NO
	Through						
	Right Turn	1,500	25	5	156	52	NO

Intersection 3

SR-65 NB Ramps/Twelve Bridges Dr

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	700	19	2	105	17	NO
	Through						
	Right Turn	1,500	19	2	105	17	NO

Intersection 4

SR-65 SB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	360	30	4	114	14	NO
	Through						
	Right Turn	1,330	32	4	116	14	NO

Intersection 5

SR-65 NB Ramps/Sunset Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,400	53	4	209	45	NO
	Through						
	Right Turn	1,400	6	0	57	8	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 6

SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	200	49	9	185	71	NO
	Through	2,260	59	12	248	45	NO
	Right Turn	200	0	0	10	17	NO

Intersection 7

SR-65 NB Ramps/Blue Oaks Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	400	37	7	191	31	NO
	Through						
	Right Turn	1,100	37	7	191	31	NO

Intersection 8

SR-65 SB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	430	24	4	125	20	NO
	Through						
	Right Turn	1,130	27	4	127	20	NO

Intersection 9

SR-65 NB Ramps/Pleasant Grove Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1,420	43	3	160	25	NO
	Through						
	Right Turn	1,420	43	3	160	25	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
Average Results from 10 Runs
Queue Length

I-80/SR 65 Interchange
Construction Year - Alt 3 (No Taylor)
PM Peak Hour

Intersection 11

SR-65 NB Ramps/Stanford Ranch Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1,800	4	0	133	51	NO
WB	Left Turn						
	Through						
	Right Turn	1,170	0	0	0	0	NO

Intersection 12

SR-65 SB Ramps/Galleria Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
EB	Left Turn						
	Through						
	Right Turn	1,130	44	3	213	49	NO
WB	Left Turn						
	Through						
	Right Turn	1,780	2	0	103	43	NO

Intersection 19

I-80 WB Ramps/Atlantic St

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1,150	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1,430	0	0	0	0	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 3 (No Taylor)
 PM Peak Hour

Intersection 20

Taylor Rd-I-80 EB Ramps/Eureka Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	180	181	187	1,271	298	AVG
	Through	1,700	254	240	1,310	272	NO
	Right Turn	1,700	113	172	1,033	329	NO
SB	Left Turn	550	24	3	86	22	NO
	Through						
	Right Turn	550	76	11	415	145	NO
EB	Left Turn	1,120	55	5	188	31	NO
	Through	1,120	75	14	542	84	NO
	Right Turn	810	2	2	154	79	NO
WB	Left Turn						
	Through	1,370	340	261	1,282	94	NO
	Right Turn	280	5	5	138	51	NO

Intersection 24

I-80 WB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1,530	80	82	360	87	NO
	Through	1,530	80	82	360	87	NO
	Right Turn	730	81	83	360	87	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

VISSIM Post-Processor
 Average Results from 10 Runs
 Queue Length

I-80/SR 65 Interchange
 Construction Year - Alt 3 (No Taylor)
 PM Peak Hour

Intersection 25

I-80 EB Ramps/Douglas Blvd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn						
	Through						
	Right Turn	1400	0	0	0	0	NO
SB	Left Turn						
	Through						
	Right Turn	1250	36	8	273	92	NO

Intersection 30

I-80 WB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	700	54	25	259	105	NO
	Through						
	Right Turn	1230	67	26	280	105	NO

Intersection 31

I-80 EB Ramps/Rocklin Rd

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1080	106	32	344	102	NO
	Through						
	Right Turn	1080	60	28	348	100	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

Intersection 33

Lincoln Blvd/SR-65 NB Off-Ramp

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
WB	Left Turn	1940	0	0	0	0	NO
	Through						
	Right Turn	1940	50	3	246	69	NO

Intersection 35

SR-65 SB Ramps/Placer Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
SB	Left Turn	1650	29	3	171	27	NO
	Through						
	Right Turn	1650	29	3	171	27	NO

Intersection 36

SR-65 NB Ramps/Whitney Ranch Pkwy

Signalized

Direction	Movement	Storage (ft)	Average Queue (ft)		Maximum Queue (ft)		Exceeds Storage?
			Average	Std. Dev.	Average	Std. Dev.	
NB	Left Turn	1620	63	4	259	40	NO
	Through						
	Right Turn	1620	63	4	259	40	NO

Note: The "Average Queue" is calculated on a time-step basis so that queues when the approach is green (zero length) are included in the average.

I-80/SR 65 Interchange Improvements

**Vissim Model Results – Construction Year Alternative 5
(No Build)**

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
AM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	163,776	143
Travel Distance [mi]	All Vehicles	740,654	1,696
Travel Time [h]	All Vehicles	23,042	236.2
Average Speed [mph]	All Vehicles	32.1	0.3
Total Delay [h]	All Vehicles	10,333	231.5
Average Delay per Vehicle [s]	All Vehicles	218.7	4.8
VHD/VMT [min/mile]	All Vehicles	0.84	0.02
Number of Vehicles Served	HOVs	31,606	77
Travel Distance [mi]	HOVs	151,373	492
Travel Time [h]	HOVs	4,398	38.6
Average Speed [mph]	HOVs	34.4	0.3
Total Delay [h]	HOVs	1,825	39.4
Average Delay per Vehicle [s]	HOVs	199.8	4.1
VHD/VMT [min/mile]	HOVs	0.72	0.02
Number of Vehicles Served	Trucks	7,543	29
Travel Distance [mi]	Trucks	36,837	398
Travel Time [h]	Trucks	1,180	18.9
Average Speed [mph]	Trucks	31.2	0.3
Total Delay [h]	Trucks	543	13.7
Average Delay per Vehicle [s]	Trucks	247.8	6.0
VHD/VMT [min/mile]	Trucks	0.88	0.02

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	31,610	7,540	163,780
Demand Volume	33,800	8,390	169,670
Percent Demand Served	93.5%	89.9%	96.5%
Vehicle Miles of Travel	151,370	36,840	740,650
Person Miles of Travel	317,880	38,680	909,000
Vehicle Hours of Travel	4,400	1,180	23,040
Vehicle Hours of Delay	1,830	540	10,330
VHD % of VHT	41.6%	45.8%	44.8%
Average Delay per Vehicle (min)	3.47	4.30	3.78
Person Hours of Delay	3,840	570	12,370
Average Travel Speed	34.4	31.2	32.1

VISSIM Post-Processor
Average Values from 10 Runs
Peak Hour Travel Time

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
AM Peak Period

Mode	Description	Distance (ft)	Volume (vehicles)		Travel Time (min.:sec.)		Speed (mph)
			Average	Std. Dev.	Average	Std. Dev.	Average
SOV	SR-65 at Blue Oaks to I-80 at Antelope	43,113	535	12	17:10	01:03	11.4
	I-80 at Auburn to SR-65 at Blue Oaks	32,843	1474	18	09:05	00:58	16.4
	I-80 at Sierra College to I-80 at Antelope	45,830	1125	10	12:12	00:46	17.1
	I-80 at Auburn to I-80 at Sierra College	36,738	678	11	07:01	00:57	23.8
HOV	SR-65 at Blue Oaks to I-80 at Antelope	43,113	171	6	13:58	00:51	14.0
	I-80 at Auburn to SR-65 at Blue Oaks	32,843	360	8	08:51	00:53	16.9
	I-80 at Sierra College to I-80 at Antelope	45,830	504	8	08:52	00:12	23.5
	I-80 at Auburn to I-80 at Sierra College	36,738	224	7	06:37	00:11	25.2

VISSIM Post-Processor
Average Values from 10 Runs
Network Statistics

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
PM Peak Period

Network Performance	Vehicle Types	Average	Std. Dev.
Number of Vehicles Served	All Vehicles	216,607	2,142
Travel Distance [mi]	All Vehicles	805,449	16,684
Travel Time [h]	All Vehicles	37,227	669.3
Average Speed [mph]	All Vehicles	21.6	0.3
Total Delay [h]	All Vehicles	23,023	480.4
Average Delay per Vehicle [s]	All Vehicles	368.1	6.5
VHD/VMT [min/mile]	All Vehicles	1.72	0.03
Number of Vehicles Served	HOVs	42,854	505
Travel Distance [mi]	HOVs	173,711	3,643
Travel Time [h]	HOVs	6,741	217.5
Average Speed [mph]	HOVs	25.8	1.3
Total Delay [h]	HOVs	3,713	272.1
Average Delay per Vehicle [s]	HOVs	301.6	24.8
VHD/VMT [min/mile]	HOVs	1.28	0.12
Number of Vehicles Served	Trucks	8,196	103
Travel Distance [mi]	Trucks	29,871	728
Travel Time [h]	Trucks	1,533	62.6
Average Speed [mph]	Trucks	19.5	0.7
Total Delay [h]	Trucks	996	56.2
Average Delay per Vehicle [s]	Trucks	418.8	21.4
VHD/VMT [min/mile]	Trucks	2.00	0.10

Performance Measure	Vehicle Types		
	HOV	Truck	All
Vehicles Served	42,850	8,200	216,610
Demand Volume	47,340	10,010	235,650
Percent Demand Served	90.5%	81.9%	91.9%
Vehicle Miles of Travel	173,710	29,870	805,450
Person Miles of Travel	364,790	31,360	998,020
Vehicle Hours of Travel	6,740	1,530	37,230
Vehicle Hours of Delay	3,710	1,000	23,020
VHD % of VHT	55.0%	65.4%	61.8%
Average Delay per Vehicle (min)	5.19	7.32	6.38
Person Hours of Delay	7,790	1050	27,150
Average Travel Speed	25.8	19.5	21.6

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	7,176	154	109.6%	928	45	103.1%				58.1	12.7	37.4	42.7	E
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	8,063	288	108.2%							55.5	14.7	39.0	32.1	E
3 I-80 EB - Douglas Blvd Slip Off	Diverge	8,044	329	108.0%				1,391	124	106.2%	55.3	13.4	33.5	21.1	D
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	6,634	284	108.0%				560	85	103.6%	52.8	10.3	40.1	23.9	E
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	6,064	269	108.3%							63.3	0.1	24.7	0.5	C
6 I-80 EB - Douglas Blvd On-ramp	Merge	6,061	272	108.2%	887	24	99.7%				61.9	0.5	28.3	0.7	D
7 I-80 EB - Eureka Rd Off-ramp	Diverge	6,942	292	107.0%				1,375	109	105.7%	59.0	2.1	30.3	2.0	D
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	5,566	236	107.3%							62.6	0.5	24.7	0.3	C
9 I-80 EB - Eureka Rd EB On-ramp	Merge	5,569	236	107.3%	199	23	110.3%				62.4	0.4	23.0	0.4	C
10 I-80 EB - Eureka Rd to Taylor Rd	Weave	5,767	242	107.4%	443	42	103.0%	348	34	102.4%	59.7	11.0	25.3	20.5	C
11 I-80 EB - Taylor Rd to SR-65	Basic	5,844	285	107.0%							50.1	15.2	38.7	27.5	E
17 I-80 EB - SR-65 Off-ramp	Diverge	5,841	276	107.0%				2,967	162	105.6%	39.3	16.9	66.1	33.3	F
18 I-80 EB - SR-65 Off to On-ramp	Basic	2,855	153	107.7%							63.9	0.2	14.8	0.5	B
19 I-80 EB - SR-65 On-ramp	Merge	2,856	158	107.8%	1,139	69	86.9%				62.8	0.4	19.8	0.8	B
21 I-80 EB - SR-65 to Rocklin Rd	Basic	4,001	183	101.0%							63.5	0.1	18.8	0.6	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	4,000	178	101.0%				1,339	80	101.4%	47.4	8.9	73.1	33.7	F
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	2,648	107	100.3%							63.8	0.2	16.5	0.5	B
24 I-80 EB - Rocklin Rd On-ramp	Merge	2,649	110	100.3%	275	12	105.6%				60.2	0.5	17.5	0.6	B
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	2,924	109	100.8%							63.6	0.4	17.9	0.6	B
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	2,926	109	100.9%				405	41	101.2%	63.2	0.6	19.1	0.6	B
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,527	98	101.1%							63.7	0.3	16.5	0.6	B
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	2,531	97	101.2%	134	7	103.2%				63.0	0.2	15.4	0.6	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	2,669	98	101.5%	387	12	101.8%				61.2	0.5	16.9	0.7	B
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	4,881	22	105.0%				842	52	105.3%	56.1	2.1	28.0	0.9	C
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	4,038	61	104.9%							61.3	0.7	24.7	0.5	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	4,039	62	104.9%	50	3	82.8%				62.8	0.3	21.3	0.5	C
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	4,089	70	104.6%	299	9	103.1%				57.0	1.6	23.7	0.8	C
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	4,385	68	104.4%							63.0	0.2	24.8	0.4	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	4,385	69	104.4%				250	40	104.1%	62.8	0.3	24.5	0.7	C
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	4,134	94	104.4%							63.0	0.2	23.5	0.5	C
45 I-80 WB - Rocklin Rd On-ramp	Merge	4,133	90	104.4%	912	24	101.4%				55.6	2.0	28.5	1.5	D
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	5,037	109	103.6%							62.1	0.6	28.2	0.7	D
47 I-80 WB - HOV Lane Start to SR-65	Basic	5,037	114	103.6%							60.7	2.4	22.3	1.1	C
48 I-80 WB - SR-65 Off-ramp	Diverge	5,034	112	103.6%				1,368	76	102.8%	51.7	9.7	51.3	32.0	F
49 I-80 WB - SR-65 Off to On-ramp	Basic	3,660	94	103.7%							63.6	0.1	19.4	0.3	C
50 I-80 WB - SR-65 On-ramp	Merge	3,659	95	103.6%	2,991	84	88.5%				55.6	12.8	31.9	16.3	D
60 I-80 WB - Taylor Rd On-ramp	Merge	6,647	155	96.2%	642	42	110.7%				40.3	17.8	56.3	33.3	F
61 I-80 WB - Atlantic St WB Off-ramp	Diverge	7,279	190	97.2%				321	40	103.5%	25.0	13.9	96.3	34.3	F
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	6,949	202	96.8%				944	65	98.4%	22.2	11.0	93.1	20.4	F
63 I-80 WB - Atlantic St Off to On-ramp	Basic	5,992	183	96.3%							17.2	1.9	107.8	15.8	F
64 I-80 WB - Atlantic St On-ramp	Merge	5,989	168	96.3%	991	52	106.5%				18.1	2.5	107.1	20.3	F
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	6,978	136	97.6%				828	56	92.0%	26.9	1.0	46.2	3.8	F
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	6,141	97	98.2%							28.8	1.1	85.2	4.4	F
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	6,144	98	98.3%	976	37	104.9%				24.8	0.5	114.3	5.1	F
68 I-80 WB - Douglas Blvd Slip On	Merge	7,121	96	99.2%	452	19	107.5%				34.4	0.6	70.9	1.0	F
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	7,576	98	99.7%							60.8	0.2	34.6	0.2	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	7,573	93	99.7%				666	45	84.3%	61.9	0.1	32.1	0.3	D
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	6,907	110	101.4%							62.4	0.1	31.2	0.3	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	6,909	107	101.5%	281	6	82.6%				62.8	0.1	25.0	0.4	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	7,191	116	100.6%	897	5	88.8%				63.1	0.3	22.1	0.5	C
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	8,088	128	99.1%							62.6	0.1	28.3	0.3	D
75 I-80 WB - Antelope Rd Off-ramp	Diverge	8,088	121	99.1%				340	28	91.9%	62.6	0.1	27.3	0.4	C
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	7,751	130	99.5%							62.7	0.1	27.4	0.4	D
77 I-80 WB - Antelope Rd WB On-ramp	Merge	7,751	129	99.5%	581	5	100.2%				55.5	2.4	32.1	2.7	D
78 I-80 WB - Antelope Rd to Truck Scales	Weave	8,331	127	99.5%	414	14	90.1%	80	13	80.3%	60.0	1.2	29.6	1.0	D
79 I-80 WB - Truck Scales Off to On-ramp	Basic	8,670	110	99.3%							62.4	0.1	31.6	0.5	D
80 I-80 WB - Truck Scales On-ramp	Merge	8,677	110	99.4%	81	14	80.7%				60.0	2.1	33.1	1.6	D
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	8,770	117	99.3%							53.1	5.4	40.8	5.1	E
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	8,777	115	99.4%				721	55	97.4%	53.2	10.2	35.8	8.9	E
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	8,076	137	99.8%							36.7	11.6	64.1	22.0	F
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	8,107	153	100.2%	828	16	98.6%				27.5	4.2	93.4	14.4	F
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	9,016	165	101.0%	871	24	94.7%				32.4	0.4	81.9	2.5	F

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
AM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	508	6	108.1%				20	7	99.5%	64.7	0.2	5.4	0.1	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	488	11	108.5%							64.6	0.2	5.3	0.1	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	489	12	108.7%	869	14	105.9%				59.4	0.4	11.6	0.1	B
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	1,355	30	106.7%	757	36	101.0%				37.3	20.1	38.3	44.5	E
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	2,025	124	100.2%							19.6	24.1	90.1	60.5	F
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	1,991	141	98.6%							10.1	11.9	118.7	57.9	F
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	1,932	142	95.7%	1,000	143	84.8%	285	46	89.0%	4.9	2.1	152.8	29.0	F
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	2,436	226	84.6%							5.3	0.7	164.7	6.1	F
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	2,406	230	83.5%	512	46	98.5%				5.3	0.7	163.5	5.9	F
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	2,769	280	81.4%							6.7	1.0	153.4	6.9	F
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	2,714	296	79.8%				304	52	84.5%	9.0	1.3	142.4	8.8	F
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	2,290	266	75.3%							4.6	0.7	166.0	8.4	F
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	2,242	267	73.8%	239	26	108.7%				4.0	0.4	164.7	5.7	F
148 SR-65 SB - Placer Pkwy EB On-ramp	Merge	2,395	260	73.5%	195	19	108.5%				4.9	0.4	151.9	4.6	F
101 SR-65 SB - Sunset Blvd Off-ramp	Diverge	2,520	274	73.3%				310	80	60.7%	5.0	0.5	170.8	10.2	F
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	2,058	205	70.2%							6.4	0.4	154.4	3.9	F
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	2,033	189	69.4%	233	14	93.1%				7.3	0.8	138.5	5.2	F
104 SR-65 SB - Sunset Blvd EB On-ramp	Merge	2,225	178	70.0%	328	23	102.5%				9.5	1.1	125.9	5.7	F
105 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	2,506	172	71.6%							8.5	0.9	139.5	5.8	F
106 SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	2,505	164	71.6%				490	78	76.5%	8.3	0.8	138.6	4.6	F
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	2,012	89	70.3%							7.5	0.6	145.2	3.1	F
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	2,022	92	70.7%	418	9	102.0%				9.5	0.6	111.0	2.3	F
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	2,440	95	74.6%	899	51	81.0%	434	48	71.1%	12.9	0.9	96.0	2.8	F
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	2,913	76	77.3%							16.6	1.2	98.6	2.2	F
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	2,914	75	77.3%	513	37	104.8%				20.1	1.5	78.9	3.0	F
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	3,428	66	80.5%	597	6	94.7%				32.3	0.9	58.2	1.2	F
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	4,022	68	82.3%							55.2	1.4	36.2	1.1	E
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	4,022	68	82.3%				783	50	73.1%	59.6	0.7	34.0	0.7	D
115 SR-65 SB - Galleria Blvd Off-ramp to Lane Add	Basic	3,240	82	84.8%							61.5	0.8	29.3	0.4	D
116 SR-65 SB - Lane Add to Galleria Blvd On-ramp	Basic	3,240	78	84.8%							63.3	0.1	20.1	0.3	C
117 SR-65 SB - Galleria Blvd On-ramp	Merge	3,240	81	84.8%	878	49	100.9%				58.6	1.4	25.9	0.8	C
118 SR-65 SB - I-80 WB Off-ramp	Diverge	4,120	86	87.8%				2,994	81	88.6%	62.5	0.6	24.1	0.6	C
125 SR-65 NB - I-80 WB On-ramp	Merge	2,911	139	103.6%	1,357	77	102.0%				26.6	1.1	87.3	4.0	F
126 SR-65 NB - I-80 to Stanford Ranch Rd	Basic	4,241	139	102.4%							57.2	1.4	35.5	3.1	E
127 SR-65 NB - Stanford Ranch Rd Off-ramp	Diverge	4,241	139	102.4%				709	58	94.5%	56.8	1.9	36.4	2.9	E
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	3,526	127	104.0%							50.0	12.2	38.9	11.7	E
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	3,527	113	104.0%	776	36	103.5%				32.9	6.2	63.5	10.9	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	4,301	104	103.9%							57.8	1.5	37.7	0.9	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	4,302	103	103.9%				622	46	95.6%	60.4	1.2	32.9	0.5	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	3,680	109	105.5%							62.3	0.4	30.9	0.6	D
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	3,682	112	105.5%	234	28	97.5%	1,690	85	105.0%	63.0	0.2	23.7	0.5	C
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	2,224	78	104.9%							63.5	0.2	18.7	0.6	C
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	2,224	78	104.9%	417	34	88.6%				60.0	0.8	21.0	0.8	C
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	2,639	80	101.9%							62.5	0.3	23.8	0.8	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	2,637	78	101.8%				1,146	61	102.3%	63.6	0.2	18.5	0.4	B
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	1,492	66	101.5%							63.8	0.2	12.8	0.5	B
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	1,492	66	101.5%	51	13	102.6%				63.0	0.4	12.9	0.5	B
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	1,542	71	101.5%	247	21	107.4%	313	33	97.9%	63.7	0.2	12.7	0.4	B
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	1,477	61	103.3%							63.8	0.2	12.8	0.4	B
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	1,477	62	103.3%	191	22	100.4%				61.6	0.7	13.7	0.5	B
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	1,670	68	103.1%	219	24	109.3%				63.4	0.2	15.6	0.5	B
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	1,888	71	103.7%							63.5	0.2	16.2	0.5	B
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	1,888	71	115.8%				360	43	87.7%	63.3	0.2	16.6	0.5	B
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	1,528	61	125.2%							63.7	0.1	13.5	0.4	B
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	1,529	60	125.3%	246	24	98.5%	840	54	110.5%	63.9	0.2	11.7	0.4	B
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	939	49	132.3%							64.6	0.2	8.0	0.4	A
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	939	50	132.3%				660	41	103.0%	64.4	0.2	9.7	0.6	A
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	280	26	400.6%							64.6	0.2	2.9	0.2	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	281	27	401.9%	14	2	70.0%				64.2	0.2	2.9	0.2	A

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
1 I-80 EB - Auburn Blvd On-ramp	Merge	5,560	986	74.3%	501	216	54.4%				22.8	5.1	180.4	14.1	F
2 I-80 EB - Auburn Blvd to Douglas Blvd	Basic	6,043	1,149	71.9%							15.5	4.3	142.0	16.0	F
3 I-80 EB - Douglas Blvd EB Off-ramp	Diverge	6,031	1,114	71.8%				778	213	67.0%	20.0	4.1	102.9	7.6	F
4 I-80 EB - Douglas Blvd WB Off-ramp	Diverge	5,228	913	72.2%				478	145	68.3%	28.6	11.8	157.6	17.2	F
5 I-80 EB - Douglas Blvd Off to On-ramp	Basic	4,739	785	72.5%							21.4	4.3	144.5	41.9	F
6 I-80 EB - Douglas Blvd On-ramp	Merge	4,764	774	72.8%	638	166	50.7%				9.3	1.7	165.3	8.5	F
7 I-80 EB - Eureka Rd Off-ramp	Diverge	5,418	810	69.5%				816	122	72.2%	12.5	4.0	131.1	17.6	F
8 I-80 EB - Eureka Rd Off to On-ramp	Basic	4,626	650	69.4%							18.9	2.1	147.9	11.6	F
9 I-80 EB - Eureka Rd EB On-ramp	Merge	4,639	632	69.5%	297	21	98.9%				11.7	1.5	146.5	4.8	F
10 I-80 EB - Eureka Rd to Taylor Rd	Weave	4,952	597	71.0%	964	48	100.4%	345	65	58.4%	13.0	2.2	135.4	8.4	F
11 I-80 EB - Taylor Rd to SR-65	Basic	5,592	536	76.2%							16.2	3.0	89.0	8.4	F
17 I-80 EB - SR-65 Off-ramp	Diverge	5,599	530	76.3%				3,099	201	79.1%	23.4	5.1	78.9	24.0	F
18 I-80 EB - SR-65 Off to On-ramp	Basic	2,490	297	72.8%							64.0	0.1	12.7	1.5	B
19 I-80 EB - SR-65 On-ramp	Merge	2,488	297	72.7%	1,600	67	88.9%				62.5	0.6	18.6	1.3	B
21 I-80 EB - SR-65 to Rocklin Rd	Basic	4,074	296	78.0%							61.1	5.4	18.7	5.4	C
22 I-80 EB - Rocklin Rd Off-ramp	Diverge	4,049	314	77.6%				1,025	138	72.2%	58.1	8.2	40.4	47.1	E
23 I-80 EB - Rocklin Rd Off to On-ramp	Basic	2,999	244	78.9%							63.7	0.2	16.7	1.4	B
24 I-80 EB - Rocklin Rd On-ramp	Merge	2,999	248	78.9%	238	30	91.5%				60.7	0.3	17.3	1.2	B
25 I-80 EB - Rocklin Rd to Sierra College Blvd	Basic	3,240	254	79.8%							63.7	0.2	17.8	1.5	B
26 I-80 EB - Sierra College Blvd Off-ramp	Diverge	3,239	255	79.8%				236	37	71.4%	63.2	0.3	19.3	1.5	B
27 I-80 EB - Sierra College Blvd Off to On-ramp	Basic	2,998	241	80.4%							63.6	0.2	17.5	1.5	B
28 I-80 EB - Sierra College Blvd SB On-ramp	Merge	3,002	245	80.5%	249	10	99.6%				62.4	0.3	16.7	1.3	B
29 I-80 EB - Sierra College Blvd NB On-ramp	Merge	3,247	244	81.6%	625	16	100.7%				57.5	1.9	20.6	1.8	C
38 I-80 WB - Sierra College Blvd Off-ramp	Diverge	3,590	15	105.0%				569	45	103.4%	61.0	0.4	19.0	0.3	B
39 I-80 WB - Sierra College Blvd Off to On-ramp	Basic	3,018	47	105.2%							63.6	0.2	18.1	0.3	C
40 I-80 WB - Sierra College Blvd NB On-ramp	Merge	3,018	44	105.2%	136	7	97.3%				63.1	0.3	16.4	0.2	B
41 I-80 WB - Sierra College Blvd SB On-ramp	Merge	3,153	46	104.8%	224	5	93.5%				61.8	0.4	17.0	0.4	B
42 I-80 WB - Sierra College Blvd to Rocklin Rd	Basic	3,376	54	103.9%							63.7	0.1	18.3	0.2	C
43 I-80 WB - Rocklin Rd Off-ramp	Diverge	3,375	54	103.8%				282	29	100.6%	63.4	0.2	18.7	0.4	B
44 I-80 WB - Rocklin Rd Off to On-ramp	Basic	3,099	64	104.3%							41.6	12.7	29.3	15.8	D
45 I-80 WB - Rocklin Rd On-ramp	Merge	3,071	75	103.4%	825	280	67.1%				9.7	0.9	152.8	15.8	F
46 I-80 WB - Rocklin Rd to HOV Lane Start	Basic	3,782	275	90.0%							11.0	0.5	127.7	2.8	F
47 I-80 WB - HOV Lane Start to SR-65	Basic	3,761	281	89.5%							26.9	3.8	69.0	10.9	F
48 I-80 WB - SR-65 Off-ramp	Diverge	3,756	283	89.4%				1,282	109	86.6%	29.2	5.3	140.4	10.2	F
49 I-80 WB - SR-65 Off to On-ramp	Basic	2,452	225	90.2%							63.8	0.3	14.4	2.0	B
50 I-80 WB - SR-65 On-ramp	Merge	2,454	227	90.2%	2,860	105	91.7%				63.3	0.1	20.9	0.6	C
60 I-80 WB - Taylor Rd On-ramp	Merge	5,321	258	91.1%	557	2	95.9%				62.0	0.2	25.4	1.1	C
61 I-80 WB - Atlantic St WB Off-ramp	Diverge	5,879	255	91.6%				315	39	80.8%	62.7	0.6	26.9	0.7	C
62 I-80 WB - Atlantic St EB Off-ramp	Diverge	5,565	245	92.3%				884	63	92.1%	61.1	1.0	27.9	1.1	C
63 I-80 WB - Atlantic St Off to On-ramp	Basic	4,684	239	92.4%							63.6	0.3	18.2	1.4	C
64 I-80 WB - Atlantic St On-ramp	Merge	4,687	237	92.4%	1,229	39	91.0%				60.8	0.6	20.2	1.1	C
65 I-80 WB - Douglas Blvd Off-ramp	Diverge	5,917	246	92.2%				860	87	88.7%	61.4	1.3	14.9	1.1	B
66 I-80 WB - Douglas Blvd Off to On-ramp	Basic	5,058	185	92.8%							62.4	0.7	27.1	0.9	D
67 I-80 WB - Douglas Blvd WB On-ramp	Merge	5,057	185	92.8%	1,138	62	84.3%				56.8	2.7	28.8	2.7	D
68 I-80 WB - Douglas Blvd EB On-ramp	Merge	6,199	198	91.2%	561	22	87.6%				57.4	3.0	32.8	2.4	D
69 I-80 WB - Douglas Blvd to Riverside Ave	Basic	6,769	190	91.0%							59.8	6.7	34.5	5.9	D
70 I-80 WB - Riverside Ave Off-ramp	Diverge	6,768	195	91.0%				889	54	90.7%	47.8	6.8	43.7	8.1	E
71 I-80 WB - Riverside Ave Off to On-ramp	Basic	5,892	210	91.2%							60.5	0.9	28.5	1.2	D
72 I-80 WB - Riverside Ave NB On-ramp	Merge	5,894	210	91.2%	203	11	96.8%				63.2	0.2	22.1	0.6	C
73 I-80 WB - Riverside Ave SB On-ramp	Merge	6,101	200	91.5%	729	12	97.2%				63.1	0.3	19.5	0.8	B
74 I-80 WB - Riverside Ave to Antelope Rd	Basic	6,829	194	92.0%							62.8	0.2	24.6	0.7	C
75 I-80 WB - Antelope Rd Off-ramp	Diverge	6,830	198	92.0%				889	75	93.5%	62.7	0.4	25.5	0.8	C
76 I-80 WB - Antelope Rd Off to On-ramp	Basic	5,945	181	91.9%							63.1	0.2	21.9	0.6	C
77 I-80 WB - Antelope Rd WB On-ramp	Merge	5,946	184	91.9%	364	15	95.9%				62.1	0.5	20.1	0.6	C
78 I-80 WB - Antelope Rd to Truck Scales	Weave	6,309	181	92.1%	369	14	99.6%	59	12	98.8%	62.8	0.2	21.6	0.5	C
79 I-80 WB - Truck Scales Off to On-ramp	Basic	6,631	162	92.6%							63.0	0.2	23.7	0.4	C
80 I-80 WB - Truck Scales On-ramp	Merge	6,634	167	92.6%	59	11	98.8%				62.7	0.2	24.0	0.5	C
81 I-80 WB - Truck Scales to Elkhorn Blvd	Basic	6,697	166	92.8%							61.5	0.4	25.7	0.6	C
82 I-80 WB - Elkhorn Blvd Off-ramp	Diverge	6,697	169	92.8%				997	53	90.6%	62.2	1.3	23.1	0.7	C
83 I-80 WB - Elkhorn Blvd Off to On-ramp	Basic	5,704	177	93.2%							63.2	0.3	21.6	0.6	C
84 I-80 WB - Elkhorn Blvd WB On-ramp	Merge	5,704	173	93.2%	920	20	102.2%				59.7	0.7	22.5	0.9	C
85 I-80 WB - Elkhorn Blvd EB On-ramp	Merge	6,631	175	94.5%	656	17	102.5%				62.3	1.0	27.1	0.8	C

Notes: Average density reported for the analysis area only: for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Freeway Operations Summary

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
PM Peak Hour

Location	Facility Type	Mainline Volume (vph)			On-ramp Volume (vph)			Off-ramp Volume (vph)			Speed (mph)		Density (vplpm)		LOS
		Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	%	Avg.	St. Dev.	Avg.	St. Dev.	
156 SR-65 SB - Ferrari Ranch Rd Off-ramp	Diverge	384	6	101.0%				34	10	113.0%	64.8	0.4	3.2	0.1	A
157 SR-65 SB - Ferrari Ranch Rd Off to On-ramp	Basic	350	14	100.1%							64.8	0.3	2.9	0.1	A
158 SR-65 SB - Ferrari Ranch Rd WB On-ramp	Merge	350	15	100.1%	458	17	97.4%				60.7	0.3	6.0	0.2	A
159 SR-65 SB - Ferrari Ranch Rd EB On-ramp	Merge	809	28	98.6%	322	10	91.9%				61.6	0.1	7.3	0.3	A
160 SR-65 SB - Ferrari Ranch Rd to Lane Drop	Basic	1,129	29	96.5%							64.6	0.2	9.1	0.2	A
161 SR-65 SB - Lane Drop to Lincoln Blvd	Basic	1,129	29	96.5%							64.6	0.2	9.1	0.2	A
97 SR-65 SB - Lincoln Blvd to Twelve Bridges Dr	Weave	1,130	30	96.6%	1,063	26	92.4%	260	24	96.2%	60.0	0.4	12.9	0.3	B
98 SR-65 SB - Twelve Bridges Dr Off to On-ramp	Basic	1,936	45	94.4%							63.9	0.3	15.5	0.4	B
99 SR-65 SB - Twelve Bridges Dr On-ramp	Merge	1,936	43	94.4%	414	21	103.6%				61.6	0.5	17.8	0.4	B
100 SR-65 SB - Twelve Bridges Dr to Placer Pkwy	Basic	2,351	49	95.9%							63.4	0.2	18.9	0.4	C
145 SR-65 SB - Placer Pkwy Off-ramp	Diverge	2,350	52	95.9%				425	34	92.4%	63.5	0.2	18.0	0.5	B
146 SR-65 SB - Placer Pkwy Off to On-ramp	Basic	1,924	60	96.7%							63.7	0.1	15.2	0.5	B
147 SR-65 SB - Placer Pkwy WB On-ramp	Merge	1,926	59	96.8%	319	27	106.4%				54.5	13.9	18.2	5.7	B
148 SR-65 SB - Placer Pkwy EB On-ramp	Merge	2,237	72	97.7%	275	23	94.8%				38.3	22.9	41.3	29.4	E
101 SR-65 SB - Sunset Blvd Off-ramp	Diverge	2,474	103	95.9%				306	39	87.4%	27.4	26.2	79.5	52.4	F
102 SR-65 SB - Sunset Blvd Off to On-ramp	Basic	2,039	169	91.4%							16.4	14.5	112.6	49.6	F
103 SR-65 SB - Sunset Blvd WB On-ramp	Merge	2,000	167	89.7%	483	38	86.2%				8.5	1.8	134.2	22.5	F
104 SR-65 SB - Sunset Blvd EB On-ramp	Merge	2,406	208	86.2%	536	35	103.2%				11.8	1.8	113.2	6.0	F
105 SR-65 SB - Sunset Blvd to Blue Oaks Blvd	Basic	2,851	228	86.1%							11.5	2.0	126.6	9.1	F
106 SR-65 SB - Blue Oaks Blvd Off-ramp	Diverge	2,817	212	85.1%				515	63	75.7%	11.5	1.9	119.6	8.4	F
107 SR-65 SB - Blue Oaks Blvd Off to On-ramp	Basic	2,222	161	84.5%							8.5	0.7	139.9	4.5	F
108 SR-65 SB - Blue Oaks Blvd WB On-ramp	Merge	2,192	148	83.3%	390	19	102.6%				8.6	1.0	129.5	5.8	F
109 SR-65 SB - Blue Oaks Blvd to Pleasant Grove Blvd	Weave	2,550	128	84.7%	1,065	29	91.8%	450	51	76.2%	11.3	1.0	116.8	5.5	F
110 SR-65 SB - Pleasant Grove Blvd Off to On-ramp	Basic	3,156	125	88.2%							14.2	1.0	113.7	3.7	F
111 SR-65 SB - Pleasant Grove Blvd WB On-ramp	Merge	3,159	122	88.2%	371	33	100.3%				17.4	0.8	90.8	1.8	F
112 SR-65 SB - Pleasant Grove Blvd EB On-ramp	Merge	3,529	107	89.3%	790	39	100.0%				34.0	0.8	60.2	1.1	F
113 SR-65 SB - Pleasant Grove Blvd to Galleria Blvd	Basic	4,320	84	91.1%							59.3	1.3	36.6	0.6	E
114 SR-65 SB - Galleria Blvd Off-ramp	Diverge	4,319	85	91.1%				907	55	90.7%	60.1	1.0	36.0	0.8	E
115 SR-65 SB - Galleria Blvd Off-ramp to Lane Add	Basic	3,408	92	91.1%							58.8	3.7	30.8	2.6	D
116 SR-65 SB - Lane Add to Galleria Blvd On-ramp	Basic	3,409	98	91.2%							63.1	0.2	20.7	0.6	C
117 SR-65 SB - Galleria Blvd On-ramp	Merge	3,410	95	91.2%	1,047	66	88.8%				54.0	5.0	28.8	5.5	D
118 SR-65 SB - I-80 WB Off-ramp	Diverge	4,459	113	90.6%				2,856	104	91.5%	62.1	0.6	24.1	0.7	C
125 SR-65 NB - I-80 WB On-ramp	Merge	3,058	79	78.0%	1,278	104	86.3%				26.3	0.3	90.4	0.9	F
126 SR-65 NB - I-80 to Stanford Ranch Rd	Basic	4,329	49	80.2%							58.1	3.6	36.5	2.7	E
127 SR-65 NB - Stanford Ranch Rd Off-ramp	Diverge	4,329	50	80.2%				1,183	61	81.0%	56.4	2.8	38.8	2.2	E
128 SR-65 NB - Stanford Ranch Rd Off to On-ramp	Basic	3,140	60	79.7%							35.3	17.7	57.3	26.5	F
129 SR-65 NB - Stanford Ranch Rd On-ramp	Merge	3,129	59	79.4%	1,136	45	93.9%				28.7	5.7	83.4	18.5	F
130 SR-65 NB - Stanford Ranch Rd to Pleasant Grove Blvd	Basic	4,267	74	82.9%							58.2	1.4	36.1	1.3	E
131 SR-65 NB - Pleasant Grove Blvd Off-ramp	Diverge	4,267	75	82.9%				859	58	87.6%	60.5	1.0	31.1	0.7	D
132 SR-65 NB - Pleasant Grove Blvd Off to On-ramp	Basic	3,411	77	81.8%							62.6	0.6	27.9	0.5	D
133 SR-65 NB - Pleasant Grove Blvd to Blue Oaks Blvd	Weave	3,410	83	81.8%	612	41	98.7%	1,562	72	85.8%	62.8	0.3	22.9	0.3	C
134 SR-65 NB - Blue Oaks Blvd Off to On-ramp	Basic	2,460	78	82.8%							63.4	0.2	20.0	0.4	C
135 SR-65 NB - Blue Oaks Blvd On-ramp	Merge	2,457	80	82.7%	449	42	87.9%				59.9	1.4	22.1	0.8	C
136 SR-65 NB - Blue Oaks Blvd to Sunset Blvd	Basic	2,904	90	83.5%							62.8	0.2	23.6	0.7	C
137 SR-65 NB - Sunset Blvd Off-ramp	Diverge	2,901	86	83.4%				498	53	90.5%	63.0	0.2	21.8	0.7	C
138 SR-65 NB - Sunset Blvd Off to On-ramp	Basic	2,401	84	81.9%							63.1	0.2	19.7	0.6	C
139 SR-65 NB - Sunset Blvd EB On-ramp	Merge	2,402	83	82.0%	119	22	99.0%				61.1	0.4	20.6	0.6	C
140 SR-65 NB - Sunset Blvd to Whitney Ranch Pkwy	Weave	2,519	84	82.6%	380	29	97.4%	410	49	85.5%	62.9	0.2	20.2	0.5	C
141 SR-65 NB - Whitney Ranch Pkwy Off to On-ramp	Basic	2,483	94	83.9%							63.2	0.2	20.5	0.7	C
149 SR-65 NB - Whitney Ranch Pkwy EB On-ramp	Merge	2,482	91	83.8%	167	22	98.4%				60.5	0.7	21.5	0.8	C
150 SR-65 NB - Whitney Ranch Pkwy WB On-ramp	Merge	2,646	92	84.5%	266	23	102.5%				62.3	0.3	23.5	0.8	C
151 SR-65 NB - Whitney Ranch Pkwy to Twelve Bridges Dr	Basic	2,908	100	85.8%							62.8	0.2	24.2	0.6	C
142 SR-65 NB - Twelve Bridges Dr Off-ramp	Diverge	2,907	100	90.3%				593	49	84.8%	62.2	0.3	25.0	0.6	C
143 SR-65 NB - Twelve Bridges Dr Off to On-ramp	Basic	2,307	77	91.5%							63.3	0.2	19.7	0.4	C
144 SR-65 NB - Twelve Bridges Dr to Lincoln Blvd	Weave	2,306	77	91.5%	273	24	94.1%	1,000	66	86.2%	63.5	0.1	16.7	0.3	B
152 SR-65 NB - Lincoln Blvd to Ferrari Ranch Rd	Basic	1,574	75	95.4%							64.2	0.2	12.9	0.6	B
153 SR-65 NB - Ferrari Ranch Rd Off-ramp	Diverge	1,573	77	95.3%				1,175	68	83.9%	63.9	0.2	14.7	0.6	B
154 SR-65 NB - Ferrari Ranch Rd Off to On-ramp	Basic	396	37	158.4%							64.7	0.3	3.3	0.3	A
155 SR-65 NB - Ferrari Ranch Rd On-ramp	Merge	397	38	158.6%	26	2	87.7%				64.1	0.3	3.3	0.3	A

Notes: Average density reported for the analysis area only; for example, within the ramp influence area and not including the HOV lane.
Mainline volume is the upstream served volume for all lanes.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Parkway	Signal	2,457	2,587	105.3%	31.7	39.4	C
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	1,118	1,120	100.2%	136.4	47.4	F
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,248	1,254	100.5%	88.8	57.8	F
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,224	2,083	93.7%	19.3	11.0	B
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,530	2,482	98.1%	14.2	2.4	B
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	4,496	4,000	89.0%	186.6	10.4	F
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	2,924	2,946	100.7%	11.8	1.2	B
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	3,671	3,525	96.0%	41.0	17.1	D
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	2,805	2,787	99.4%	10.4	0.9	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	2,987	3,071	102.8%	28.8	2.4	C
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	3,539	3,655	103.3%	26.6	11.4	C
12	SR-65 SB Ramps/Galleria Blvd	Signal	3,793	3,604	95.0%	22.5	1.2	C
13	Galleria Blvd/Antelope Creek Dr	Signal	2,828	2,668	94.3%	13.2	2.3	B
14	Galleria Blvd/Roseville Pkwy	Signal	5,376	5,560	103.4%	36.4	1.6	D
15	Creekside Ridge Dr/Roseville Pkwy	Signal	3,581	3,674	102.6%	8.5	1.9	A
16	Taylor Rd/East Roseville Pkwy	Signal	4,547	4,740	104.2%	129.9	27.3	F
17	North Sunrise Ave/East Roseville Pkwy	Signal	4,351	4,580	105.3%	23.7	1.3	C
18	Wills Rd/Atlantic St	Signal	1,941	2,136	110.0%	16.4	1.7	B
19	I-80 WB Ramps/Atlantic St	Signal	3,233	3,403	105.3%	15.5	10.6	B
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	4,252	4,422	104.0%	22.1	2.4	C
21	North Sunrise Ave/Eureka Rd	Signal	3,889	4,013	103.2%	25.4	1.3	C
22	Harding Blvd/Wills Rd	Signal	2,172	2,261	104.1%	13.5	2.1	B
23	Harding Blvd/Douglas Blvd	Signal	2,755	2,955	107.3%	22.2	3.9	C
24	I-80 WB Ramps/Douglas Blvd	Signal	3,702	3,842	103.8%	58.7	8.9	E

Network Summary	
Total Demand Volume (veh/hr)	76,419
Total Volume Served (veh/hr)	77,365
Percent Served	101.2%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
AM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
25	I-80 EB Ramps/Douglas Blvd	Signal	4,092	4,358	106.5%	46.9	22.8	D
26	North Sunrise Ave/Douglas Blvd	Signal	4,467	4,722	105.7%	30.4	1.3	C
27	Pacific St/Woodside Dr	Signal	1,720	1,883	109.5%	8.5	1.0	A
28	Pacific St/Sunset Blvd	Signal	2,684	2,957	110.2%	27.9	2.0	C
29	Granite Dr/Rocklin Rd	Signal	2,424	2,520	103.9%	21.1	5.0	C
30	I-80 WB Ramps/Rocklin Rd	Signal	2,671	2,801	104.9%	36.5	13.0	D
31	I-80 EB Ramps/Rocklin Rd	Signal	2,704	2,848	105.3%	69.8	15.0	E
32	Aguilar Rd/Rocklin Rd	Signal	1,899	2,038	107.3%	9.4	0.9	A
253	Galleria Blvd/Berry St	Signal	2,031	2,102	103.5%	10.4	0.8	B
33	Lincoln Blvd/SR-65 NB Off-Ramp	Signal	2,396	2,401	100.2%	96.9	72.1	F
34	Lincoln Blvd/SR-65 SB On-Ramp	Signal	1,641	1,497	91.2%	228.6	103.5	F
35	SR-65 SB Ramps/Placer Pkwy	Signal	1,291	1,398	108.2%	6.2	0.7	A
36	SR-65 NB Ramps/Whitney Ranch Pkwy	Signal	1,602	1,655	103.3%	7.6	0.7	A

Network Summary	
Total Demand Volume (veh/hr)	31,622
Total Volume Served (veh/hr)	33,180
Percent Served	104.9%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.

VISSIM Post-Processor
Average Results from 10 Runs
Intersection Volume and Delay

I-80/SR 65 Interchange
Construction Year - Alt 5 (No Build)
PM Peak Hour

	Intersection	Control	Volume (vph)		Percent Served	Delay (sec/veh)		Level of Service
			Demand	Served		Average	Std. Dev.	
1	Lincoln Blvd/Sterling Pkwy	Signal	3,044	2,799	92.0%	120.2	26.0	F
2	SR-65 SB Ramps/Twelve Bridges Dr	Signal	964	960	99.6%	6.5	0.7	A
3	SR-65 NB Ramps/Twelve Bridges Dr	Signal	1,423	1,322	92.9%	8.2	0.7	A
4	SR-65 SB Ramps/Sunset Blvd	Signal	2,660	2,483	93.3%	59.1	16.3	E
5	SR-65 NB Ramps/Sunset Blvd	Signal	2,629	2,487	94.6%	113.0	38.9	F
6	SR-65 SB Ramps-Washington Blvd/Blue Oaks Blvd	Signal	5,499	4,923	89.5%	187.5	9.2	F
7	SR-65 NB Ramps/Blue Oaks Blvd	Signal	3,722	3,467	93.2%	25.5	3.8	C
8	SR-65 SB Ramps/Pleasant Grove Blvd	Signal	5,071	4,924	97.1%	6.8	0.8	A
9	SR-65 NB Ramps/Pleasant Grove Blvd	Signal	4,334	4,231	97.6%	10.6	1.1	B
10	Stanford Ranch Rd/Five Star Blvd	Signal	4,669	4,334	92.8%	107.1	72.0	F
11	SR-65 NB Ramps/Stanford Ranch Rd	Signal	5,764	5,381	93.4%	45.4	24.0	D
12	SR-65 SB Ramps/Galleria Blvd	Signal	5,566	5,221	93.8%	43.4	38.0	D
13	Galleria Blvd/Antelope Creek Dr	Signal	4,566	3,971	87.0%	27.9	18.1	C
14	Galleria Blvd/Roseville Pkwy	Signal	7,751	6,687	86.3%	226.7	12.4	F
15	Creekside Ridge Dr/Roseville Pkwy	Signal	4,747	4,051	85.3%	60.9	22.1	E
16	Taylor Rd/East Roseville Pkwy	Signal	5,981	5,524	92.4%	36.7	4.1	D
17	North Sunrise Ave/East Roseville Pkwy	Signal	5,476	5,261	96.1%	32.3	3.5	C
18	Wills Rd/Atlantic St	Signal	2,866	2,709	94.5%	27.1	17.7	C
19	I-80 WB Ramps/Atlantic St	Signal	4,389	4,111	93.7%	35.9	14.6	D
20	Taylor Rd-I-80 EB Ramps/Eureka Rd	Signal	5,651	5,416	95.8%	42.2	3.3	D
21	North Sunrise Ave/Eureka Rd	Signal	5,529	5,656	102.3%	48.5	12.4	D
22	Harding Blvd/Wills Rd	Signal	3,086	2,915	94.5%	15.6	3.6	B
23	Harding Blvd/Douglas Blvd	Signal	3,691	3,263	88.4%	123.4	30.5	F
24	I-80 WB Ramps/Douglas Blvd	Signal	4,498	3,905	86.8%	42.3	18.5	D

Network Summary	
Total Demand Volume (veh/hr)	103,576
Total Volume Served (veh/hr)	96,000
Percent Served	92.7%

- Notes: 1. Volume is measured for the entire peak hour.
2. Delay is measured for the peak 15 minutes in the peak hour.



I-80/SR 65 Interchange Improvements

Transportation Analysis Report

Technical Appendix – Part 2

Placer County, CA

03-PLA-80-PM 1.9 to 6.1
03-PLA-65-PM R4.8 to R7.3

EA 03-4E3200
Project ID 0300000696

August 2014



PLACER COUNTY
TRANSPORTATION
PLANNING AGENCY

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Part 2

Traffic Counts

Travel Demand Forecasts Memorandum, June 2012

Existing Conditions Operations Model Calibration and Validation Memorandum, July 2012

Draft I-80/SR 65 Interchange Improvements Traffic Analysis Report, February 2013

Traffic Focus Meeting Minutes

I-80/SR 65 Interchange Improvements

Traffic Counts

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: IS THERE AN EXISTING HOV LANE?
 y Y or N
 NO. LANES COUNTED: 5
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S):
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

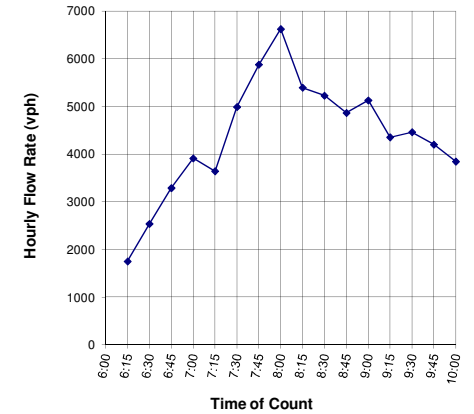
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

ALL LANES
 (HOV LANE)

VEHICLE TYPE			COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL.
			CARS			VP	MISC				BUSES						
TIME			1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL			
6:00 - 6:15	ESTIMATED		323	43	4	1	3	63	0	0	0	0	0	0	1.19	438	1752
6:15 - 6:30	ESTIMATED		499	67	7	3	1	58	0	0	0	0	0	0	1.21	635	2540
6:30 - 6:45	ESTIMATED		676	90	9	1	0	46	0	0	0	0	0	0	1.17	823	3292
6:45 - 7:00	ESTIMATED		792	114	11	0	1	59	1	0	0	2	0	0	1.21	979	3916
7:00 - 7:15			723	122	7	0	1	57	1	1	0	0	0	0	1.16	911	3644
7:15 - 7:30			1023	146	19	0	3	55	0	2	0	0	0	0	1.16	1248	4992
7:30 - 7:45			1247	162	15	0	1	36	0	8	1	0	0	0	1.14	1470	5880
7:45 - 8:00			1371	212	14	0	5	50	0	5	0	0	0	0	1.15	1657	6628
8:00 - 8:15			1076	178	27	0	1	59	0	6	0	1	1	0	1.21	1349	5396
8:15 - 8:30			1083	148	17	0	2	56	0	2	0	0	0	0	1.15	1308	5232
8:30 - 8:45			962	176	27	0	1	46	0	1	0	2	2	0	1.25	1217	4868
8:45 - 9:00			1018	200	14	0	2	45	0	4	0	0	0	0	1.19	1283	5132
9:00 - 9:15			839	156	20	0	1	68	0	4	0	0	0	1	1.24	1089	4356
9:15 - 9:30			835	189	17	1	1	67	0	6	0	0	0	0	1.23	1116	4464
9:30 - 9:45			810	167	17	0	1	49	0	5	0	0	1	1	1.26	1051	4204
9:45 - 10:00			735	167	11	1	1	40	0	7	0	0	0	0	1.22	962	3848
PEAK PERIOD																	
6:00 - 10:00			Totals: 14012 2337 237 7 25 854 2 51 1 4 7 2											17536			
			Percentage: 79.9% 13.3% 1.3% 0.0% 0.1% 4.9% 0.0% 0.3% 0.0% 0.0% 0.0% 0.0%											100%			
			Vehicle Occupants: 14012 4673 804 74 25 1025 2 56 5 35 141 92											20941		Occ. 1.19	
PEAK HOUR																	
7:30 - 8:30			Totals: 4777 700 73 0 9 201 0 21 1 1 1 0											5784			
			Percentage: 82.6% 12.1% 1.3% 0.0% 0.2% 3.5% 0.0% 0.4% 0.0% 0.0% 0.0% 0.0%											100%			
			Vehicle Occupants: 4777 1400 248 0 9 241 0 23 4 10 20 0											6733		Occ. 1.16	
MIN. HOURLY VOL.																	
6:00 - 7:00			Totals: 2290 314 32 5 5 226 1 0 0 3 3 0											2878			
			Percentage: 79.6% 10.9% 1.1% 0.2% 0.2% 7.9% 0.0% 0.0% 0.0% 0.1% 0.1% 0.0%											100%			
			Vehicle Occupants: 2290 627 107 53 5 271 1 0 1 30 61 12											3457		Occ. 1.20	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
2670	1027	5.9%	1495	154	14712
15.2%			56.0%	12.0%	99.0%
806	366	6.3%	474	45	4933
13.9%			58.8%	9.4%	99.1%
362	99	3.4%	12	30	2486
12.6%			3.3%	24.4%	98.8%

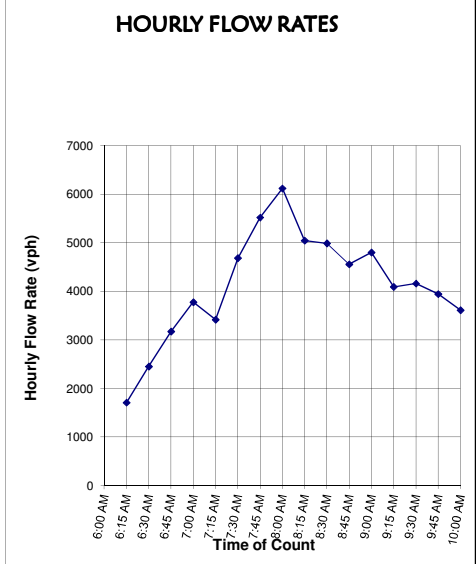
AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): 0
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL	
			CARS			MISC				BUSES									
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
ESTIMATED	6:00 - 6:15		328	30	2	1	3	63	0	0	0	0	0	0	0	1.14	427	1708	
ESTIMATED	6:15 - 6:30		504	46	4	1	0	58	0	0	0	0	0	0	1.13	613	2452		
ESTIMATED	6:30 - 6:45		680	62	5	0	0	46	0	0	0	0	0	0	1.11	793	3172		
ESTIMATED	6:45 - 7:00		799	78	6	0	1	59	0	0	0	0	1	0	1.14	944	3776	2777	
	7:00 - 7:15		717	76	3	0	1	57	0	0	0	0	0	0	1.11	854	3416	3204	
	7:15 - 7:30		1016	93	5	0	2	55	0	0	0	0	0	0	1.10	1171	4684	3762	
	7:30 - 7:45		1235	100	7	0	1	36	0	0	1	0	0	0	1.09	1380	5520	4349	
	7:45 - 8:00		1362	114	4	0	0	50	0	0	0	0	0	0	1.09	1530	6120	4935	
	8:00 - 8:15		1068	112	19	0	1	59	0	0	0	1	1	0	1.16	1261	5044	5342	
	8:15 - 8:30		1078	105	8	0	0	56	0	0	0	0	0	0	1.11	1247	4988	5418	
	8:30 - 8:45		957	124	11	0	0	45	0	0	0	2	0	0	1.16	1139	4556	5177	
	8:45 - 9:00		1010	139	8	0	1	42	0	0	0	0	0	0	1.14	1200	4800	4847	
	9:00 - 9:15		832	111	11	0	0	68	0	0	0	0	0	1	1.19	1023	4092	4609	
	9:15 - 9:30		823	138	11	0	1	67	0	0	0	0	0	0	1.17	1040	4160	4402	
	9:30 - 9:45		805	122	9	0	1	49	0	0	0	0	0	0	1.16	986	3944	4249	
	9:45 - 10:00		724	131	7	1	0	40	0	0	0	0	0	0	1.18	903	3612	3952	



PEAK PERIOD	Totals:	13938	1580	119	3	12	850	0	0	1	4	2	1	16511
6:00 - 10:00	Percentage:	84.4%	9.6%	0.7%	0.0%	0.1%	5.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	Vehicle Occupants:	13938	3161	405	32	12	1020	0	0	5	35	48	48	18703
														Occ. 1.13
PEAK HOUR	Totals:	4743	431	38	0	2	201	0	0	1	1	1	0	5418
7:30 - 8:30	Percentage:	87.5%	8.0%	0.7%	0.0%	0.0%	3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	Vehicle Occupants:	4743	862	129	0	2	241	0	0	4	10	20	0	6011
														Occ. 1.11
MIN. HOURLY VOL.	Totals:	2311	215	16	2	4	226	0	0	0	1	1	0	2778
6:00 - 7:00	Percentage:	83.2%	7.8%	0.6%	0.1%	0.1%	8.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	Vehicle Occupants:	2311	431	55	21	4	271	0	0	1	14	28	8	3143
														Occ. 1.13

HOV-RELATED INFORMATION					
HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1723					
10.4%					
474					
8.7%					
241					
8.7%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): 0
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

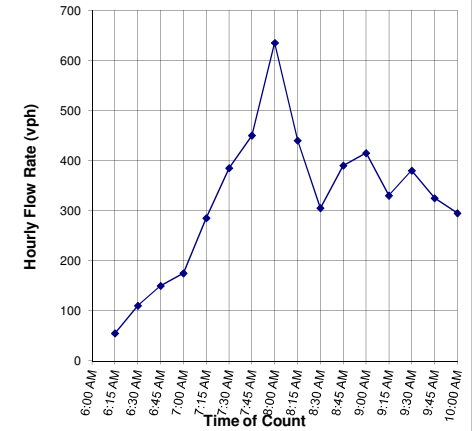
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			MISC				BUSES								
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	3	7	1	0	0	0	0	0	0	0	0	0	1.98	11	44	
6:15 - 6:30	ESTIMATED	5	12	2	2	1	0	0	0	0	0	0	0	2.71	22	88	
6:30 - 6:45	ESTIMATED	8	18	3	1	0	0	0	0	0	0	0	0	2.27	30	120	
6:45 - 7:00	ESTIMATED	8	22	3	0	0	0	1	0	0	0	1	0	2.50	35	140	98
7:00 - 7:15		6	46	4	0	0	0	1	1	0	0	0	0	1.98	57	228	144
7:15 - 7:30		7	53	14	0	1	0	0	2	0	0	0	0	2.13	77	308	199
7:30 - 7:45		12	62	8	0	0	0	0	8	0	0	0	0	1.91	90	360	259
7:45 - 8:00		9	98	10	0	5	0	0	5	0	0	0	0	1.96	127	508	351
8:00 - 8:15		8	66	8	0	0	0	0	6	0	0	0	0	1.98	88	352	382
8:15 - 8:30		5	43	9	0	2	0	0	2	0	0	0	0	2.06	61	244	366
8:30 - 8:45		5	52	16	0	1	1	0	1	0	0	2	0	2.65	78	312	354
8:45 - 9:00		8	61	6	0	1	3	0	4	0	0	0	0	1.92	83	332	310
9:00 - 9:15		7	45	9	0	1	0	0	4	0	0	0	0	2.02	66	264	288
9:15 - 9:30		12	51	6	1	0	0	0	6	0	0	0	0	1.99	76	304	303
9:30 - 9:45		5	45	8	0	0	0	0	5	0	0	1	1	2.89	65	260	290
9:45 - 10:00		11	36	4	0	1	0	0	7	0	0	0	0	1.78	59	236	266
PEAK PERIOD 6:00 - 10:00		Totals: 119 717 111 4 13 4 2 51 0 0 4 1												1025			
		Percentage: 11.6% 70.0% 10.8% 0.4% 1.3% 0.4% 0.2% 5.0% 0.0% 0.0% 0.4% 0.1%												100%			
		Vehicle Occupants: 119 1435 377 42 13 5 2 56 0 0 89 42												2178	Occ.	2.12	
PEAK HOUR 7:15 - 8:15		Totals: 36 279 40 0 6 0 0 21 0 0 0 0												382			
		Percentage: 9.4% 73.0% 10.5% 0.0% 1.6% 0.0% 0.0% 5.5% 0.0% 0.0% 0.0% 0.0%												100%			
		Vehicle Occupants: 36 558 136 0 6 0 0 23 0 0 0 0												759	Occ.	1.99	
MIN. HOURLY VOL. 6:00 - 7:00		Totals: 24 59 9 3 1 0 1 0 0 1 1 0												99			
		Percentage: 24.4% 59.6% 9.0% 3.0% 1.0% 0.0% 1.0% 0.0% 0.0% 1.4% 1.4% 0.1%												100%			
		Vehicle Occupants: 24 119 30 32 1 0 1 0 0 14 29 2												251	Occ.	2.53	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
902	88.0%			123	12.0%
346	90.6%			36	9.4%
75	75.6%			24	24.4%

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): 0
 REMARKS: 6-7AM from 1/31/2012

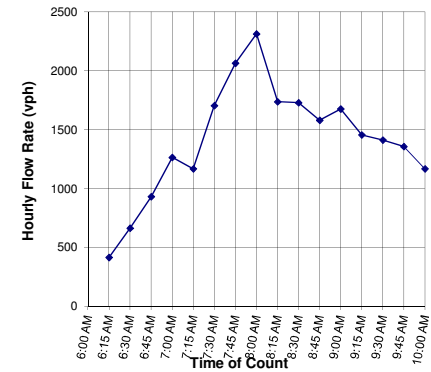
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #2 ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL		
			CARS			MISC				BUSES									
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
ESTIMATED	6:00 - 6:15		95	6	0	0	1	1	0	0	0	0	0	0	0	1.08	104	416	
ESTIMATED	6:15 - 6:30		155	10	0	0	0	0	0	0	0	0	0	0	0	1.08	166	664	
ESTIMATED	6:30 - 6:45		217	14	1	0	0	1	0	0	0	0	0	0	0	1.08	233	932	
ESTIMATED	6:45 - 7:00		289	24	1	0	0	1	0	0	0	0	1	0	0	1.15	316	1264	819
	7:00 - 7:15		267	21	3	0	1	0	0	0	0	0	0	0	0	1.10	292	1168	1007
	7:15 - 7:30		397	27	1	0	0	1	0	0	0	0	0	0	0	1.07	426	1704	1267
	7:30 - 7:45		489	26	0	0	0	1	0	0	0	0	0	0	0	1.05	516	2064	1550
	7:45 - 8:00		549	27	2	0	0	0	0	0	0	0	0	0	0	1.06	578	2312	1812
	8:00 - 8:15		399	31	2	0	1	1	0	0	0	0	0	0	0	1.08	434	1736	1954
	8:15 - 8:30		408	22	0	0	0	2	0	0	0	0	0	0	0	1.05	432	1728	1960
	8:30 - 8:45		364	26	3	0	0	0	0	0	0	2	0	0	0	1.13	395	1580	1839
	8:45 - 9:00		381	34	2	0	1	1	0	0	0	0	0	0	0	1.09	419	1676	1680
	9:00 - 9:15		326	37	1	0	0	0	0	0	0	0	0	0	0	1.11	364	1456	1610
	9:15 - 9:30		308	44	0	0	0	1	0	0	0	0	0	0	0	1.13	353	1412	1531
	9:30 - 9:45		305	33	1	0	0	0	0	0	0	0	0	0	0	1.10	339	1356	1475
	9:45 - 10:00		254	36	2	0	0	0	0	0	0	0	0	0	0	1.14	292	1168	1348
PEAK PERIOD																			
6:00 - 10:00			Totals:	5204	418	19	0	4	10	0	0	2	1	0		5659			
			Percentage:	92.0%	7.4%	0.3%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%		100%			
			Vehicle Occupants:	5204	837	66	0	4	12	0	0	23	24	0		6170			Occ. 1.09
PEAK HOUR																			
7:30 - 8:30			Totals:	1845	106	4	0	1	4	0	0	0	0	0		1960			
			Percentage:	94.1%	5.4%	0.2%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%		100%			
			Vehicle Occupants:	1845	212	14	0	1	5	0	0	0	0	0		2076			Occ. 1.06
MIN. HOURLY VOL.																			
6:00 - 7:00			Totals:	757	54	2	0	1	3	0	0	1	1	0		820			
			Percentage:	92.3%	6.6%	0.3%	0.0%	0.1%	0.4%	0.0%	0.0%	0.1%	0.1%	0.0%		100%			
			Vehicle Occupants:	757	109	8	0	1	4	0	0	12	24	0		914			Occ. 1.12

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
445					
7.9%					
111					
5.7%					
60					
7.3%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): 0
 REMARKS: 6-7AM from 1/31/2012

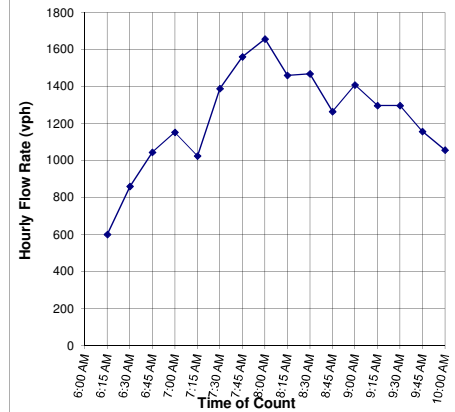
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #3 ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL	
			CARS			MISC				BUSES								
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
ESTIMATED	6:00 - 6:15		135	12	1	1	0	1	0	0	0	0	0	0	1.17	150	600	
ESTIMATED	6:15 - 6:30		194	17	1	0	0	3	0	0	0	0	0	0	1.11	215	860	
ESTIMATED	6:30 - 6:45		234	21	1	0	0	5	0	0	0	0	0	0	1.11	261	1044	
ESTIMATED	6:45 - 7:00		260	23	1	0	1	2	0	0	0	0	0	0	1.10	288	1152	
	7:00 - 7:15		221	30	0	0	0	5	0	0	0	0	0	0	1.12	256	1024	
	7:15 - 7:30		319	22	3	0	0	3	0	0	0	0	0	0	1.09	347	1388	
	7:30 - 7:45		361	25	1	0	1	1	0	0	1	0	0	0	1.08	390	1560	
	7:45 - 8:00		374	37	0	0	0	3	0	0	0	0	0	0	1.09	414	1656	
	8:00 - 8:15		316	37	7	0	0	4	0	0	0	1	0	0	1.17	365	1460	
	8:15 - 8:30		324	33	6	0	0	4	0	0	0	0	0	0	1.13	367	1468	
	8:30 - 8:45		273	38	1	0	0	4	0	0	0	0	0	0	1.13	316	1264	
	8:45 - 9:00		318	32	0	0	0	2	0	0	0	0	0	0	1.09	352	1408	
	9:00 - 9:15		282	34	1	0	0	6	0	0	0	0	1	1.24	324	1296		
	9:15 - 9:30		265	50	1	0	0	8	0	0	0	0	0	0	1.17	324	1296	
	9:30 - 9:45		255	32	0	0	0	2	0	0	0	0	0	0	1.11	289	1156	
	9:45 - 10:00		227	35	0	1	0	1	0	0	0	0	0	1.17	264	1056		
PEAK PERIOD																		
6:00 - 10:00			Totals:	4358	478	24	2	2	54	0	0	1	1	0	1	4922		
			Percentage:	88.5%	9.7%	0.5%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%		
			Vehicle Occupants:	4358	957	81	21	2	65	0	0	5	12	0	49	5549	Occ.	1.13
PEAK HOUR																		
7:30 - 8:30			Totals:	1375	132	14	0	1	12	0	0	1	1	0	0	1536		
			Percentage:	89.5%	8.6%	0.9%	0.0%	0.1%	0.8%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	100%		
			Vehicle Occupants:	1375	264	48	0	1	14	0	0	4	10	0	0	1716	Occ.	1.12
MIN. HOURLY VOL.																		
6:00 - 7:00			Totals:	823	73	4	1	1	11	0	0	0	0	0	0	914		
			Percentage:	90.1%	8.0%	0.4%	0.1%	0.1%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%		
			Vehicle Occupants:	823	147	13	11	1	13	0	0	1	0	0	9	1017	Occ.	1.11

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
510					
10.4%					
149					
9.7%					
80					
8.7%					

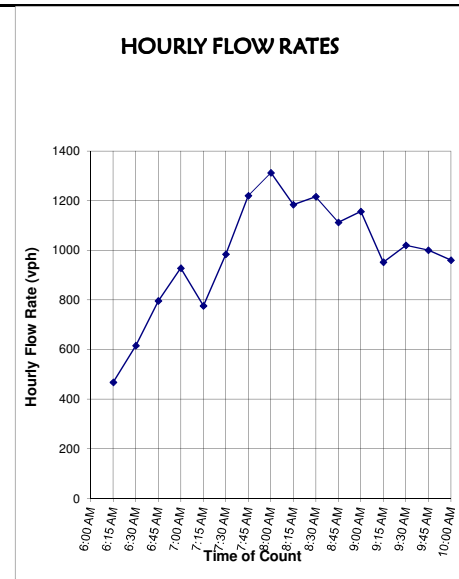
AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): 0
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #4 ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL	
			CARS			MISC				BUSES								
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
ESTIMATED	6:00 - 6:15		64	8	1	0	2	42	0	0	0	0	0	0	0	1.16	117	468
ESTIMATED	6:15 - 6:30		99	13	1	1	0	40	0	0	0	0	0	0	0	1.22	154	616
ESTIMATED	6:30 - 6:45		144	19	2	0	0	34	0	0	0	0	0	0	0	1.16	199	796
ESTIMATED	6:45 - 7:00		165	21	2	0	0	43	0	0	0	0	0	0	0	1.16	232	928
	7:00 - 7:15		134	19	0	0	0	41	0	0	0	0	0	0	0	1.14	194	776
	7:15 - 7:30		176	32	0	0	1	37	0	0	0	0	0	0	0	1.16	246	984
	7:30 - 7:45		244	30	3	0	0	28	0	0	0	0	0	0	0	1.14	305	1220
	7:45 - 8:00		253	36	1	0	0	38	0	0	0	0	0	0	0	1.14	328	1312
	8:00 - 8:15		225	26	0	0	0	44	0	0	0	0	1	0	0	1.18	296	1184
	8:15 - 8:30		229	32	2	0	0	41	0	0	0	0	0	0	0	1.15	304	1216
	8:30 - 8:45		206	34	4	0	0	34	0	0	0	0	0	0	0	1.18	278	1112
	8:45 - 9:00		207	49	6	0	0	27	0	0	0	0	0	0	0	1.24	289	1156
	9:00 - 9:15		159	28	7	0	0	44	0	0	0	0	0	0	0	1.23	238	952
	9:15 - 9:30		171	29	10	0	0	45	0	0	0	0	0	0	0	1.24	255	1020
	9:30 - 9:45		163	44	8	0	1	34	0	0	0	0	0	0	0	1.28	250	1000
	9:45 - 10:00		167	39	2	0	0	32	0	0	0	0	0	0	0	1.21	240	960
PEAK PERIOD																		
6:00 - 10:00			Totals:	2807	459	49	1	4	604	0	0	0	0	1	0		3925	
			Percentage:	71.5%	11.7%	1.3%	0.0%	0.1%	15.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		100%	
			Vehicle Occupants:	2807	917	168	11	4	725	0	0	0	0	23	0		4655	Occ. 1.19
PEAK HOUR																		
7:30 - 8:30			Totals:	951	124	6	0	0	151	0	0	0	0	1	0		1233	
			Percentage:	77.1%	10.1%	0.5%	0.0%	0.0%	12.2%	0.0%	0.0%	0.0%	0.1%	0.0%		100%		
			Vehicle Occupants:	951	248	20	0	0	181	0	0	0	0	20	0		1421	Occ. 1.15
MIN. HOURLY VOL.																		
6:00 - 7:00			Totals:	473	61	6	1	2	159	0	0	0	0	0	0		702	
			Percentage:	67.3%	8.6%	0.9%	0.1%	0.3%	22.6%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
			Vehicle Occupants:	473	121	22	11	2	191	0	0	0	2	3	0		824	Occ. 1.17



HOV-RELATED INFORMATION					
HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
514					
131					
70					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: y Y or N
 NO. LANES COUNTED: 5
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): SM,RL,CA,CH,RW,SL
 REMARKS:

TIME INTERVAL FOR COUNT
 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 Y or N
 HOW MANY HOURS IN COUNT?
 3 or 4

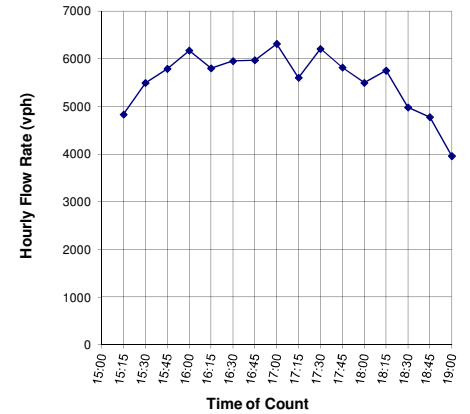
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

ALL LANES
 (HOV LANE)

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL.
	CARS			MISC				BUSES								
	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	905	227	18	1	1	53	0	3	0	0	1	0	1.26	1209	4836	
15:15 - 15:30	1045	262	14	1	1	49	0	1	0	0	1	0	1.24	1374	5496	
15:30 - 15:45	1106	266	27	1	4	40	0	2	0	0	0	2	1.29	1448	5792	
15:45 - 16:00	1218	261	17	0	5	38	0	4	0	1	0	0	1.21	1544	6176	5575
16:00 - 16:15	1124	256	17	0	2	50	1	2	0	0	0	0	1.21	1451	5804	5817
16:15 - 16:30	1158	263	29	0	1	29	1	6	1	0	2	0	1.26	1489	5956	5932
16:30 - 16:45	1150	263	23	3	6	41	1	5	0	0	2	0	1.26	1493	5972	5977
16:45 - 17:00	1269	243	22	0	7	34	0	3	0	0	1	0	1.20	1579	6316	6012
17:00 - 17:15	1118	220	8	1	8	40	0	4	0	0	2	0	1.21	1401	5604	5962
17:15 - 17:30	1306	188	13	0	7	33	1	5	0	0	1	0	1.16	1553	6212	6026
17:30 - 17:45	1255	140	16	0	3	32	0	9	0	0	0	0	1.13	1455	5820	5988
17:45 - 18:00	ESTIMATED 1166	161	13	0	1	25	0	5	0	0	4	0	1.20	1375	5500	5784
18:00 - 18:15	ESTIMATED 1216	168	13	0	4	37	0	0	0	0	1	0	1.16	1439	5756	5822
18:15 - 18:30	ESTIMATED 1060	146	12	1	2	24	0	0	0	0	1	0	1.17	1246	4984	5515
18:30 - 18:45	ESTIMATED 999	138	11	0	0	46	0	0	0	0	1	0	1.16	1195	4780	5255
18:45 - 19:00	ESTIMATED 836	115	9	0	1	29	0	0	0	0	1	0	1.16	991	3964	4871
PEAK PERIOD 15:00 - 19:00	Totals: 17932 3316 262 8 53 600 4 49 1 1 17 2												22242			
	Percentage: 80.6% 14.9% 1.2% 0.0% 0.2% 2.7% 0.0% 0.2% 0.0% 0.0% 0.1% 0.0%												100%			
	Vehicle Occupants: 17932 6632 889 84 53 720 4 54 5 13 338 100												26821		Occ. 1.21	
PEAK HOUR 16:30 - 17:30	Totals: 4843 914 66 4 28 148 2 17 0 0 6 0												6026			
	Percentage: 80.4% 15.2% 1.1% 0.1% 0.5% 2.5% 0.0% 0.3% 0.0% 0.0% 0.1% 0.0%												100%			
	Vehicle Occupants: 4843 1828 224 42 28 178 2 19 0 0 120 0												7282		Occ. 1.21	
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 4112 566 45 1 7 136 0 0 0 3 3 0												4874			
	Percentage: 84.4% 11.6% 0.9% 0.0% 0.1% 2.8% 0.0% 0.0% 0.0% 0.1% 0.1% 0.0%												100%			
	Vehicle Occupants: 4112 1133 153 11 7 163 0 0 1 31 61 16												5686		Occ. 1.17	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
3710	2489	11.2%	1401	683	17849
16.7%		37.8%	22.0%		96.3%
1035	690	11.5%	447	116	4875
17.2%		43.2%	12.8%		97.7%
626	523	10.7%	4	252	3996
12.8%		0.6%	38.4%		94.1%

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): SM,RL,CA,CH,RW,SL
 REMARKS:

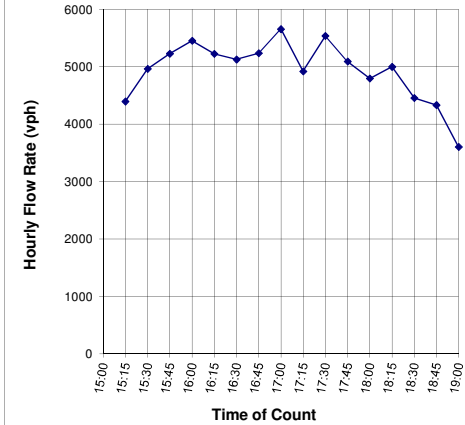
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	885	148	11	1	0	53	0	0	0	0	1	0	1.19	1099	4396		
15:15 - 15:30	1027	158	4	1	1	49	0	0	0	0	1	0	1.17	1241	4964		
15:30 - 15:45	1090	166	10	0	1	40	0	0	0	0	0	0	1.15	1307	5228		
15:45 - 16:00	1200	116	8	0	2	36	0	0	0	1	0	0	1.11	1363	5452	5010	
16:00 - 16:15	1109	138	10	0	0	49	0	0	0	0	0	0	1.13	1306	5224	5217	
16:15 - 16:30	1138	95	19	0	0	29	1	0	0	0	1	0	1.13	1282	5128	5258	
16:30 - 16:45	1126	129	10	0	2	41	0	0	0	0	1	0	1.14	1309	5236	5260	
16:45 - 17:00	1248	121	10	0	0	34	0	0	0	0	1	0	1.12	1414	5656	5311	
17:00 - 17:15	1090	96	1	0	3	40	0	0	0	0	0	0	1.09	1230	4920	5235	
17:15 - 17:30	1278	69	3	0	0	33	1	0	0	0	1	0	1.07	1384	5536	5337	
17:30 - 17:45	1187	52	3	0	0	31	0	0	0	0	0	0	1.05	1273	5092	5301	
17:45 - 18:00	ESTIMATED 1091	75	5	0	0	25	0	0	0	0	2	0	1.12	1199	4796	5086	
18:00 - 18:15	ESTIMATED 1127	78	6	0	2	37	0	0	0	0	1	0	1.09	1250	5000	5106	
18:15 - 18:30	ESTIMATED 1013	70	5	0	1	24	0	0	0	0	0	0	1.09	1114	4456	4836	
18:30 - 18:45	ESTIMATED 965	67	5	0	0	46	0	0	0	0	0	0	1.09	1083	4332	4646	
18:45 - 19:00	ESTIMATED 811	56	4	0	1	29	0	0	0	0	0	0	1.09	901	3604	4348	
PEAK PERIOD 15:00 - 19:00	Totals: 17384 1634 114 2 13 596 2 0 0 1 10 0													19755			
	Percentage: 88.0% 8.3% 0.6% 0.0% 0.1% 3.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%													100%			
	Vehicle Occupants: 17384 3269 387 21 13 715 2 0 0 13 205 0													22007	Occ. 1.11		
PEAK HOUR 16:30 - 17:30	Totals: 4742 415 24 0 5 148 1 0 0 0 3 0													5337			
	Percentage: 88.9% 7.8% 0.4% 0.0% 0.1% 2.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%													100%			
	Vehicle Occupants: 4742 830 82 0 5 178 1 0 0 0 60 0													5896	Occ. 1.10		
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 3916 271 19 0 4 136 0 0 0 2 2 0													4350			
	Percentage: 90.0% 6.2% 0.4% 0.0% 0.1% 3.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%													100%			
	Vehicle Occupants: 3916 542 66 0 4 163 0 0 0 18 35 0													4743	Occ. 1.09		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1775					
9.0%					
447					
8.4%					
298					
6.8%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): SM,RL,CA,CH,RW,SL
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

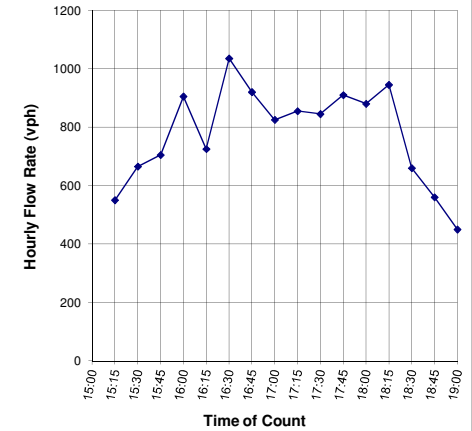
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	20	79	7	0	1	0	0	3	0	0	0	0	1.87	110	440	
15:15 - 15:30	18	104	10	0	0	0	0	1	0	0	0	0	1.96	133	532	
15:30 - 15:45	16	100	17	1	3	0	0	2	0	0	0	2	2.62	141	564	
15:45 - 16:00	18	145	9	0	3	2	0	4	0	0	0	0	1.92	181	724	565
16:00 - 16:15	15	118	7	0	2	1	1	2	0	0	0	0	1.93	145	580	600
16:15 - 16:30	20	168	10	0	1	0	0	6	1	0	1	0	2.04	207	828	674
16:30 - 16:45	24	134	13	3	4	0	1	5	0	0	1	0	2.16	184	736	717
16:45 - 17:00	21	122	12	0	7	0	0	3	0	0	0	0	1.92	165	660	701
17:00 - 17:15	28	124	7	1	5	0	0	4	0	0	2	0	2.10	171	684	727
17:15 - 17:30	28	119	10	0	7	0	0	5	0	0	0	0	1.85	169	676	689
17:30 - 17:45	68	88	13	0	3	1	0	9	0	0	0	0	1.66	182	728	687
17:45 - 18:00	ESTIMATED	66	95	8	0	1	0	0	5	0	0	1	1.84	176	704	698
18:00 - 18:15	ESTIMATED	72	105	9	0	2	0	0	0	0	0	0	1.75	189	756	716
18:15 - 18:30	ESTIMATED	50	73	6	1	1	0	0	0	0	0	0	1.82	132	528	679
18:30 - 18:45	ESTIMATED	43	63	5	0	0	0	0	0	0	0	0	1.75	112	448	609
18:45 - 19:00	ESTIMATED	35	50	4	0	0	0	0	0	0	0	0	1.75	90	360	523
PEAK PERIOD 15:00 - 19:00	Totals: 543 1686 149 6 40 4 2 49 1 0 7 3												2487			
	Percentage: 21.8% 67.8% 6.0% 0.2% 1.6% 0.2% 0.1% 2.0% 0.1% 0.0% 0.3% 0.1%												100%			
	Vehicle Occupants: 543 3372 506 63 40 5 2 54 5 0 131 104												4822		Occ. 1.94	
PEAK HOUR 16:15 - 17:15	Totals: 93 548 42 4 17 0 1 18 1 0 4 0												727			
	Percentage: 12.8% 75.4% 5.8% 0.6% 2.3% 0.0% 0.1% 2.5% 0.1% 0.0% 0.6% 0.0%												100%			
	Vehicle Occupants: 93 1096 143 42 17 0 1 20 4 0 80 0												1495		Occ. 2.06	
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 201 291 25 1 3 0 0 0 0 0 1 1 0												524			
	Percentage: 38.4% 55.4% 4.9% 0.2% 0.6% 0.0% 0.0% 0.0% 0.0% 0.2% 0.2% 0.1%												100%			
	Vehicle Occupants: 201 581 87 11 3 0 0 0 1 12 23 18												936		Occ. 1.79	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1940				547	
78.0%				22.0%	
634				93	
87.2%				12.8%	
323				201	
61.6%				38.4%	

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): SM,RL,CA,CH,RW,SL
 REMARKS:

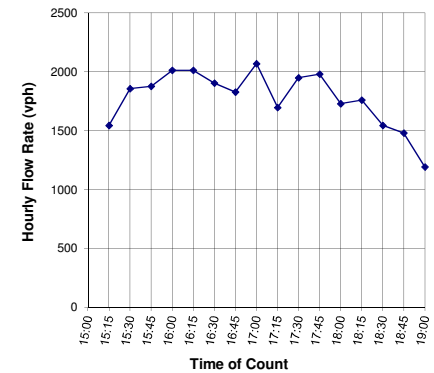
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #2 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	333	49	4	0	0	0	0	0	0	0	0	0	0	1.15	386	1544
15:15 - 15:30	415	46	1	0	1	1	0	0	0	0	0	0	0	1.10	464	1856
15:30 - 15:45	433	34	1	0	1	0	0	0	0	0	0	0	0	1.08	469	1876
15:45 - 16:00	476	26	1	0	0	0	0	0	0	0	0	0	0	1.06	503	2012
16:00 - 16:15	461	36	6	0	0	0	0	0	0	0	0	0	0	1.10	503	2012
16:15 - 16:30	452	21	3	0	0	0	0	0	0	0	0	0	0	1.06	476	1904
16:30 - 16:45	432	22	1	0	1	0	0	0	0	0	1	0	0	1.09	457	1828
16:45 - 17:00	492	21	2	0	0	2	0	0	0	0	0	0	0	1.05	517	2068
17:00 - 17:15	406	17	0	0	0	1	0	0	0	0	0	0	0	1.04	424	1696
17:15 - 17:30	478	9	0	0	0	0	1	0	0	0	0	0	0	1.02	487	1948
17:30 - 17:45	484	9	0	0	0	2	0	0	0	0	0	0	0	1.02	495	1980
17:45 - 18:00	ESTIMATED 413	16	1	0	0	1	0	0	0	0	1	0	0	1.09	432	1728
18:00 - 18:15	ESTIMATED 421	16	1	0	1	1	0	0	0	0	0	0	0	1.05	440	1760
18:15 - 18:30	ESTIMATED 371	14	1	0	0	0	0	0	0	0	0	0	0	1.05	386	1544
18:30 - 18:45	ESTIMATED 355	13	1	0	0	1	0	0	0	0	0	0	0	1.05	370	1480
18:45 - 19:00	ESTIMATED 286	11	1	0	0	0	0	0	0	0	0	0	0	1.05	298	1192
PEAK PERIOD 15:00 - 19:00	Totals: 6708 359 24 0 4 9 1 0 0 0 3 0												7107			
	Percentage: 94.4% 5.1% 0.3% 0.0% 0.1% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%												100%			
	Vehicle Occupants: 6708 719 80 0 4 11 1 0 0 0 53 0												7576	Occ. 1.07		
PEAK HOUR 16:00 - 17:00	Totals: 1837 100 12 0 1 2 0 0 0 0 1 0												1953			
	Percentage: 94.1% 5.1% 0.6% 0.0% 0.1% 0.1% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%												100%			
	Vehicle Occupants: 1837 200 41 0 1 2 0 0 0 0 20 0												2101	Occ. 1.08		
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 1433 54 4 0 1 2 0 0 0 0 1 1 0												1495			
	Percentage: 95.9% 3.6% 0.2% 0.0% 0.1% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 1433 108 12 0 1 2 0 0 0 0 5 10 0												1572	Occ. 1.05		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
390					
5.5%					
114					
5.8%					
59					
4.0%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): SM,RL,CA,CH,RW,SL
 REMARKS:

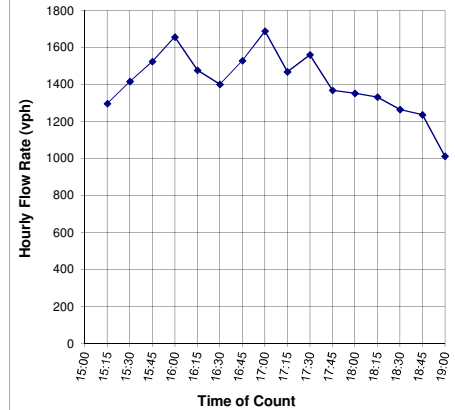
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #3 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	273	44	1	1	0	5	0	0	0	0	0	0	1.18	324	1296	
15:15 - 15:30	311	41	0	0	0	2	0	0	0	0	0	0	1.12	354	1416	
15:30 - 15:45	332	48	0	0	0	1	0	0	0	0	0	0	1.13	381	1524	
15:45 - 16:00	371	39	0	0	0	3	0	0	0	1	0	0	1.12	414	1656	1473
16:00 - 16:15	333	35	0	0	0	1	0	0	0	0	0	0	1.10	369	1476	1518
16:15 - 16:30	324	23	0	0	0	3	1	0	0	0	0	0	1.07	350	1400	1514
16:30 - 16:45	329	43	5	0	1	4	0	0	0	0	0	0	1.15	382	1528	1515
16:45 - 17:00	377	37	0	0	0	7	0	0	0	0	1	0	1.14	422	1688	1523
17:00 - 17:15	328	30	1	0	1	7	0	0	0	0	0	0	1.09	367	1468	1521
17:15 - 17:30	373	13	1	0	0	2	0	0	0	0	1	0	1.09	390	1560	1561
17:30 - 17:45	303	30	3	0	0	6	0	0	0	0	0	0	1.11	342	1368	1521
17:45 - 18:00	ESTIMATED 311	22	1	0	0	3	0	0	0	0	1	0	1.14	338	1352	1437
18:00 - 18:15	ESTIMATED 301	21	1	0	0	10	0	0	0	0	0	0	1.09	333	1332	1403
18:15 - 18:30	ESTIMATED 292	21	1	0	0	2	0	0	0	0	0	0	1.08	316	1264	1329
18:30 - 18:45	ESTIMATED 280	20	1	0	0	8	0	0	0	0	0	0	1.09	309	1236	1296
18:45 - 19:00	ESTIMATED 232	16	1	0	0	4	0	0	0	0	0	0	1.09	253	1012	1211
PEAK PERIOD 15:00 - 19:00	Totals: 5071 483 14 1 2 68 1 0 0 1 4 0												5644			
	Percentage: 89.8% 8.6% 0.3% 0.0% 0.0% 1.2% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%												100%			
	Vehicle Occupants: 5071 966 49 11 2 82 1 0 0 13 79 0												6271		Occ. 1.11	
PEAK HOUR 16:30 - 17:30	Totals: 1407 123 7 0 2 20 0 0 0 0 2 0												1561			
	Percentage: 90.1% 7.9% 0.4% 0.0% 0.1% 1.3% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%												100%			
	Vehicle Occupants: 1407 246 24 0 2 24 0 0 0 0 40 0												1743		Occ. 1.12	
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 1106 78 3 0 0 24 0 0 0 1 1 0												1212			
	Percentage: 91.3% 6.4% 0.2% 0.0% 0.0% 2.0% 0.0% 0.0% 0.0% 0.1% 0.1% 0.0%												100%			
	Vehicle Occupants: 1106 156 9 0 0 29 0 0 0 7 15 0												1321		Occ. 1.09	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
505					
9.0%					
134					
8.6%					
82					
6.8%					

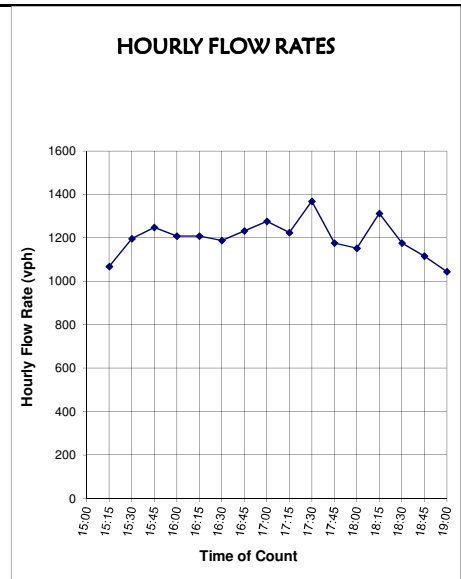
AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): SM,RL,CA,CH,RW,SL
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #4 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	188	37	4	0	0	38	0	0	0	0	0	0	0	1.20	267	1068	
15:15 - 15:30	202	57	3	0	0	37	0	0	0	0	0	0	0	1.24	299	1196	
15:30 - 15:45	209	64	8	0	0	31	0	0	0	0	0	0	0	1.29	312	1248	
15:45 - 16:00	237	37	5	0	0	23	0	0	0	0	0	0	0	1.18	302	1208	1180
16:00 - 16:15	208	52	4	0	0	38	0	0	0	0	0	0	0	1.23	302	1208	1215
16:15 - 16:30	227	33	15	0	0	22	0	0	0	0	0	0	0	1.25	297	1188	1213
16:30 - 16:45	235	46	2	0	0	25	0	0	0	0	0	0	0	1.18	308	1232	1209
16:45 - 17:00	255	36	4	0	0	24	0	0	0	0	0	0	0	1.16	319	1276	1226
17:00 - 17:15	242	35	0	0	2	27	0	0	0	0	0	0	0	1.13	306	1224	1230
17:15 - 17:30	287	30	0	0	0	25	0	0	0	0	0	0	0	1.10	342	1368	1275
17:30 - 17:45	267	6	0	0	0	21	0	0	0	0	0	0	0	1.03	294	1176	1261
17:45 - 18:00	ESTIMATED 243	27	3	0	0	15	0	0	0	0	0	0	0	1.13	288	1152	1230
18:00 - 18:15	ESTIMATED 272	31	3	0	0	22	0	0	0	0	0	0	0	1.13	328	1312	1252
18:15 - 18:30	ESTIMATED 245	27	3	0	0	19	0	0	0	0	0	0	0	1.13	294	1176	1204
18:30 - 18:45	ESTIMATED 230	26	3	0	0	20	0	0	0	0	0	0	0	1.13	279	1116	1189
18:45 - 19:00	ESTIMATED 216	24	3	0	0	18	0	0	0	0	0	0	0	1.13	261	1044	1162
PEAK PERIOD 15:00 - 19:00	Totals: 3763 568 60 0 2 405 0 0 0 0 0 0 0													4798			
	Percentage: 78.4% 11.8% 1.2% 0.0% 0.0% 8.4% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%													100%			
	Vehicle Occupants: 3763 1137 203 0 2 486 0 0 0 0 0 0 0													5590		Occ. 1.17	
PEAK HOUR 16:30 - 17:30	Totals: 1019 147 6 0 2 101 0 0 0 0 0 0 0													1275			
	Percentage: 79.9% 11.5% 0.5% 0.0% 0.2% 7.9% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%													100%			
	Vehicle Occupants: 1019 294 20 0 2 121 0 0 0 0 0 0 0													1457		Occ. 1.14	
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 963 108 12 0 0 79 0 0 0 0 0 0 0													1162			
	Percentage: 82.9% 9.3% 1.0% 0.0% 0.0% 6.8% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%													100%			
	Vehicle Occupants: 963 216 40 0 0 95 0 0 0 0 0 0 0													1314		Occ. 1.13	



HOV-RELATED INFORMATION					
HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
630					
13.1%					
155					
12.2%					
120					
10.3%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 5
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): SM,RL,CA,CH,RW,SL
 REMARKS:

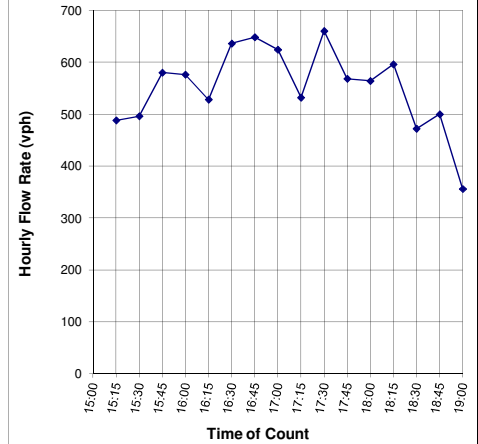
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #5 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	91	18	2	0	0	10	0	0	0	0	1	0	1.36	122	488		
15:15 - 15:30	99	14	0	1	0	9	0	0	0	0	1	0	1.36	124	496		
15:30 - 15:45	116	20	1	0	0	8	0	0	0	0	0	0	1.17	145	580		
15:45 - 16:00	116	14	2	0	2	10	0	0	0	0	0	0	1.14	144	576	535	
16:00 - 16:15	107	15	0	0	0	10	0	0	0	0	0	0	1.13	132	528	545	
16:15 - 16:30	135	18	1	0	0	4	0	0	0	0	1	0	1.25	159	636	580	
16:30 - 16:45	130	18	2	0	0	12	0	0	0	0	0	0	1.16	162	648	597	
16:45 - 17:00	124	27	4	0	0	1	0	0	0	0	0	0	1.24	156	624	609	
17:00 - 17:15	114	14	0	0	0	5	0	0	0	0	0	0	1.11	133	532	610	
17:15 - 17:30	140	17	2	0	0	6	0	0	0	0	0	0	1.14	165	660	616	
17:30 - 17:45	133	7	0	0	0	2	0	0	0	0	0	0	1.05	142	568	596	
17:45 - 18:00	ESTIMATED	122	12	1	0	0	6	0	0	0	0	0	1.12	141	564	581	
18:00 - 18:15	ESTIMATED	131	12	1	0	1	4	0	0	0	0	0	1.12	149	596	597	
18:15 - 18:30	ESTIMATED	103	10	1	0	1	3	0	0	0	0	0	1.12	118	472	550	
18:30 - 18:45	ESTIMATED	98	9	1	0	0	17	0	0	0	0	0	1.13	125	500	533	
18:45 - 19:00	ESTIMATED	73	7	1	0	1	7	0	0	0	0	0	1.13	89	356	481	
PEAK PERIOD 15:00 - 19:00	Totals: 1833 232 18 1 5 114 0 0 0 0 4 0													2206			
	Percentage: 83.1% 10.5% 0.8% 0.0% 0.2% 5.2% 0.0% 0.0% 0.0% 0.0% 0.2% 0.0%													100%			
	Vehicle Occupants: 1833 464 60 11 5 137 0 0 0 0 72 0													2581		Occ.	1.17
PEAK HOUR 16:30 - 17:30	Totals: 508 76 8 0 0 24 0 0 0 0 0 0													616			
	Percentage: 82.5% 12.3% 1.3% 0.0% 0.0% 3.9% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%													100%			
	Vehicle Occupants: 508 152 27 0 0 29 0 0 0 0 0 0													716		Occ.	1.16
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 405 38 3 0 3 31 0 0 0 0 0 0													481			
	Percentage: 84.2% 8.0% 0.6% 0.0% 0.6% 6.4% 0.0% 0.0% 0.0% 0.1% 0.1% 0.0%													100%			
	Vehicle Occupants: 405 77 10 0 3 37 0 0 0 4 9 0													546		Occ.	1.13

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
259					
11.8%					
84					
13.6%					
45					
9.4%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: N Y or N
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): DW,DL,LT,MR
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 N Y or N

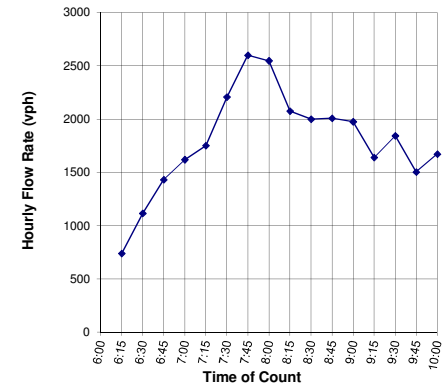
HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 ALL LANES

VEHICLE TYPE		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL		
		CARS			MISC				BUSES									
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
6:00 - 6:15	ESTIMATED	113	20	0	0	0	51	0	0	0	0	0	0	1.20	185	740		
6:15 - 6:30	ESTIMATED	202	36	1	0	0	39	1	0	0	0	0	0	1.20	279	1116		
6:30 - 6:45	ESTIMATED	274	49	1	0	0	33	0	0	0	0	0	0	1.20	358	1432		
6:45 - 7:00	ESTIMATED	304	66	1	0	0	32	1	0	0	1	0	0	1.25	405	1620	1227	
7:00 - 7:15		339	60	0	2	0	37	0	0	0	0	0	0	1.20	438	1752	1480	
7:15 - 7:30		399	93	5	4	1	48	1	0	1	1	0	0	1.30	552	2208	1753	
7:30 - 7:45		506	112	2	0	0	30	0	0	0	0	0	0	1.19	650	2600	2045	
7:45 - 8:00		491	106	3	4	1	31	0	0	0	0	0	1	1.31	637	2548	2277	
8:00 - 8:15		369	104	1	1	2	41	0	0	1	0	0	0	1.24	519	2076	2358	
8:15 - 8:30		354	92	6	2	0	41	0	0	2	2	1	0	1.35	500	2000	2306	
8:30 - 8:45		389	79	1	1	0	30	3	0	1	1	0	0	1.22	502	2008	2158	
8:45 - 9:00		378	68	1	1	0	42	2	0	1	0	0	3	1.42	494	1976	2015	
9:00 - 9:15		299	66	3	0	1	39	2	0	1	1	0	0	1.23	410	1640	1906	
9:15 - 9:30		331	74	0	1	1	54	0	0	0	0	0	0	1.20	461	1844	1867	
9:30 - 9:45		265	71	0	2	0	38	0	0	0	0	0	0	1.26	376	1504	1741	
9:45 - 10:00		295	94	1	0	0	26	0	0	2	0	0	0	1.26	418	1672	1665	
PEAK PERIOD																		
6:00 - 10:00		Totals:	5308	1190	27	18	6	612	10	0	10	7	1	5	7184			
		Percentage:	73.9%	16.6%	0.4%	0.3%	0.1%	8.5%	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%	100%			
		Vehicle Occupants:	5308	2379	91	189	6	734	11	0	41	71	24	187	9031		Occ.	1.26
PEAK HOUR																		
7:15 - 8:15		Totals:	1765	415	11	9	4	150	1	0	2	1	0	1	2358			
		Percentage:	74.9%	17.6%	0.5%	0.4%	0.2%	6.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%			
		Vehicle Occupants:	1765	830	37	95	4	180	1	0	8	10	0	40	2969		Occ.	1.26
MIN. HOURLY VOL.																		
6:00 - 7:00		Totals:	893	171	4	0	0	155	2	0	1	0	0	1	1225			
		Percentage:	72.9%	13.9%	0.3%	0.0%	0.0%	12.7%	0.2%	0.0%	0.1%	0.0%	0.0%	0.1%	100%			
		Vehicle Occupants:	893	341	13	0	0	186	2	0	5	2	4	27	1471		Occ.	1.20

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1264					
17.6%					
443					
18.8%					
177					
14.4%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): DW,DL,LT,MR
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

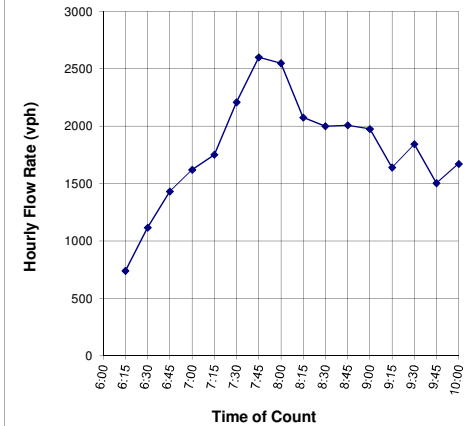
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

MIXED FLOW ONLY

VEHICLE TYPE		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			MISC				BUSES								
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	113	20	0	0	0	51	0	0	0	0	0	0	1.20	185	740	
6:15 - 6:30	ESTIMATED	202	36	1	0	0	39	1	0	0	0	0	0	1.20	279	1116	
6:30 - 6:45	ESTIMATED	274	49	1	0	0	33	0	0	0	0	0	0	1.20	358	1432	
6:45 - 7:00	ESTIMATED	304	66	1	0	0	32	1	0	0	1	0	0	1.25	405	1620	1227
7:00 - 7:15		339	60	0	2	0	37	0	0	0	0	0	0	1.20	438	1752	1480
7:15 - 7:30		399	93	5	4	1	48	1	0	1	1	0	0	1.30	552	2208	1753
7:30 - 7:45		506	112	2	0	0	30	0	0	0	0	0	0	1.19	650	2600	2045
7:45 - 8:00		491	106	3	4	1	31	0	0	0	0	0	1	1.31	637	2548	2277
8:00 - 8:15		369	104	1	1	2	41	0	0	1	0	0	0	1.24	519	2076	2358
8:15 - 8:30		354	92	6	2	0	41	0	0	2	2	1	0	1.35	500	2000	2306
8:30 - 8:45		389	79	1	1	0	30	3	0	1	1	0	0	1.22	502	2008	2158
8:45 - 9:00		378	68	1	1	0	42	2	0	1	0	0	3	1.42	494	1976	2015
9:00 - 9:15		299	66	3	0	1	39	2	0	1	1	0	0	1.23	410	1640	1906
9:15 - 9:30		331	74	0	1	1	54	0	0	0	0	0	0	1.20	461	1844	1867
9:30 - 9:45		265	71	0	2	0	38	0	0	0	0	0	0	1.26	376	1504	1741
9:45 - 10:00		295	94	1	0	0	26	0	0	2	0	0	0	1.26	418	1672	1665
PEAK PERIOD																	
6:00 - 10:00		Totals:	5308	1190	27	18	6	612	10	0	10	7	1	5	7184		
		Percentage:	73.9%	16.6%	0.4%	0.3%	0.1%	8.5%	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%	100%		
		Vehicle Occupants:	5308	2379	91	189	6	734	11	0	41	71	24	187	9031	Occ.	1.26
PEAK HOUR																	
7:15 - 8:15		Totals:	1765	415	11	9	4	150	1	0	2	1	0	1	2358		
		Percentage:	74.9%	17.6%	0.5%	0.4%	0.2%	6.4%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%		
		Vehicle Occupants:	1765	830	37	95	4	180	1	0	8	10	0	40	2969	Occ.	1.26
MIN. HOURLY VOL.																	
6:00 - 7:00		Totals:	893	171	4	0	0	155	2	0	1	0	0	1	1225		
		Percentage:	72.9%	13.9%	0.3%	0.0%	0.0%	12.7%	0.2%	0.0%	0.1%	0.0%	0.0%	0.1%	100%		
		Vehicle Occupants:	893	341	13	0	0	186	2	0	5	2	4	27	1471	Occ.	1.20

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1264					
17.6%					
443					
18.8%					
177					
14.4%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): DW,DL,LT,MR
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

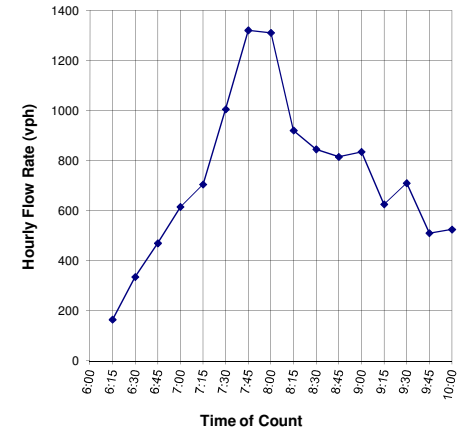
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE		COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			VP	MISC				BUSES								
TIME		1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
6:00 - 6:15	ESTIMATED	27	6	0	0	0	0	0	0	0	0	0	0	1.18	33	132		
6:15 - 6:30	ESTIMATED	55	12	0	0	0	0	1	0	0	0	0	0	1.18	67	268		
6:30 - 6:45	ESTIMATED	77	17	0	0	0	0	0	0	0	0	0	0	1.18	94	376		
6:45 - 7:00	ESTIMATED	93	30	0	0	0	0	0	0	0	0	0	0	1.24	123	492	317	
7:00 - 7:15		111	29	0	0	0	1	0	0	0	0	0	0	1.21	141	564	425	
7:15 - 7:30		156	44	0	1	0	0	1	0	0	0	0	0	1.27	201	804	559	
7:30 - 7:45		211	53	0	0	0	0	0	0	0	0	0	0	1.20	264	1056	729	
7:45 - 8:00		212	50	0	0	0	0	0	0	0	0	0	0	1.19	262	1048	868	
8:00 - 8:15		136	46	0	0	1	1	0	0	0	0	0	0	1.25	184	736	911	
8:15 - 8:30		133	35	0	0	0	1	0	0	0	0	0	0	1.21	169	676	879	
8:30 - 8:45		128	34	0	0	0	1	0	0	0	0	0	0	1.21	163	652	778	
8:45 - 9:00		138	27	1	0	0	1	2	0	0	0	0	0	1.18	167	668	683	
9:00 - 9:15		98	27	0	0	0	0	2	0	0	0	0	0	1.22	125	500	624	
9:15 - 9:30		108	32	0	0	1	1	0	0	0	0	0	0	1.23	142	568	597	
9:30 - 9:45		80	22	0	0	0	0	0	0	0	0	0	0	1.22	102	408	536	
9:45 - 10:00		75	30	0	0	0	0	0	0	0	0	0	0	1.29	105	420	474	
PEAK PERIOD 6:00 - 10:00		Totals:	1839	493	1	1	2	6	6	0	0	0	0		2342			
		Percentage:	78.5%	21.1%	0.0%	0.0%	0.1%	0.3%	0.3%	0.0%	0.0%	0.0%	0.0%		100%			
		Vehicle Occupants:	1839	987	4	11	2	7	7	0	0	0	0		2849		Occ. 1.22	
PEAK HOUR 7:15 - 8:15		Totals:	715	193	0	1	1	1	1	0	0	0	0		911			
		Percentage:	78.5%	21.2%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%		100%			
		Vehicle Occupants:	715	386	0	11	1	1	1	0	0	0	0		1114		Occ. 1.22	
MIN. HOURLY VOL. 6:00 - 7:00		Totals:	253	64	0	0	0	0	1	0	0	0	0		317			
		Percentage:	79.7%	20.3%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%		100%			
		Vehicle Occupants:	253	129	0	0	0	0	1	0	0	0	0		382		Occ. 1.20	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
497					
21.2%					
195					
21.4%					
64					
20.3%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 REORDERER(S): DW,DL,LT,MR
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

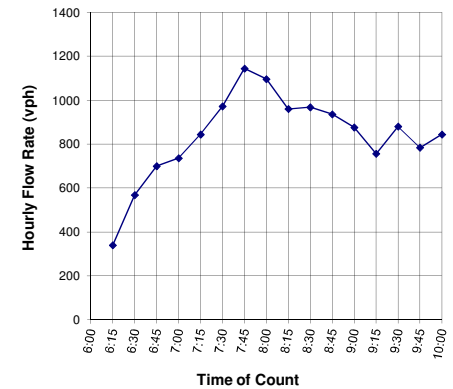
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #2 ONLY

VEHICLE TYPE	TIME	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			VP	MISC				BUSES							
		1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
ESTIMATED	6:00 - 6:15	68	10	0	0	6	0	0	0	0	0	0	0	1.15	85	340	
ESTIMATED	6:15 - 6:30	115	18	1	0	8	0	0	0	0	0	0	0	1.15	142	568	
ESTIMATED	6:30 - 6:45	147	23	1	0	4	0	0	0	0	0	0	0	1.15	175	700	
ESTIMATED	6:45 - 7:00	147	25	1	0	10	1	0	0	1	0	0	0	1.21	184	736	586
	7:00 - 7:15	184	21	0	1	5	0	0	0	0	0	0	0	1.15	211	844	712
	7:15 - 7:30	187	38	4	2	11	0	0	0	0	0	0	0	1.28	243	972	813
	7:30 - 7:45	239	41	1	0	5	0	0	0	0	0	0	0	1.16	286	1144	924
	7:45 - 8:00	222	40	2	2	7	0	0	0	0	0	0	0	1.24	274	1096	1014
	8:00 - 8:15	184	45	1	1	8	0	0	0	0	0	0	0	1.24	240	960	1043
	8:15 - 8:30	175	47	6	2	11	0	0	1	0	0	0	0	1.35	242	968	1042
	8:30 - 8:45	197	30	1	0	6	2	0	0	0	0	0	0	1.14	234	936	990
	8:45 - 9:00	174	31	0	1	12	0	0	1	0	0	0	0	1.21	219	876	935
	9:00 - 9:15	148	31	1	0	9	0	0	0	0	0	0	0	1.19	189	756	884
	9:15 - 9:30	170	32	0	1	17	0	0	0	0	0	0	0	1.20	220	880	862
	9:30 - 9:45	150	37	0	2	7	0	0	0	0	0	0	0	1.29	196	784	824
	9:45 - 10:00	155	52	1	0	3	0	0	0	0	0	0	0	1.26	211	844	816
PEAK PERIOD																	
6:00 - 10:00		Totals: 2663 520 20 12 3 129 3 0 2 1 0 0												3351			
		Percentage: 79.5% 15.5% 0.6% 0.4% 0.1% 3.8% 0.1% 0.0% 0.1% 0.0% 0.0% 0.0%												100%			
		Vehicle Occupants: 2663 1040 68 126 3 155 3 0 10 12 0 0												4077	Occ.	1.22	
PEAK HOUR																	
7:15 - 8:15		Totals: 832 164 8 5 3 31 0 0 0 0 0 0												1043			
		Percentage: 79.8% 15.7% 0.8% 0.5% 0.3% 3.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%												100%			
		Vehicle Occupants: 832 328 27 53 3 37 0 0 0 0 0 0												1280	Occ.	1.23	
MIN. HOURLY VOL.																	
6:00 - 7:00		Totals: 478 75 3 0 0 28 1 0 0 0 0 0												585			
		Percentage: 81.8% 12.8% 0.5% 0.0% 0.0% 4.8% 0.2% 0.0% 0.1% 0.0% 0.0% 0.0%												100%			
		Vehicle Occupants: 478 150 10 0 0 34 1 0 2 0 0 0												674	Occ.	1.15	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
559					
16.7%					
180					
17.3%					
79					
13.4%					

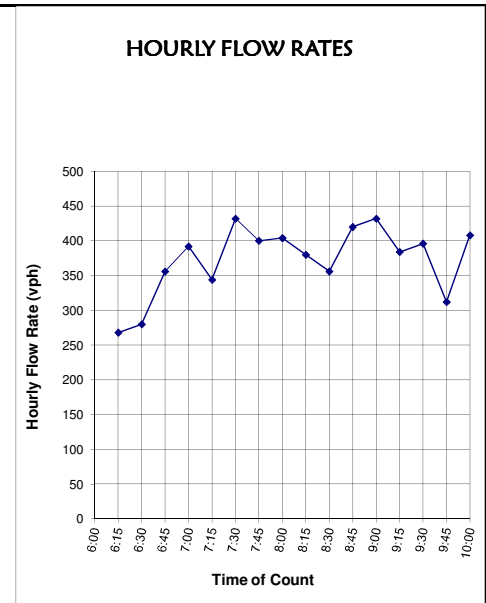
AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 REORDERER(S): DW,DL,LT,MR
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #3 ONLY



VEHICLE TYPE		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			MISC				BUSES								
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	18	3	0	0	0	45	0	0	0	0	0	0	1.27	67	268	
6:15 - 6:30	ESTIMATED	32	6	0	0	0	31	0	0	0	0	0	0	1.32	70	280	
6:30 - 6:45	ESTIMATED	50	9	0	0	0	29	0	0	0	0	0	0	1.34	89	356	
6:45 - 7:00	ESTIMATED	63	11	0	0	0	22	0	0	0	0	0	0	1.36	98	392	
7:00 - 7:15		44	10	0	1	0	31	0	0	0	0	0	0	1.30	86	344	
7:15 - 7:30		56	11	1	1	0	37	0	0	1	1	0	0	1.39	108	432	
7:30 - 7:45		56	18	1	0	0	25	0	0	0	0	0	0	1.25	100	400	
7:45 - 8:00		57	16	1	2	0	24	0	0	0	0	0	1	1.80	101	404	
8:00 - 8:15		49	13	0	0	0	32	0	0	1	0	0	0	1.24	95	380	
8:15 - 8:30		46	10	0	0	0	29	0	0	1	2	1	0	1.63	89	356	
8:30 - 8:45		64	15	0	1	0	23	1	0	1	1	0	0	1.39	105	420	
8:45 - 9:00		66	10	0	0	0	29	0	0	0	0	0	3	2.23	108	432	
9:00 - 9:15		53	8	2	0	1	30	0	0	1	1	0	0	1.32	96	384	
9:15 - 9:30		53	10	0	0	0	36	0	0	0	0	0	0	1.17	99	396	
9:30 - 9:45		35	12	0	0	0	31	0	0	0	0	0	0	1.23	78	312	
9:45 - 10:00		65	12	0	0	0	23	0	0	2	0	0	0	1.22	102	408	
PEAK PERIOD																	
6:00 - 10:00		Totals:		808	174	6	5	1	477	1	0	8	6	1	5	1491	
		Percentage:		54.2%	11.6%	0.4%	0.3%	0.1%	32.0%	0.1%	0.0%	0.6%	0.4%	0.1%	0.3%	100%	
		Vehicle Occupants:		808	347	21	53	1	572	1	0	33	61	25	191	2112	Occ.
																1.42	
PEAK HOUR																	
8:30 - 9:30		Totals:		236	43	2	1	1	118	1	0	2	2	0	3	408	
		Percentage:		57.8%	10.5%	0.5%	0.2%	0.2%	28.9%	0.2%	0.0%	0.5%	0.5%	0.0%	0.7%	100%	
		Vehicle Occupants:		236	86	7	11	1	142	1	0	8	20	0	120	630	Occ.
																1.54	
MIN. HOURLY VOL.																	
6:00 - 7:00		Totals:		164	29	1	0	0	127	0	0	1	0	0	1	323	
		Percentage:		50.7%	8.9%	0.3%	0.0%	0.0%	39.3%	0.0%	0.0%	0.4%	0.1%	0.1%	0.2%	100%	
		Vehicle Occupants:		164	57	4	0	0	152	0	0	5	3	5	31	421	Occ.
																1.30	

HOV-RELATED INFORMATION					
HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
206					
13.8%					
54					
13.2%					
32					
10.0%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: N Y or N
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,DL,LT,MR
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 N Y or N

HOW MANY HOURS IN COUNT?
 4 3 or 4

DAY: Tuesday

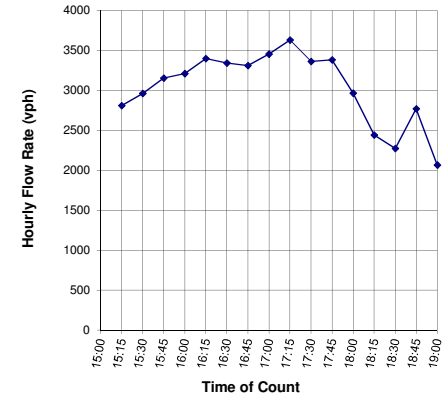
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

ALL LANES

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	541	118	2	0	2	39	2	0	0	1	0	0	1.20	703	2812	
15:15 - 15:30	556	137	5	0	0	42	1	0	1	0	0	0	1.22	741	2964	
15:30 - 15:45	584	153	5	0	7	39	1	0	0	1	0	0	1.23	789	3156	
15:45 - 16:00	608	161	1	1	2	27	1	0	0	2	0	1	1.29	803	3212	
16:00 - 16:15	666	144	3	1	2	33	0	0	1	0	0	0	1.20	850	3400	
16:15 - 16:30	679	113	5	3	2	33	0	0	0	1	0	0	1.20	836	3344	
16:30 - 16:45	646	135	13	4	4	25	0	0	1	0	0	0	1.26	828	3312	
16:45 - 17:00	669	148	13	1	1	31	1	0	1	0	0	0	1.23	864	3456	
17:00 - 17:15	736	123	7	2	3	37	3	0	0	0	0	0	1.18	908	3632	
17:15 - 17:30	718	87	8	0	5	22	4	0	0	1	0	0	1.14	841	3364	
17:30 - 17:45	731	77	3	1	5	29	1	0	0	0	0	0	1.12	846	3384	
17:45 - 18:00	ESTIMATED 618	93	4	0	2	24	0	0	0	0	0	0	1.15	742	2968	
18:00 - 18:15	ESTIMATED 514	69	3	0	1	23	0	0	0	0	0	0	1.14	611	2444	
18:15 - 18:30	ESTIMATED 476	64	3	0	1	25	0	0	0	0	0	0	1.14	569	2276	
18:30 - 18:45	ESTIMATED 579	78	4	0	4	28	0	0	0	0	0	0	1.14	693	2772	
18:45 - 19:00	ESTIMATED 415	56	3	0	2	41	1	0	0	0	0	0	1.14	517	2068	
PEAK PERIOD 15:00 - 19:00	Totals: 9736 1756 82 13 43 498 15 0 5 7 0 1												12141			
	Percentage: 80.2% 14.5% 0.7% 0.1% 0.4% 4.1% 0.1% 0.0% 0.0% 0.1% 0.0% 0.0%												100%			
	Vehicle Occupants: 9736 3511 279 137 43 598 17 0 20 75 0 52												14449	Occ. 1.19		
PEAK HOUR 16:45 - 17:45	Totals: 2854 435 31 4 14 119 9 0 1 1 0 0												3459			
	Percentage: 82.5% 12.6% 0.9% 0.1% 0.4% 3.4% 0.3% 0.0% 0.0% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 2854 870 105 42 14 143 10 0 4 10 0 0												4042	Occ. 1.17		
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 1983 266 13 0 8 117 1 0 1 0 0 0												2389			
	Percentage: 83.0% 11.2% 0.5% 0.0% 0.3% 4.9% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 1983 533 44 0 8 140 1 0 3 0 0 9												2721	Occ. 1.14		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1907					
15.7%					
486					
14.1%					
288					
12.1%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,DL,LT,MR
 REMARKS:

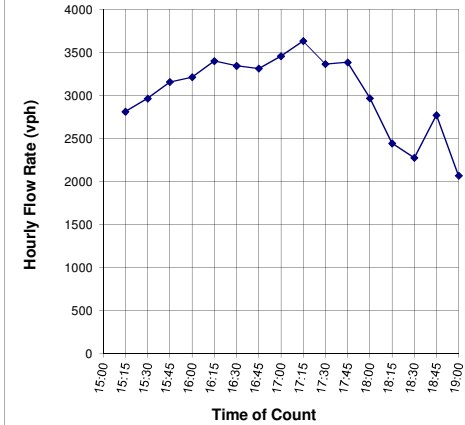
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	541	118	2	0	2	39	2	0	0	1	0	0	1.20	703	2812	
15:15 - 15:30	556	137	5	0	0	42	1	0	1	0	0	0	1.22	741	2964	
15:30 - 15:45	584	153	5	0	7	39	1	0	0	1	0	0	1.23	789	3156	
15:45 - 16:00	608	161	1	1	2	27	1	0	0	2	0	1	1.29	803	3212	3036
16:00 - 16:15	666	144	3	1	2	33	0	0	1	0	0	0	1.20	850	3400	3183
16:15 - 16:30	679	113	5	3	2	33	0	0	0	1	0	0	1.20	836	3344	3278
16:30 - 16:45	646	135	13	4	4	25	0	0	1	0	0	0	1.26	828	3312	3317
16:45 - 17:00	669	148	13	1	1	31	1	0	1	0	0	0	1.23	864	3456	3378
17:00 - 17:15	736	123	7	2	3	37	3	0	0	0	0	0	1.18	908	3632	3436
17:15 - 17:30	718	87	8	0	5	22	4	0	0	1	0	0	1.14	841	3364	3441
17:30 - 17:45	731	77	3	1	5	29	1	0	0	0	0	0	1.12	846	3384	3459
17:45 - 18:00	ESTIMATED 618	93	4	0	2	24	0	0	0	0	0	0	1.15	742	2968	3337
18:00 - 18:15	ESTIMATED 514	69	3	0	1	23	0	0	0	0	0	0	1.14	611	2444	3040
18:15 - 18:30	ESTIMATED 476	64	3	0	1	25	0	0	0	0	0	0	1.14	569	2276	2768
18:30 - 18:45	ESTIMATED 579	78	4	0	4	28	0	0	0	0	0	0	1.14	693	2772	2615
18:45 - 19:00	ESTIMATED 415	56	3	0	2	41	1	0	0	0	0	0	1.14	517	2068	2390
PEAK PERIOD 15:00 - 19:00	Totals:	9736	1756	82	13	43	498	15	0	5	7	0	1	12141		
	Percentage:	80.2%	14.5%	0.7%	0.1%	0.4%	4.1%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	100%		
	Vehicle Occupants:	9736	3511	279	137	43	598	17	0	20	75	0	52	14449	Occ.	1.19
PEAK HOUR 16:45 - 17:45	Totals:	2854	435	31	4	14	119	9	0	1	1	0	0	3459		
	Percentage:	82.5%	12.6%	0.9%	0.1%	0.4%	3.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100%		
	Vehicle Occupants:	2854	870	105	42	14	143	10	0	4	10	0	0	4042	Occ.	1.17
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	1983	266	13	0	8	117	1	0	1	0	0	0	2389		
	Percentage:	83.0%	11.2%	0.5%	0.0%	0.3%	4.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%		
	Vehicle Occupants:	1983	533	44	0	8	140	1	0	3	0	0	9	2721	Occ.	1.14

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1907					
15.7%					
486					
14.1%					
288					
12.1%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,DL,LT,MR
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

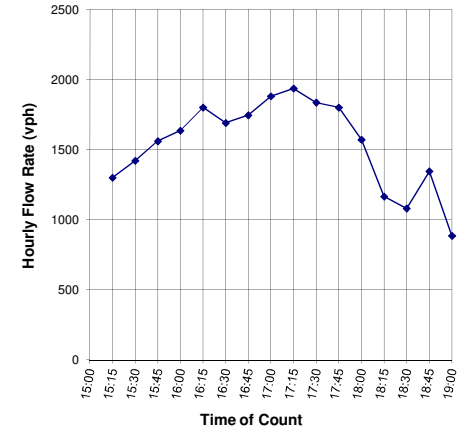
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	210	49	0	0	1	0	1	0	0	0	0	0	0	1.19	260	1040	
15:15 - 15:30	228	56	0	0	0	0	1	0	0	0	0	0	0	1.20	284	1136	
15:30 - 15:45	249	57	2	0	4	0	1	0	0	0	0	0	0	1.20	312	1248	
15:45 - 16:00	240	85	0	0	2	0	0	0	0	0	0	0	0	1.26	327	1308	1183
16:00 - 16:15	286	72	0	1	1	0	0	0	0	0	0	0	0	1.23	360	1440	1283
16:15 - 16:30	280	53	2	2	1	0	0	0	0	0	0	0	0	1.23	338	1352	1337
16:30 - 16:45	264	72	8	3	1	1	0	0	0	0	0	0	0	1.34	349	1396	1374
16:45 - 17:00	311	62	2	0	1	0	1	0	0	0	0	0	0	1.18	376	1504	1423
17:00 - 17:15	325	55	1	2	3	1	2	0	0	0	0	0	0	1.20	387	1548	1450
17:15 - 17:30	321	41	3	0	2	0	4	0	0	0	0	0	0	1.13	367	1468	1479
17:30 - 17:45	325	31	0	1	3	0	0	0	0	0	0	0	0	1.11	360	1440	1490
17:45 - 18:00	ESTIMATED 268	44	1	0	1	0	0	0	0	0	0	0	0	1.15	314	1256	1428
18:00 - 18:15	ESTIMATED 202	29	1	0	0	1	0	0	0	0	0	0	0	1.14	233	932	1274
18:15 - 18:30	ESTIMATED 187	27	1	0	1	0	0	0	0	0	0	0	0	1.13	216	864	1123
18:30 - 18:45	ESTIMATED 230	33	1	0	4	1	0	0	0	0	0	0	0	1.13	269	1076	1032
18:45 - 19:00	ESTIMATED 152	22	1	0	2	0	1	0	0	0	0	0	0	1.13	177	708	895
PEAK PERIOD 15:00 - 19:00	Totals:	4078	789	23	9	27	4	11	0	0	0	0	0		4929		
	Percentage:	82.7%	16.0%	0.5%	0.2%	0.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
	Vehicle Occupants:	4078	1577	77	95	27	5	12	0	0	0	0	0		5858		Occ. 1.19
PEAK HOUR 16:45 - 17:45	Totals:	1282	189	6	3	9	1	7	0	0	0	0	0		1490		
	Percentage:	86.0%	12.7%	0.4%	0.2%	0.6%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
	Vehicle Occupants:	1282	378	20	32	9	1	8	0	0	0	0	0		1722		Occ. 1.16
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	771	112	3	0	7	2	1	0	0	0	0	0		895		
	Percentage:	86.1%	12.5%	0.4%	0.0%	0.8%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
	Vehicle Occupants:	771	224	12	0	7	2	1	0	0	0	0	0		1015		Occ. 1.13

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
847					
17.2%					
207					
13.9%					
122					
13.7%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,DL,LT,MR
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

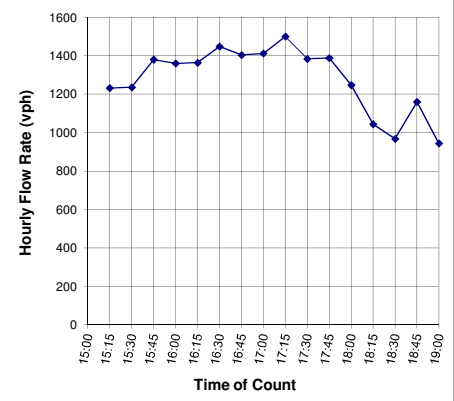
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #2 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	260	42	2	0	0	3	1	0	0	1	0	0	1.18	308	1232	
15:15 - 15:30	239	55	2	0	0	13	0	0	0	0	0	0	1.20	309	1236	
15:30 - 15:45	266	69	2	0	2	5	0	0	0	1	0	0	1.24	345	1380	
15:45 - 16:00	278	53	1	1	0	6	1	0	0	0	0	1	1.31	340	1360	1302
16:00 - 16:15	282	49	2	0	1	7	0	0	0	0	0	0	1.16	341	1364	1335
16:15 - 16:30	312	40	1	1	1	6	0	0	0	1	0	0	1.17	362	1448	1388
16:30 - 16:45	302	40	4	1	1	3	0	0	0	0	0	0	1.17	351	1404	1394
16:45 - 17:00	269	62	8	1	0	13	0	0	0	0	0	0	1.26	353	1412	1407
17:00 - 17:15	320	43	3	0	0	9	1	0	0	0	0	0	1.14	375	1500	1441
17:15 - 17:30	306	32	2	0	3	3	0	0	0	0	0	0	1.11	346	1384	1425
17:30 - 17:45	303	34	2	0	2	6	1	0	0	0	0	0	1.12	347	1388	1421
17:45 - 18:00	ESTIMATED 271	34	2	0	0	5	0	0	0	0	0	0	1.14	312	1248	1380
18:00 - 18:15	ESTIMATED 226	26	1	0	1	7	0	0	0	0	0	0	1.13	261	1044	1266
18:15 - 18:30	ESTIMATED 209	24	1	0	0	8	0	0	0	0	0	0	1.13	242	968	1162
18:30 - 18:45	ESTIMATED 255	29	2	0	0	4	0	0	0	0	0	0	1.13	290	1160	1105
18:45 - 19:00	ESTIMATED 206	23	1	0	0	5	0	0	0	0	0	0	1.13	236	944	1029
PEAK PERIOD 15:00 - 19:00	Totals:	4304	655	37	4	11	103	4	0	4	0	1		5118		
	Percentage:	84.1%	12.8%	0.7%	0.1%	0.2%	2.0%	0.1%	0.0%	0.1%	0.0%	0.0%		100%		
	Vehicle Occupants:	4304	1310	125	42	11	124	4	0	36	0	52		6003	Occ.	1.17
PEAK HOUR 16:15 - 17:15	Totals:	1203	185	16	3	2	31	1	0	1	0	0		1441		
	Percentage:	83.5%	12.8%	1.1%	0.2%	0.1%	2.2%	0.1%	0.0%	0.1%	0.0%	0.0%		100%		
	Vehicle Occupants:	1203	370	54	32	2	37	1	0	10	0	0		1708	Occ.	1.19
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	895	102	6	0	1	24	0	0	0	0	0		1029		
	Percentage:	87.1%	9.9%	0.6%	0.0%	0.1%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
	Vehicle Occupants:	895	204	20	0	1	29	0	0	0	0	9		1158	Occ.	1.13

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
711					
13.9%					
207					
14.4%					
109					
10.6%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: EB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,DL,LT,MR
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

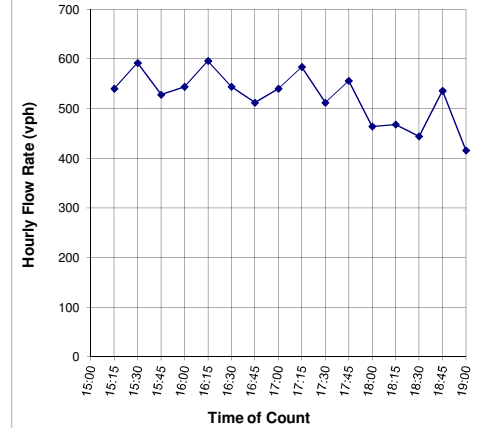
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #3 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	71	27	0	0	1	36	0	0	0	0	0	0	1.25	135	540	
15:15 - 15:30	89	26	3	0	0	29	0	0	1	0	0	0	1.28	148	592	
15:30 - 15:45	69	27	1	0	1	34	0	0	0	0	0	0	1.27	132	528	
15:45 - 16:00	90	23	0	0	0	21	0	0	0	2	0	0	1.33	136	544	
16:00 - 16:15	98	23	1	0	0	26	0	0	1	0	0	0	1.23	149	596	
16:15 - 16:30	87	20	2	0	0	27	0	0	0	0	0	0	1.22	136	544	
16:30 - 16:45	80	23	1	0	2	21	0	0	1	0	0	0	1.25	128	512	
16:45 - 17:00	89	24	3	0	0	18	0	0	1	0	0	0	1.28	135	540	
17:00 - 17:15	91	25	3	0	0	27	0	0	0	0	0	0	1.26	146	584	
17:15 - 17:30	91	14	3	0	0	19	0	0	0	1	0	0	1.27	128	512	
17:30 - 17:45	103	12	1	0	0	23	0	0	0	0	0	0	1.14	139	556	
17:45 - 18:00	ESTIMATED 79	15	1	0	1	19	0	0	0	0	0	0	1.21	116	464	
18:00 - 18:15	ESTIMATED 86	14	1	0	0	15	0	0	0	0	0	0	1.19	117	468	
18:15 - 18:30	ESTIMATED 79	13	1	0	0	17	0	0	0	0	0	0	1.19	111	444	
18:30 - 18:45	ESTIMATED 94	16	1	0	0	23	0	0	0	0	0	0	1.19	134	536	
18:45 - 19:00	ESTIMATED 57	10	1	0	0	36	0	0	0	0	0	0	1.20	104	416	
PEAK PERIOD 15:00 - 19:00	Totals:	1353	313	23	0	5	391	0	0	5	4	0	0	2094		
	Percentage:	64.6%	14.9%	1.1%	0.0%	0.2%	18.7%	0.0%	0.0%	0.2%	0.2%	0.0%	0.0%	100%		
	Vehicle Occupants:	1353	625	79	0	5	469	0	0	20	40	0	0	2591	Occ.	1.24
PEAK HOUR 15:15 - 16:15	Totals:	346	99	5	0	1	110	0	0	2	2	0	0	565		
	Percentage:	61.2%	17.5%	0.9%	0.0%	0.2%	19.5%	0.0%	0.0%	0.4%	0.4%	0.0%	0.0%	100%		
	Vehicle Occupants:	346	198	17	0	1	132	0	0	8	20	0	0	722	Occ.	1.28
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	316	53	4	0	0	91	0	0	1	0	0	0	465		
	Percentage:	67.9%	11.4%	0.9%	0.0%	0.0%	19.6%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	100%		
	Vehicle Occupants:	316	106	14	0	0	109	0	0	4	0	0	0	549	Occ.	1.18

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
350					
16.7%					
109					
19.3%					
58					
12.5%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: y Y or N
 NO. LANES COUNTED: 4
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 y Y or N

HOW MANY HOURS IN COUNT?
 4 3 or 4

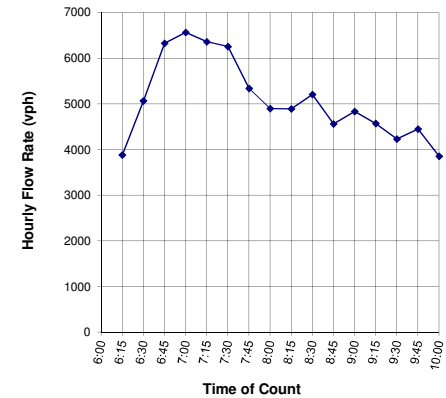
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

ALL LANES
 (HOV LANE)

VEHICLE TYPE		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL	
		CARS			MISC				BUSES								
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	818	105	3	0	1	41	1	0	0	0	2	0	1.16	971	3884	
6:15 - 6:30	ESTIMATED	1067	137	6	1	1	50	0	0	0	4	0	1.20	1267	5068		
6:30 - 6:45	ESTIMATED	1356	173	4	1	5	39	1	0	0	1	2	0	1.16	1582	6328	
6:45 - 7:00	ESTIMATED	1391	197	5	2	2	40	1	1	0	0	3	0	1.19	1642	6568	5462
7:00 - 7:15		1335	190	4	1	3	45	0	9	0	0	3	0	1.17	1590	6360	6081
7:15 - 7:30		1290	209	4	2	5	38	0	16	0	0	0	0	1.16	1564	6256	6378
7:30 - 7:45		1091	168	3	1	7	46	1	15	1	1	2	0	1.18	1335	5340	6131
7:45 - 8:00		1013	149	3	0	2	46	0	11	0	0	1	0	1.15	1225	4900	5714
8:00 - 8:15		1032	124	1	1	1	51	0	13	0	0	0	0	1.12	1223	4892	5347
8:15 - 8:30		1066	164	2	1	3	52	0	14	0	0	0	0	1.15	1302	5208	5085
8:30 - 8:45		935	135	3	1	4	54	0	8	0	0	1	0	1.16	1141	4564	4891
8:45 - 9:00		990	169	6	1	2	38	0	2	0	0	1	0	1.18	1209	4836	4875
9:00 - 9:15		921	166	2	2	6	40	0	6	0	0	0	0	1.17	1143	4572	4795
9:15 - 9:30		834	143	7	2	2	59	1	8	0	0	3	0	1.23	1058	4232	4551
9:30 - 9:45		839	197	7	0	2	56	5	11	0	0	0	1	1.24	1113	4452	4523
9:45 - 10:00		662	219	5	0	1	62	1	15	0	0	0	0	1.25	964	3856	4278
PEAK PERIOD 6:00 - 10:00		Totals:	16640	2646	66	16	47	757	11	129	1	3	23	1	20329		
		Percentage:	81.9%	13.0%	0.3%	0.1%	0.2%	3.7%	0.1%	0.6%	0.0%	0.0%	0.1%	0.0%	100%		
		Vehicle Occupants:	16640	5292	224	168	47	908	12	142	5	25	454	48	23954		Occ. 1.18
PEAK HOUR 6:30 - 7:30		Totals:	5372	769	17	6	15	162	2	26	0	1	9	0	6378		
		Percentage:	84.2%	12.1%	0.3%	0.1%	0.2%	2.5%	0.0%	0.4%	0.0%	0.0%	0.1%	0.0%	100%		
		Vehicle Occupants:	5372	1539	59	63	15	194	2	29	1	13	176	5	7465		Occ. 1.17
MIN. HOURLY VOL. 9:00 - 10:00		Totals:	3256	725	21	4	11	217	7	40	0	3	3	1	4281		
		Percentage:	76.1%	16.9%	0.5%	0.1%	0.3%	5.1%	0.2%	0.9%	0.0%	0.1%	0.1%	0.0%	100%		
		Vehicle Occupants:	3256	1450	71	42	11	260	8	44	0	30	60	40	5265		Occ. 1.23

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
2932 14.4%	1944	9.6%	954 32.5%	302 12.5%	17095 98.3%
844 13.2%	709	11.1%	103 12.2%	125 13.5%	5409 97.7%
808 18.9%	355	8.3%	503 62.3%	40 9.5%	3433 98.8%

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS: 6-7AM from 1/31/2012

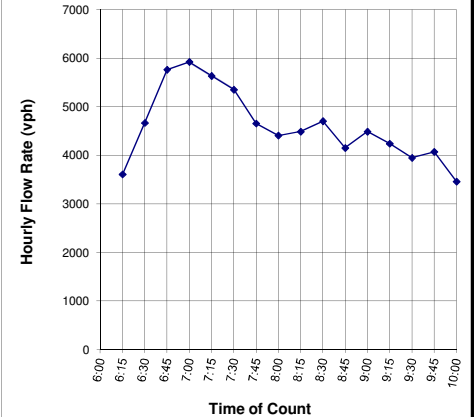
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL	
			CARS			MISC				BUSES								
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
ESTIMATED	6:00 - 6:15		815	44	2	0	0	41	1	0	0	0	1	0	1.08	902	3608	
ESTIMATED	6:15 - 6:30		1052	57	2	1	1	50	0	0	0	0	4	0	1.13	1167	4668	
ESTIMATED	6:30 - 6:45		1324	70	3	1	1	39	1	0	0	1	2	0	1.10	1441	5764	
ESTIMATED	6:45 - 7:00		1359	75	3	1	1	40	1	0	0	0	2	0	1.10	1481	5924	4991
	7:00 - 7:15		1309	53	2	0	0	44	0	0	0	0	1	0	1.06	1409	5636	5498
	7:15 - 7:30		1263	35	1	1	0	38	0	0	0	0	0	0	1.04	1338	5352	5669
	7:30 - 7:45		1080	32	2	0	2	46	1	0	1	0	1	0	1.06	1164	4656	5392
	7:45 - 8:00		1006	45	3	0	1	46	0	0	0	0	1	0	1.07	1102	4408	5013
	8:00 - 8:15		1030	40	0	0	1	51	0	0	0	0	0	0	1.04	1122	4488	4726
	8:15 - 8:30		1062	59	2	1	0	52	0	0	0	0	0	0	1.07	1176	4704	4564
	8:30 - 8:45		930	50	2	1	1	53	0	0	0	0	1	0	1.09	1038	4152	4438
	8:45 - 9:00		989	86	5	1	2	38	0	0	0	0	1	0	1.12	1122	4488	4458
	9:00 - 9:15		915	99	2	2	2	40	0	0	0	0	0	0	1.12	1060	4240	4396
	9:15 - 9:30		819	100	3	1	2	59	0	0	0	0	3	0	1.19	987	3948	4207
	9:30 - 9:45		829	126	5	0	1	56	0	0	0	0	0	1	1.18	1018	4072	4187
	9:45 - 10:00		647	151	4	0	1	62	0	0	0	0	0	0	1.20	865	3460	3930
PEAK PERIOD																		
6:00 - 10:00			Totals:	16429	1122	40	10	16	755	4	0	1	1	17	1	18392		
			Percentage:	89.3%	6.1%	0.2%	0.1%	0.1%	4.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	100%		
			Vehicle Occupants:	16429	2243	135	105	16	906	4	0	5	12	330	48	20230		Occ. 1.10
PEAK HOUR																		
6:30 - 7:30			Totals:	5255	233	8	3	2	161	2	0	0	1	5	0	5669		
			Percentage:	92.7%	4.1%	0.1%	0.1%	0.0%	2.8%	0.0%	0.0%	0.0%	0.1%	0.0%	100%			
			Vehicle Occupants:	5255	466	28	32	2	193	2	0	1	11	102	5	6094		Occ. 1.07
MIN. HOURLY VOL.																		
9:00 - 10:00			Totals:	3210	476	14	3	6	217	0	0	0	3	3	1	3933		
			Percentage:	81.6%	12.1%	0.4%	0.1%	0.2%	5.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	100%		
			Vehicle Occupants:	3210	952	48	32	6	260	0	0	0	30	60	40	4638		Occ. 1.18

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1208					
6.6%					
253					
4.5%					
506					
12.9%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS: 6-7AM from 1/31/2012

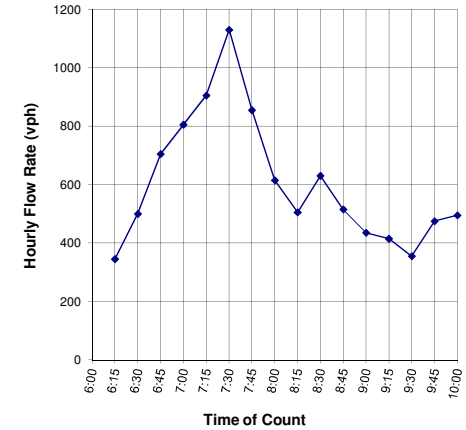
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			VP	MISC				BUSES								
TIME	1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
6:00 - 6:15	ESTIMATED	17	48	2	0	1	0	0	0	0	0	1	0	2.08	69	276	
6:15 - 6:30	ESTIMATED	24	71	4	0	0	0	0	0	0	0	0	0	1.86	100	400	
6:30 - 6:45	ESTIMATED	35	100	2	0	4	0	0	0	0	0	0	0	1.79	141	564	
6:45 - 7:00	ESTIMATED	35	119	3	1	1	0	0	1	0	0	1	0	2.00	161	644	471
7:00 - 7:15		26	137	2	1	3	1	0	9	0	0	2	0	2.05	181	724	583
7:15 - 7:30		27	174	3	1	5	0	0	16	0	0	0	0	1.85	226	904	709
7:30 - 7:45		11	136	1	1	5	0	0	15	0	1	1	0	2.04	171	684	739
7:45 - 8:00		7	104	0	0	1	0	0	11	0	0	0	0	1.85	123	492	701
8:00 - 8:15		2	84	1	1	0	0	0	13	0	0	0	0	1.96	101	404	621
8:15 - 8:30		4	105	0	0	3	0	0	14	0	0	0	0	1.84	126	504	521
8:30 - 8:45		5	85	1	0	3	1	0	8	0	0	0	0	1.86	103	412	453
8:45 - 9:00		1	83	1	0	0	0	0	2	0	0	0	0	1.98	87	348	417
9:00 - 9:15		6	67	0	0	4	0	0	6	0	0	0	0	1.81	83	332	399
9:15 - 9:30		15	43	4	1	0	0	1	8	0	0	0	0	1.89	71	284	344
9:30 - 9:45		10	71	2	0	1	0	5	11	0	0	0	0	1.81	95	380	336
9:45 - 10:00		15	68	1	0	0	0	1	15	0	0	0	0	1.73	99	396	348
PEAK PERIOD 6:00 - 10:00		Totals:	240	1496	26	6	31	2	7	129	0	1	6	0	1937		
		Percentage:	12.4%	77.2%	1.4%	0.3%	1.6%	0.1%	0.4%	6.7%	0.0%	0.1%	0.3%	0.0%	100%		
		Vehicle Occupants:	240	2992	89	63	31	2	8	142	0	12	119	0	3691		Occ. 1.91
PEAK HOUR 6:45 - 7:45		Totals:	99	566	9	4	14	1	0	41	0	1	4	0	739		
		Percentage:	13.4%	76.6%	1.2%	0.5%	1.9%	0.1%	0.0%	5.5%	0.0%	0.1%	0.6%	0.0%	100%		
		Vehicle Occupants:	99	1132	29	42	14	1	0	45	0	11	86	0	1459		Occ. 1.97
MIN. HOURLY VOL. 8:45 - 9:45		Totals:	32	264	7	1	5	0	6	27	0	0	0	0	336		
		Percentage:	9.5%	78.6%	2.1%	0.3%	1.5%	0.0%	1.8%	8.0%	0.0%	0.0%	0.0%	0.0%	100%		
		Vehicle Occupants:	32	528	24	11	5	0	7	30	0	0	0	0	629		Occ. 1.87

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1695	87.5%			242	12.5%
639	86.5%			100	13.5%
304	90.5%			32	9.5%

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS: 6-7AM from 1/31/2012

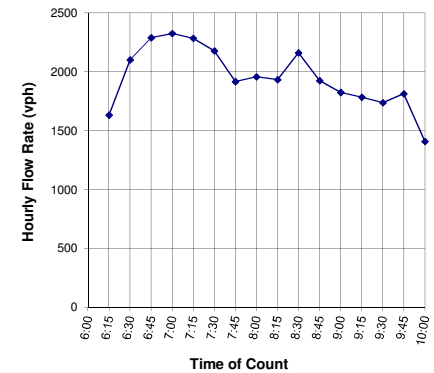
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #2 ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL	
			CARS			MISC				BUSES								
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
ESTIMATED	6:00 - 6:15		390	14	1	0	0	3	0	0	0	0	0	0	1.04	408	1632	
ESTIMATED	6:15 - 6:30		502	18	1	0	1	1	0	0	0	0	2	0	1.11	525	2100	
ESTIMATED	6:30 - 6:45		551	19	1	0	0	1	1	0	0	0	0	0	1.04	572	2288	
ESTIMATED	6:45 - 7:00		558	22	1	0	0	0	1	0	0	0	0	0	1.04	581	2324	
	7:00 - 7:15		551	19	0	0	0	1	0	0	0	0	0	0	1.03	571	2284	
	7:15 - 7:30		534	9	1	0	0	0	0	0	0	0	0	0	1.02	544	2176	
	7:30 - 7:45		469	7	1	0	1	1	0	0	0	0	0	0	1.02	479	1916	
	7:45 - 8:00		471	14	3	0	1	0	0	0	0	0	0	0	1.04	489	1956	
	8:00 - 8:15		471	12	0	0	0	0	0	0	0	0	0	0	1.02	483	1932	
	8:15 - 8:30		520	18	1	0	0	1	0	0	0	0	0	0	1.04	540	2160	
	8:30 - 8:45		466	14	0	1	0	0	0	0	0	0	0	0	1.05	481	1924	
	8:45 - 9:00		439	14	0	0	2	1	0	0	0	0	0	0	1.03	456	1824	
	9:00 - 9:15		423	22	0	0	1	0	0	0	0	0	0	0	1.05	446	1784	
	9:15 - 9:30		402	27	1	0	1	3	0	0	0	0	0	0	1.07	434	1736	
	9:30 - 9:45		392	55	4	0	1	1	0	0	0	0	0	0	1.14	453	1812	
	9:45 - 10:00		272	76	3	0	1	0	0	0	0	0	0	0	1.24	352	1408	
PEAK PERIOD																		
6:00 - 10:00			Totals:	7411	361	17	1	9	13	2	0	0	2	0		7814		
			Percentage:	94.8%	4.6%	0.2%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
			Vehicle Occupants:	7411	721	59	11	9	16	2	0	0	46	0		8272		Occ. 1.06
PEAK HOUR																		
6:30 - 7:30			Totals:	2194	69	3	0	0	2	2	0	0	0	0		2268		
			Percentage:	96.7%	3.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%		100%		Occ. 1.03
			Vehicle Occupants:	2194	138	9	0	0	2	2	0	0	3	0		2347		
MIN. HOURLY VOL.																		
9:00 - 10:00			Totals:	1489	180	8	0	4	4	0	0	0	0	0		1685		
			Percentage:	88.4%	10.7%	0.5%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		Occ. 1.12
			Vehicle Occupants:	1489	360	27	0	4	5	0	0	0	0	0		1885		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
390					
5.0%					
72					
3.2%					
192					
11.4%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS: 6-7AM from 1/31/2012

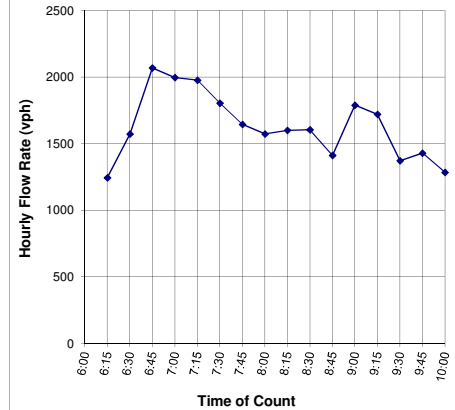
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #3 ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL		
			CARS			MISC				BUSES									
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
ESTIMATED	6:00 - 6:15		285	18	0	0	0	8	0	0	0	0	0	0	0	1.07	311	1244	
ESTIMATED	6:15 - 6:30		360	23	0	0	0	10	0	0	0	0	0	0	0	1.07	393	1572	
ESTIMATED	6:30 - 6:45		477	30	0	0	1	9	0	0	0	0	0	0	0	1.07	517	2068	
ESTIMATED	6:45 - 7:00		458	29	0	1	0	11	0	0	0	0	0	0	0	1.09	499	1996	1720
	7:00 - 7:15		475	15	0	0	0	3	0	0	0	0	1	0	0	1.07	494	1976	1903
	7:15 - 7:30		428	10	0	0	0	13	0	0	0	0	0	0	0	1.03	451	1804	1961
	7:30 - 7:45		378	18	0	0	1	14	0	0	0	0	0	0	0	1.05	411	1644	1855
	7:45 - 8:00		361	18	0	0	0	14	0	0	0	0	0	0	0	1.05	393	1572	1749
	8:00 - 8:15		368	18	0	0	0	14	0	0	0	0	0	0	0	1.05	400	1600	1655
	8:15 - 8:30		360	27	0	0	0	14	0	0	0	0	0	0	0	1.07	401	1604	1605
	8:30 - 8:45		319	23	0	0	1	10	0	0	0	0	0	0	0	1.07	353	1412	1547
	8:45 - 9:00		391	50	4	1	0	1	0	0	0	0	0	0	0	1.16	447	1788	1601
	9:00 - 9:15		370	55	1	2	1	1	0	0	0	0	0	0	0	1.18	430	1720	1631
	9:15 - 9:30		286	38	0	1	1	17	0	0	0	0	0	0	0	1.15	343	1372	1573
	9:30 - 9:45		305	45	0	0	0	7	0	0	0	0	0	0	0	1.13	357	1428	1577
	9:45 - 10:00		249	51	0	0	0	21	0	0	0	0	0	0	0	1.17	321	1284	1451
PEAK PERIOD																			
6:00 - 10:00			Totals:	5869	467	6	5	5	167	0	0	0	0	1	0		6521		
			Percentage:	90.0%	7.2%	0.1%	0.1%	0.1%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
			Vehicle Occupants:	5869	934	22	53	5	200	0	0	0	0	25	0		7108		Occ. 1.09
PEAK HOUR																			
6:30 - 7:30			Totals:	1837	84	1	1	1	36	0	0	0	0	1	0		1961		
			Percentage:	93.7%	4.3%	0.0%	0.1%	0.1%	1.8%	0.0%	0.0%	0.0%	0.1%	0.0%		100%			
			Vehicle Occupants:	1837	167	3	11	1	43	0	0	0	0	23	0		2085		Occ. 1.06
MIN. HOURLY VOL.																			
9:00 - 10:00			Totals:	1210	189	1	3	2	46	0	0	0	0	0	0		1451		
			Percentage:	83.4%	13.0%	0.1%	0.2%	0.1%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%		100%			
			Vehicle Occupants:	1210	378	3	32	2	55	0	0	0	0	0	0		1680		Occ. 1.16

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
485					
7.4%					
88					
4.5%					
195					
13.4%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 y Y/N

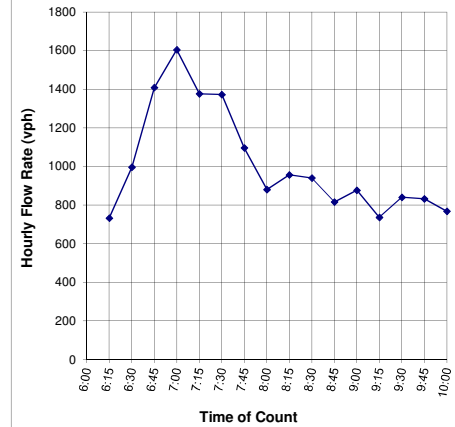
HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #4 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
6:00 - 6:15	ESTIMATED	140	11	1	0	0	30	1	0	0	0	0	0	1.16	183	732	
6:15 - 6:30	ESTIMATED	191	15	1	1	0	39	0	0	0	2	0	0	1.28	249	996	
6:30 - 6:45	ESTIMATED	294	24	1	1	0	29	0	0	0	1	2	0	1.27	352	1408	
6:45 - 7:00	ESTIMATED	340	27	2	0	1	29	0	0	0	0	2	0	1.21	401	1604	1185
7:00 - 7:15		283	19	2	0	0	40	0	0	0	0	0	0	1.09	344	1376	1346
7:15 - 7:30		301	16	0	1	0	25	0	0	0	0	0	0	1.09	343	1372	1440
7:30 - 7:45		233	7	1	0	0	31	1	0	1	0	1	0	1.14	274	1096	1362
7:45 - 8:00		174	13	0	0	0	32	0	0	0	1	0	0	1.17	220	880	1181
8:00 - 8:15		191	10	0	0	1	37	0	0	0	0	0	0	1.07	239	956	1076
8:15 - 8:30		182	14	1	1	0	37	0	0	0	0	0	0	1.14	235	940	968
8:30 - 8:45		145	13	2	0	0	43	0	0	0	1	0	0	1.22	204	816	898
8:45 - 9:00		159	22	1	0	0	36	0	0	0	1	0	0	1.23	219	876	897
9:00 - 9:15		122	22	1	0	0	39	0	0	0	0	0	0	1.18	184	736	842
9:15 - 9:30		131	35	2	0	0	39	0	0	0	3	0	0	1.50	210	840	817
9:30 - 9:45		132	26	1	0	0	48	0	0	0	0	1	0	1.37	208	832	821
9:45 - 10:00		126	24	1	0	0	41	0	0	0	0	0	0	1.18	192	768	794
PEAK PERIOD 6:00 - 10:00		Totals:	3144	299	16	4	2	575	2	0	1	1	13	1	4057		
		Percentage:	77.5%	7.4%	0.4%	0.1%	0.0%	14.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	100%		
		Vehicle Occupants:	3144	597	56	42	2	690	2	0	5	12	267	50	4865		Occ. 1.20
PEAK HOUR 6:30 - 7:30		Totals:	1218	86	5	2	1	123	0	0	0	1	4	0	1440		
		Percentage:	84.5%	6.0%	0.3%	0.1%	0.1%	8.5%	0.0%	0.0%	0.0%	0.1%	0.3%	0.0%	100%		
		Vehicle Occupants:	1218	172	17	21	1	148	0	0	1	11	84	7	1678		Occ. 1.17
MIN. HOURLY VOL. 9:00 - 10:00		Totals:	511	107	5	0	0	167	0	0	0	3	3	1	797		
		Percentage:	64.1%	13.4%	0.6%	0.0%	0.0%	21.0%	0.0%	0.0%	0.0%	0.4%	0.4%	0.1%	100%		
		Vehicle Occupants:	511	214	17	0	0	200	0	0	0	30	60	40	1072		Occ. 1.35

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
338					
8.3%					
99					
6.9%					
119					
14.9%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: y Y or N
 NO. LANES COUNTED: 4
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y or N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

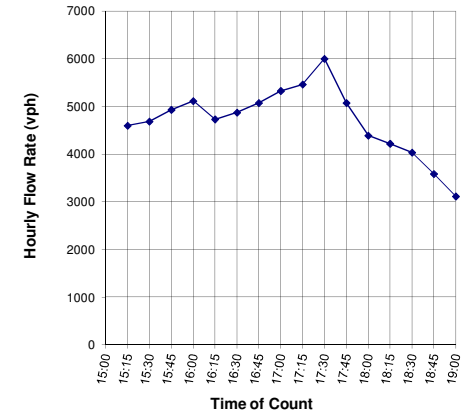
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

ALL LANES
 (HOV LANE)

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL.
	CARS			MISC				BUSES								
	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	795	236	31	2	4	80	0	2	0	0	0	0	1.30	1150	4600	
15:15 - 15:30	866	199	26	2	7	62	1	9	0	0	1	0	1.27	1172	4688	
15:30 - 15:45	899	254	15	0	4	57	1	2	0	1	1	0	1.27	1233	4932	
15:45 - 16:00	909	271	20	0	7	64	0	6	0	0	2	0	1.29	1279	5116	4834
16:00 - 16:15	873	240	9	0	4	51	1	5	0	1	0	0	1.24	1183	4732	4867
16:15 - 16:30	929	223	14	1	5	41	1	3	0	0	3	0	1.27	1219	4876	4914
16:30 - 16:45	977	217	20	1	4	47	1	3	0	0	0	0	1.22	1269	5076	4950
16:45 - 17:00	1039	229	14	0	5	40	0	5	0	0	0	0	1.20	1332	5328	5003
17:00 - 17:15	1111	198	11	0	5	35	0	4	0	0	2	0	1.20	1366	5464	5186
17:15 - 17:30	1224	215	10	0	2	42	0	7	0	0	1	0	1.18	1501	6004	5468
17:30 - 17:45	1111	124	2	0	3	27	0	2	0	0	0	0	1.11	1269	5076	5468
17:45 - 18:00	ESTIMATED 890	158	9	0	1	35	0	1	0	0	4	0	1.25	1098	4392	5234
18:00 - 18:15	ESTIMATED 856	133	8	1	3	49	0	0	0	0	4	0	1.24	1055	4220	4923
18:15 - 18:30	ESTIMATED 840	129	8	0	3	24	0	0	0	1	3	0	1.23	1009	4036	4431
18:30 - 18:45	ESTIMATED 729	112	8	2	2	38	0	0	0	0	5	0	1.29	897	3588	4059
18:45 - 19:00	ESTIMATED 635	98	6	0	2	35	0	0	0	1	2	0	1.22	779	3116	3740
PEAK PERIOD 15:00 - 19:00	Totals: 14683 3036 212 9 61 727 5 49 0 5 29 0												18811			
	Percentage: 78.1% 16.1% 1.1% 0.0% 0.3% 3.9% 0.0% 0.3% 0.0% 0.0% 0.2% 0.0%												100%			
	Vehicle Occupants: 14683 6071 721 95 61 872 6 54 0 49 584 0												23191		Occ. 1.23	
PEAK HOUR 16:45 - 17:45	Totals: 4485 766 37 0 15 144 0 18 0 0 3 0												5468			
	Percentage: 82.0% 14.0% 0.7% 0.0% 0.3% 2.6% 0.0% 0.3% 0.0% 0.0% 0.1% 0.0%												100%			
	Vehicle Occupants: 4485 1532 126 0 15 173 0 20 0 0 60 0												6410		Occ. 1.17	
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 3060 472 31 3 10 146 0 0 0 15 15 0												3752			
	Percentage: 81.6% 12.6% 0.8% 0.1% 0.3% 3.9% 0.0% 0.0% 0.0% 0.4% 0.4% 0.0%												100%			
	Vehicle Occupants: 3060 944 106 32 10 175 0 0 0 148 296 0												4772		Occ. 1.27	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
3401	1871	9.9%	1670	741	14669
18.1%		49.1%	31.7%	95.2%	
839	571	10.4%	480	218	4412
15.3%		57.2%	30.1%	95.3%	
546	319	8.5%	20	185	3021
14.5%		3.7%	46.3%	94.2%	

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

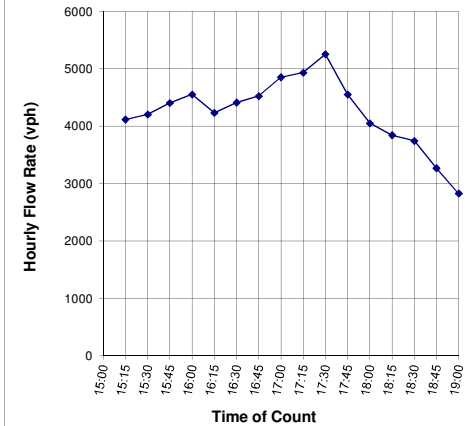
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

MIXED FLOW ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	776	149	20	2	2	80	0	0	0	0	0	0	0	1.23	1029	4116	
15:15 - 15:30	826	134	20	2	6	62	1	0	0	0	0	1	0	1.22	1051	4204	
15:30 - 15:45	870	161	11	0	0	57	0	0	0	1	1	0	0	1.21	1101	4404	
15:45 - 16:00	871	179	16	0	7	64	0	0	0	0	1	0	0	1.22	1138	4552	4319
16:00 - 16:15	850	147	6	0	4	50	1	0	0	1	0	0	0	1.17	1058	4232	4348
16:15 - 16:30	909	136	13	1	2	41	1	0	0	0	1	0	0	1.18	1103	4412	4400
16:30 - 16:45	946	122	14	1	1	47	0	0	0	0	0	0	0	1.15	1131	4524	4430
16:45 - 17:00	1002	155	13	0	3	40	0	0	0	0	0	0	0	1.16	1213	4852	4505
17:00 - 17:15	1066	118	10	0	2	35	0	0	0	0	2	0	0	1.15	1233	4932	4680
17:15 - 17:30	1164	99	7	0	1	41	0	0	0	0	1	0	0	1.11	1313	5252	4890
17:30 - 17:45	1042	67	0	0	2	27	0	0	0	0	0	0	0	1.06	1138	4552	4897
17:45 - 18:00	ESTIMATED 875	90	7	0	1	35	0	0	0	0	4	0	0	1.19	1013	4052	4697
18:00 - 18:15	ESTIMATED 819	81	7	1	0	49	0	0	0	0	4	0	0	1.21	961	3844	4425
18:15 - 18:30	ESTIMATED 818	80	7	0	3	24	0	0	0	1	3	0	0	1.18	936	3744	4048
18:30 - 18:45	ESTIMATED 699	69	7	1	0	37	0	0	0	0	5	0	0	1.24	817	3268	3727
18:45 - 19:00	ESTIMATED 604	59	5	0	1	35	0	0	0	0	1	2	0	1.17	707	2828	3421
PEAK PERIOD 15:00 - 19:00	Totals: 14136 1847 162 8 35 724 3 0 0 5 25 0													16942			
	Percentage: 83.4% 10.9% 1.0% 0.0% 0.2% 4.3% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%													100%			
	Vehicle Occupants: 14136 3694 551 84 35 869 3 0 0 49 507 0													19925		Occ. 1.18	
PEAK HOUR 16:45 - 17:45	Totals: 4274 439 30 0 8 143 0 0 0 0 3 0													4897			
	Percentage: 87.3% 9.0% 0.6% 0.0% 0.2% 2.9% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%													100%			
	Vehicle Occupants: 4274 878 102 0 8 172 0 0 0 0 60 0													5494		Occ. 1.12	
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 2938 290 25 2 4 145 0 0 0 14 14 0													3432			
	Percentage: 85.6% 8.4% 0.7% 0.1% 0.1% 4.2% 0.0% 0.0% 0.0% 0.4% 0.4% 0.0%													100%			
	Vehicle Occupants: 2938 580 84 21 4 174 0 0 0 141 283 0													4226		Occ. 1.23	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
2082					
12.3%					
480					
9.8%					
349					
10.2%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS:

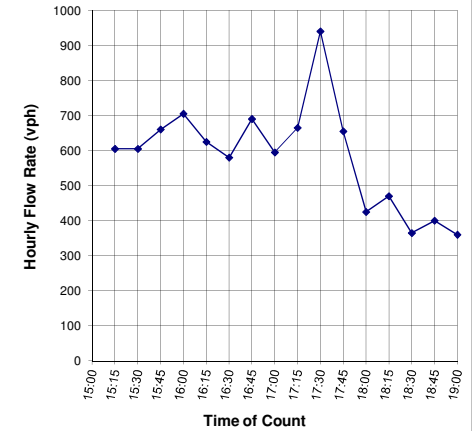
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			VP	MISC				BUSES								
TIME	1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	19	87	11	0	2	0	0	2	0	0	0	0	1.94	121	484		
15:15 - 15:30	40	65	6	0	1	0	0	9	0	0	0	0	1.66	121	484		
15:30 - 15:45	29	93	4	0	4	0	1	2	0	0	0	0	1.78	132	528		
15:45 - 16:00	38	92	4	0	0	0	0	6	0	1	0	0	1.86	141	564	515	
16:00 - 16:15	23	93	3	0	0	1	0	5	0	0	0	0	1.81	125	500	519	
16:15 - 16:30	20	87	1	0	3	0	0	3	0	0	2	0	2.10	116	464	514	
16:30 - 16:45	31	95	6	0	3	0	1	3	0	0	0	0	1.79	138	552	520	
16:45 - 17:00	37	74	1	0	2	0	0	5	0	0	0	0	1.65	119	476	498	
17:00 - 17:15	45	80	1	0	3	0	0	4	0	0	0	0	1.62	133	532	506	
17:15 - 17:30	60	116	3	0	1	1	0	7	0	0	0	0	1.66	188	752	578	
17:30 - 17:45	69	57	2	0	1	0	0	2	0	0	0	0	1.47	131	524	571	
17:45 - 18:00	ESTIMATED 32	51	1	0	0	0	0	1	0	0	0	0	1.66	85	340	537	
18:00 - 18:15	ESTIMATED 43	46	2	0	3	0	0	0	0	0	0	0	1.57	94	376	498	
18:15 - 18:30	ESTIMATED 35	37	1	0	0	0	0	0	0	0	0	0	1.59	73	292	383	
18:30 - 18:45	ESTIMATED 36	39	1	1	2	1	0	0	0	0	0	0	1.68	80	320	332	
18:45 - 19:00	ESTIMATED 34	36	1	0	1	0	0	0	0	0	0	0	1.58	72	288	319	
PEAK PERIOD 15:00 - 19:00	Totals:	590	1148	49	1	26	3	2	49	0	0	4	0	1869			
	Percentage:	31.5%	61.4%	2.6%	0.1%	1.4%	0.2%	0.1%	2.6%	0.0%	0.0%	0.2%	0.0%	100%			
	Vehicle Occupants:	590	2296	166	11	26	4	2	54	0	0	75	0	3220	Occ.	1.72	
PEAK HOUR 16:30 - 17:30	Totals:	173	365	11	0	9	1	1	19	0	0	0	0	578			
	Percentage:	29.9%	63.1%	1.9%	0.0%	1.6%	0.2%	0.2%	3.3%	0.0%	0.0%	0.0%	0.0%	100%			
	Vehicle Occupants:	173	730	37	0	9	1	1	21	0	0	0	0	972	Occ.	1.68	
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	147	158	6	1	6	1	0	0	1	1	0	0	320			
	Percentage:	46.0%	49.4%	1.7%	0.3%	1.9%	0.3%	0.0%	0.0%	0.2%	0.2%	0.0%	0.0%	100%			
	Vehicle Occupants:	147	316	19	11	6	1	0	0	6	12	0	0	518	Occ.	1.62	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1276				593	
68.3%				31.7%	
404				174	
69.9%				30.1%	
172				148	
53.7%				46.3%	

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

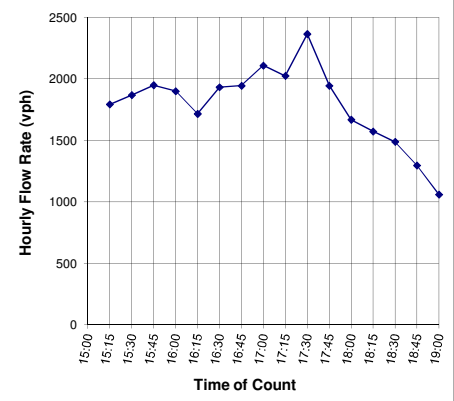
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #2 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			VP	MISC				BUSES							
TIME	1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	373	57	16	0	2	0	0	0	0	0	0	0	1.21	448	1792	
15:15 - 15:30	409	43	13	0	0	2	0	0	0	0	0	0	1.16	467	1868	
15:30 - 15:45	424	60	3	0	0	0	0	0	0	0	0	0	1.14	487	1948	
15:45 - 16:00	391	70	12	0	0	2	0	0	0	0	0	0	1.21	475	1900	1877
16:00 - 16:15	389	35	4	0	0	1	0	0	0	0	0	0	1.10	429	1716	1858
16:15 - 16:30	417	58	5	0	0	3	0	0	0	0	0	0	1.15	483	1932	1874
16:30 - 16:45	430	48	6	0	1	1	0	0	0	0	0	0	1.13	486	1944	1873
16:45 - 17:00	457	60	5	0	2	3	0	0	0	0	0	0	1.14	527	2108	1925
17:00 - 17:15	446	53	4	0	0	3	0	0	0	0	0	0	1.12	506	2024	2002
17:15 - 17:30	562	28	1	0	0	0	0	0	0	0	0	0	1.05	591	2364	2110
17:30 - 17:45	462	23	0	0	1	0	0	0	0	0	0	0	1.05	486	1944	2110
17:45 - 18:00	ESTIMATED 383	30	3	0	0	0	0	0	0	0	0	0	1.09	417	1668	2000
18:00 - 18:15	ESTIMATED 361	29	3	0	0	0	0	0	0	0	0	0	1.10	393	1572	1887
18:15 - 18:30	ESTIMATED 339	27	3	0	0	2	0	0	0	0	1	0	1.15	372	1488	1668
18:30 - 18:45	ESTIMATED 295	23	3	0	0	3	0	0	0	0	0	0	1.10	324	1296	1506
18:45 - 19:00	ESTIMATED 243	19	2	0	0	1	0	0	0	0	0	0	1.09	265	1060	1354
PEAK PERIOD 15:00 - 19:00	Totals:	6381	663	83	0	6	21	0	0	0	0	1	0	7156		
	Percentage:	89.2%	9.3%	1.2%	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%		
	Vehicle Occupants:	6381	1326	283	0	6	25	0	0	0	0	25	0	8047	Occ.	1.12
PEAK HOUR 16:45 - 17:45	Totals:	1927	164	10	0	3	6	0	0	0	0	0	0	2110		
	Percentage:	91.3%	7.8%	0.5%	0.0%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%		
	Vehicle Occupants:	1927	328	34	0	3	7	0	0	0	0	0	0	2299	Occ.	1.09
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	1238	98	11	0	0	6	0	0	0	1	1	0	1355		
	Percentage:	91.3%	7.2%	0.8%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	100%		
	Vehicle Occupants:	1238	196	37	0	0	7	0	0	0	12	24	0	1514	Occ.	1.12

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
754					
10.5%					
177					
8.4%					
111					
8.2%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS:

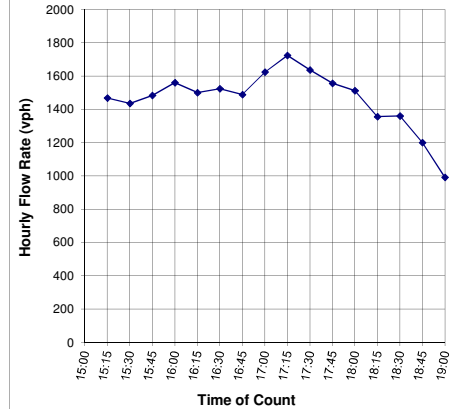
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #3 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	279	59	0	2	0	27	0	0	0	0	0	0	0	1.23	367	1468	
15:15 - 15:30	267	67	0	1	0	24	0	0	0	0	0	0	0	1.23	359	1436	
15:30 - 15:45	278	64	2	0	0	27	0	0	0	0	0	0	0	1.20	371	1484	
15:45 - 16:00	306	58	0	0	2	23	0	0	0	0	1	0	0	1.21	390	1560	1487
16:00 - 16:15	286	64	0	0	2	23	0	0	0	0	0	0	0	1.18	375	1500	1495
16:15 - 16:30	321	45	0	0	1	13	0	0	0	0	1	0	0	1.17	381	1524	1517
16:30 - 16:45	319	34	0	0	0	19	0	0	0	0	0	0	0	1.10	372	1488	1518
16:45 - 17:00	355	37	1	0	0	13	0	0	0	0	0	0	0	1.10	406	1624	1534
17:00 - 17:15	381	33	5	0	1	9	0	0	0	0	2	0	0	1.20	431	1724	1590
17:15 - 17:30	356	27	6	0	1	19	0	0	0	0	0	0	0	1.11	409	1636	1618
17:30 - 17:45	372	9	0	0	0	8	0	0	0	0	0	0	0	1.03	389	1556	1635
17:45 - 18:00	ESTIMATED 339	32	1	0	0	6	0	0	0	0	1	0	0	1.13	378	1512	1607
18:00 - 18:15	ESTIMATED 293	27	1	0	0	15	0	0	0	0	3	0	0	1.24	339	1356	1515
18:15 - 18:30	ESTIMATED 302	28	1	0	1	7	0	0	0	0	1	0	0	1.13	340	1360	1446
18:30 - 18:45	ESTIMATED 258	24	1	1	0	11	0	0	0	0	5	0	0	1.41	300	1200	1357
18:45 - 19:00	ESTIMATED 219	21	1	0	0	6	0	0	0	0	1	0	0	1.21	248	992	1227
PEAK PERIOD 15:00 - 19:00	Totals: 4932 629 18 4 8 250 0 0 0 0 14 0													5855			
	Percentage: 84.2% 10.7% 0.3% 0.1% 0.1% 4.3% 0.0% 0.0% 0.0% 0.0% 0.2% 0.0%													100%			
	Vehicle Occupants: 4932 1259 61 42 8 300 0 0 0 0 278 0													6880	Occ. 1.18		
PEAK HOUR 16:45 - 17:45	Totals: 1464 106 12 0 2 49 0 0 0 0 2 0													1635			
	Percentage: 89.5% 6.5% 0.7% 0.0% 0.1% 3.0% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%													100%			
	Vehicle Occupants: 1464 212 41 0 2 59 0 0 0 0 40 0													1818	Occ. 1.11		
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 1073 101 3 1 1 39 0 0 0 9 9 0													1236			
	Percentage: 86.8% 8.1% 0.3% 0.1% 0.1% 3.2% 0.0% 0.0% 0.0% 0.7% 0.7% 0.0%													100%			
	Vehicle Occupants: 1073 201 11 11 1 47 0 0 0 92 184 0													1619	Occ. 1.31		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
673					
11.5%					
122					
7.5%					
124					
10.0%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Auburn Boulevard
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 4
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): WJ,BA,ER,GJ,TW
 REMARKS:

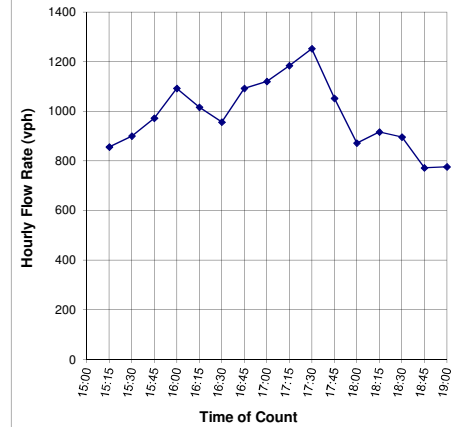
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 y Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #4 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	124	33	4	0	0	53	0	0	0	0	0	0	0	1.25	214	856	
15:15 - 15:30	150	24	7	1	6	36	1	0	0	0	1	0	0	1.34	225	900	
15:30 - 15:45	168	37	6	0	0	30	0	0	0	1	1	0	0	1.35	243	972	
15:45 - 16:00	174	51	4	0	5	39	0	0	0	0	0	0	0	1.25	273	1092	955
16:00 - 16:15	175	48	2	0	2	26	1	0	0	1	0	0	0	1.26	254	1016	995
16:15 - 16:30	171	33	8	1	1	25	1	0	0	0	0	0	0	1.28	239	956	1009
16:30 - 16:45	197	40	8	1	0	27	0	0	0	0	0	0	0	1.27	273	1092	1039
16:45 - 17:00	190	58	7	0	1	24	0	0	0	0	0	0	0	1.28	280	1120	1046
17:00 - 17:15	239	32	1	0	1	23	0	0	0	0	0	0	0	1.13	296	1184	1088
17:15 - 17:30	246	44	0	0	0	22	0	0	0	0	1	0	0	1.22	313	1252	1162
17:30 - 17:45	208	35	0	0	1	19	0	0	0	0	0	0	0	1.15	263	1052	1152
17:45 - 18:00	ESTIMATED 155	27	2	0	1	29	0	0	0	0	3	0	0	1.49	218	872	1090
18:00 - 18:15	ESTIMATED 165	25	3	1	0	34	0	0	0	0	2	0	0	1.34	229	916	1023
18:15 - 18:30	ESTIMATED 175	26	3	0	2	15	0	0	0	1	2	0	0	1.34	224	896	934
18:30 - 18:45	ESTIMATED 144	22	3	0	0	23	0	0	0	0	0	0	0	1.23	193	772	864
18:45 - 19:00	ESTIMATED 140	21	2	0	1	28	0	0	0	1	0	0	0	1.26	194	776	840
PEAK PERIOD 15:00 - 19:00	Totals: 2822 556 60 4 21 453 3 0 0 5 10 0													3931			
	Percentage: 71.8% 14.1% 1.5% 0.1% 0.5% 11.5% 0.1% 0.0% 0.0% 0.1% 0.3% 0.0%													100%			
	Vehicle Occupants: 2822 1111 206 42 21 544 3 0 0 49 208 0													5002	Occ. 1.27		
PEAK HOUR 16:30 - 17:30	Totals: 872 174 16 1 2 96 0 0 0 0 1 0													1162			
	Percentage: 75.0% 15.0% 1.4% 0.1% 0.2% 8.3% 0.0% 0.0% 0.0% 0.0% 0.1% 0.0%													100%			
	Vehicle Occupants: 872 348 54 11 2 115 0 0 0 0 20 0													1422	Occ. 1.22		
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 625 94 11 1 3 100 0 0 0 4 4 0													841			
	Percentage: 74.3% 11.1% 1.3% 0.1% 0.4% 11.9% 0.0% 0.0% 0.0% 0.5% 0.5% 0.0%													100%			
	Vehicle Occupants: 625 187 37 11 3 120 0 0 0 39 79 0													1101	Occ. 1.31		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
656					
194					
116					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: N Y or N
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear DAY: Tuesday
 RECORDER(S): GN,TN,TS,BC
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 N Y or N

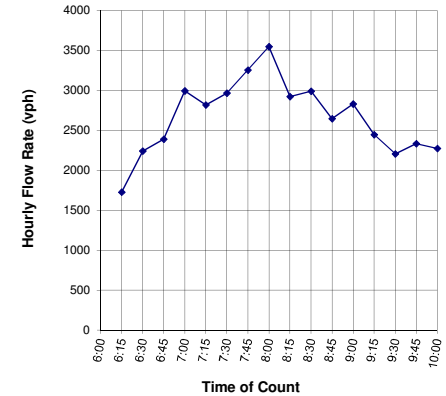
HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
ALL LANES

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL	
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
6:00 - 6:15	ESTIMATED	357	43	2	7	0	22	1	0	0	0	0	0	1.29	432	1728	
6:15 - 6:30	ESTIMATED	474	57	2	2	0	22	0	0	0	1	0	0	1.20	561	2244	
6:30 - 6:45	ESTIMATED	505	61	3	0	5	22	2	0	0	1	0	0	1.15	598	2392	
6:45 - 7:00	ESTIMATED	640	77	3	1	2	22	1	0	0	0	2	0	1.20	749	2996	2340
7:00 - 7:15		612	59	0	0	4	29	2	0	1	0	0	0	1.10	705	2820	2613
7:15 - 7:30		633	77	2	0	3	27	2	0	0	0	0	0	1.12	742	2968	2794
7:30 - 7:45		687	94	3	1	1	27	2	0	1	0	0	0	1.15	814	3256	3010
7:45 - 8:00		766	79	3	0	3	36	2	0	0	0	0	0	1.11	887	3548	3148
8:00 - 8:15		605	83	5	0	0	38	2	0	0	0	0	0	1.14	731	2924	3174
8:15 - 8:30		613	103	1	0	0	30	2	0	0	1	0	0	1.16	748	2992	3180
8:30 - 8:45		527	88	4	1	3	38	0	0	1	0	0	0	1.18	662	2648	3028
8:45 - 9:00		561	97	5	1	2	42	1	0	0	0	0	0	1.18	708	2832	2849
9:00 - 9:15		483	86	9	3	0	27	0	0	2	0	2	0	1.30	612	2448	2730
9:15 - 9:30		404	95	4	0	1	48	1	0	0	0	0	0	1.21	552	2208	2534
9:30 - 9:45		442	103	5	0	0	32	2	0	1	1	0	0	1.23	584	2336	2456
9:45 - 10:00		429	105	4	0	1	30	0	0	0	0	0	0	1.21	569	2276	2317
PEAK PERIOD 6:00 - 10:00		Totals:	8739	1308	55	16	27	492	20	0	7	4	6	0	10654		
		Percentage:	82.0%	12.3%	0.5%	0.2%	0.3%	4.6%	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%	100%		
		Vehicle Occupants:	8739	2615	188	168	27	590	22	0	30	36	124	0	12518		Occ. 1.17
PEAK HOUR 7:30 - 8:30		Totals:	2671	359	12	1	4	131	8	0	1	1	0	0	3180		
		Percentage:	84.0%	11.3%	0.4%	0.0%	0.1%	4.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100%		
		Vehicle Occupants:	2671	718	41	11	4	157	9	0	4	10	0	0	3616		Occ. 1.14
MIN. HOURLY VOL. 9:00 - 10:00		Totals:	1758	389	22	3	2	137	3	0	3	2	2	0	2318		
		Percentage:	75.8%	16.8%	0.9%	0.1%	0.1%	5.9%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	100%		
		Vehicle Occupants:	1758	778	75	32	2	164	3	0	12	20	40	0	2881		Occ. 1.24

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1423					
13.4%					
378					
11.9%					
423					
18.2%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): GN,TN,TS,BC
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 N Y/N

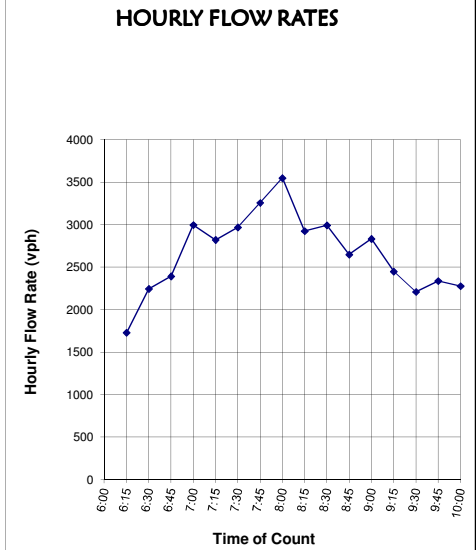
HOW MANY HOURS IN COUNT?
 4 3 or 4

DAY: Tuesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
			CARS			MISC				BUSES								
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
ESTIMATED	6:00 - 6:15		357	43	2	7	0	22	1	0	0	0	0	0	1.29	432	1728	
ESTIMATED	6:15 - 6:30		474	57	2	2	2	22	0	0	0	0	1	0	1.20	561	2244	
ESTIMATED	6:30 - 6:45		505	61	3	0	5	22	2	0	0	1	0	0	1.15	598	2392	
ESTIMATED	6:45 - 7:00		640	77	3	1	2	22	1	0	0	0	2	0	1.20	749	2996	2340
	7:00 - 7:15		612	59	0	0	4	29	2	0	1	0	0	0	1.10	705	2820	2613
	7:15 - 7:30		633	77	2	0	3	27	2	0	0	0	0	0	1.12	742	2968	2794
	7:30 - 7:45		687	94	3	1	1	27	2	0	1	0	0	0	1.15	814	3256	3010
	7:45 - 8:00		766	79	3	0	3	36	2	0	0	0	0	0	1.11	887	3548	3148
	8:00 - 8:15		605	83	5	0	0	38	2	0	0	0	0	0	1.14	731	2924	3174
	8:15 - 8:30		613	103	1	0	0	30	2	0	0	1	0	0	1.16	748	2992	3180
	8:30 - 8:45		527	88	4	1	3	38	0	0	1	0	0	0	1.18	662	2648	3028
	8:45 - 9:00		561	97	5	1	2	42	1	0	0	0	0	0	1.18	708	2832	2849
	9:00 - 9:15		483	86	9	3	0	27	0	0	2	0	2	0	1.30	612	2448	2730
	9:15 - 9:30		404	95	4	0	1	48	1	0	0	0	0	0	1.21	552	2208	2534
	9:30 - 9:45		442	103	5	0	0	32	2	0	1	1	0	0	1.23	584	2336	2456
	9:45 - 10:00		429	105	4	0	1	30	0	0	0	0	0	0	1.21	569	2276	2317



PEAK PERIOD	Totals:	8739	1308	55	16	27	492	20	0	7	4	6	0	10654
6:00 - 10:00	Percentage:	82.0%	12.3%	0.5%	0.2%	0.3%	4.6%	0.2%	0.0%	0.1%	0.0%	0.1%	0.0%	100%
	Vehicle Occupants:	8739	2615	188	168	27	590	22	0	30	36	124	0	12518
														Occ. 1.17
PEAK HOUR	Totals:	2671	359	12	1	4	131	8	0	1	1	0	0	3180
7:30 - 8:30	Percentage:	84.0%	11.3%	0.4%	0.0%	0.1%	4.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100%
	Vehicle Occupants:	2671	718	41	11	4	157	9	0	4	10	0	0	3616
														Occ. 1.14
MIN. HOURLY VOL.	Totals:	1758	389	22	3	2	137	3	0	3	2	2	0	2318
9:00 - 10:00	Percentage:	75.8%	16.8%	0.9%	0.1%	0.1%	5.9%	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	100%
	Vehicle Occupants:	1758	778	75	32	2	164	3	0	12	20	40	0	2881
														Occ. 1.24

HOV-RELATED INFORMATION					
HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1423					
13.4%					
378					
11.9%					
423					
18.2%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): GN,TN,TS,BC
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

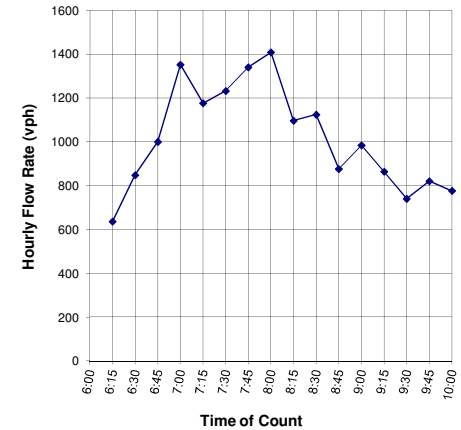
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
6:00 - 6:15	ESTIMATED	139	16	1	3	0	0	0	0	0	0	0	0	1.30	159	636	
6:15 - 6:30	ESTIMATED	188	21	1	0	0	0	0	0	0	0	1	0	1.22	212	848	
6:30 - 6:45	ESTIMATED	219	25	1	0	4	0	1	0	0	1	0	0	1.16	250	1000	
6:45 - 7:00	ESTIMATED	299	34	2	0	1	0	0	0	0	0	2	0	1.24	338	1352	959
7:00 - 7:15		273	18	0	0	3	0	2	0	0	0	0	0	1.06	294	1176	1094
7:15 - 7:30		262	44	2	0	0	0	0	0	0	0	0	0	1.16	308	1232	1190
7:30 - 7:45		285	48	1	0	1	0	0	0	0	0	0	0	1.15	335	1340	1275
7:45 - 8:00		322	28	1	0	1	0	2	0	0	0	0	0	1.09	352	1408	1289
8:00 - 8:15		246	26	2	0	0	0	2	0	0	0	0	0	1.11	274	1096	1269
8:15 - 8:30		242	38	1	0	0	0	2	0	0	0	0	0	1.14	281	1124	1242
8:30 - 8:45		188	30	0	0	1	0	0	0	0	0	0	0	1.14	219	876	1126
8:45 - 9:00		204	37	3	0	2	0	0	0	0	0	0	0	1.18	246	984	1020
9:00 - 9:15		185	29	2	0	0	0	0	0	0	0	0	0	1.16	216	864	962
9:15 - 9:30		158	25	2	0	0	0	0	0	0	0	0	0	1.16	185	740	866
9:30 - 9:45		170	33	2	0	0	0	1	0	0	0	0	0	1.18	205	820	852
9:45 - 10:00		149	41	3	0	1	0	0	0	0	0	0	0	1.25	194	776	800
PEAK PERIOD 6:00 - 10:00		Totals:	3530	493	23	3	14	0	10	0	1	4	0		4068		
		Percentage:	86.8%	12.1%	0.6%	0.1%	0.3%	0.0%	0.2%	0.0%	0.0%	0.1%	0.0%		100%		
		Vehicle Occupants:	3530	986	80	32	14	0	11	0	12	72	0		4725		Occ. 1.16
PEAK HOUR 7:00 - 8:00		Totals:	1142	138	4	0	5	0	4	0	0	0	0		1289		
		Percentage:	88.6%	10.7%	0.3%	0.0%	0.4%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%		100%		
		Vehicle Occupants:	1142	276	14	0	5	0	4	0	0	0	0		1437		Occ. 1.11
MIN. HOURLY VOL. 9:00 - 10:00		Totals:	662	128	9	0	1	0	1	0	0	0	0		800		
		Percentage:	82.8%	16.0%	1.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%		100%		
		Vehicle Occupants:	662	256	31	0	1	0	1	0	0	0	0		950		Occ. 1.19

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
538					
13.2%					
147					
11.4%					
138					
17.3%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): GN,TN,TS,BC
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

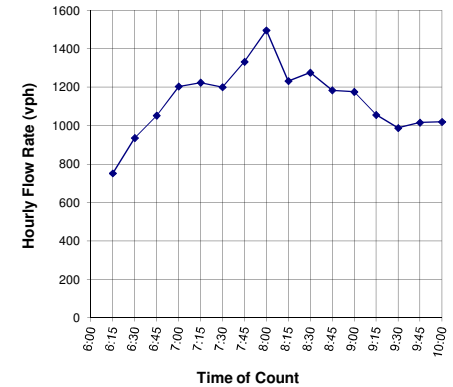
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #2 ONLY

VEHICLE TYPE	TIME	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			MISC				BUSES								
		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
ESTIMATED	6:00 - 6:15	166	19	1	2	0	1	0	0	0	0	0	0	1.22	188	752	
ESTIMATED	6:15 - 6:30	206	23	1	2	1	1	0	0	0	0	0	0	1.20	234	936	
ESTIMATED	6:30 - 6:45	231	26	1	0	1	4	1	0	0	0	0	0	1.12	263	1052	
ESTIMATED	6:45 - 7:00	266	30	1	1	1	2	1	0	0	0	0	0	1.15	301	1204	986
	7:00 - 7:15	272	31	0	0	1	2	0	0	0	0	0	0	1.10	306	1224	1104
	7:15 - 7:30	273	20	0	0	2	5	1	0	0	0	0	0	1.07	300	1200	1170
	7:30 - 7:45	296	28	2	0	0	7	1	0	0	0	0	0	1.10	333	1332	1240
	7:45 - 8:00	340	30	1	0	1	2	0	0	0	0	0	0	1.09	374	1496	1313
	8:00 - 8:15	265	37	1	0	0	5	0	0	0	0	0	0	1.13	308	1232	1315
	8:15 - 8:30	273	41	0	0	0	5	0	0	0	0	0	0	1.13	319	1276	1334
	8:30 - 8:45	254	34	3	0	2	3	0	0	0	0	0	0	1.14	296	1184	1297
	8:45 - 9:00	257	31	1	0	0	5	1	0	0	0	0	0	1.12	294	1176	1217
	9:00 - 9:15	215	37	6	0	0	4	0	0	0	0	2	0	1.34	264	1056	1173
	9:15 - 9:30	187	57	0	0	0	3	0	0	0	0	0	0	1.23	247	988	1101
	9:30 - 9:45	187	59	2	0	0	6	1	0	0	0	0	0	1.26	254	1016	1059
	9:45 - 10:00	199	50	1	0	0	5	0	0	0	0	0	0	1.21	255	1020	1020
PEAK PERIOD 6:00 - 10:00		Totals:	3886	552	21	5	9	60	6	0	0	3	0		4536		
		Percentage:	85.7%	12.2%	0.5%	0.1%	0.2%	1.3%	0.1%	0.0%	0.0%	0.1%	0.0%		100%		
		Vehicle Occupants:	3886	1104	72	53	9	72	7	0	0	51	0		5247	Occ.	1.16
PEAK HOUR 7:30 - 8:30		Totals:	1174	136	4	0	1	19	1	0	0	0	0		1334		
		Percentage:	88.0%	10.2%	0.3%	0.0%	0.1%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%		100%		
		Vehicle Occupants:	1174	272	14	0	1	23	1	0	0	0	0		1483	Occ.	1.11
MIN. HOURLY VOL. 6:00 - 7:00		Totals:	868	97	4	5	3	8	2	0	0	1	1		987		
		Percentage:	88.0%	9.8%	0.4%	0.5%	0.3%	0.8%	0.2%	0.0%	0.0%	0.1%	0.1%		100%		
		Vehicle Occupants:	868	194	14	53	3	10	2	0	6	11	0		1158	Occ.	1.17

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
590					
13.0%					
141					
10.6%					
110					
11.2%					

AM/PM PEAK: AM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 2/14/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 REORDER(S): GN,TN,TS,BC
 REMARKS: 6-7AM from 1/31/2012

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

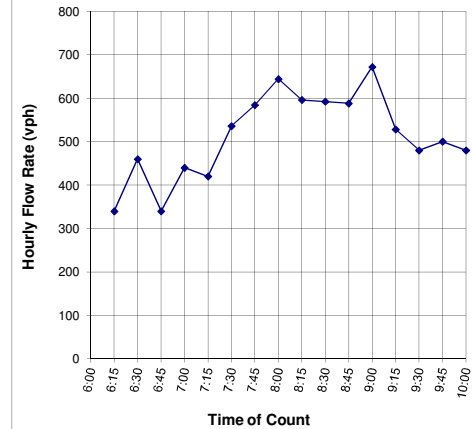
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #3 ONLY

VEHICLE TYPE		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			MISC				BUSES								
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	53	8	0	2	0	21	1	0	0	0	0	0	1.40	85	340	
6:15 - 6:30	ESTIMATED	79	13	1	0	1	21	0	0	0	0	0	0	1.18	115	460	
6:30 - 6:45	ESTIMATED	57	9	0	0	0	18	0	0	0	0	0	0	1.18	85	340	
6:45 - 7:00	ESTIMATED	77	12	1	0	0	20	0	0	0	0	0	0	1.18	110	440	
7:00 - 7:15		67	10	0	0	0	27	0	0	1	0	0	0	1.18	105	420	
7:15 - 7:30		98	13	0	0	1	22	1	0	0	0	0	0	1.13	134	536	
7:30 - 7:45		106	18	0	1	0	20	1	0	1	0	0	0	1.24	146	584	
7:45 - 8:00		104	21	1	0	1	34	0	0	0	0	0	0	1.19	161	644	
8:00 - 8:15		94	20	2	0	0	33	0	0	0	0	0	0	1.21	149	596	
8:15 - 8:30		98	24	0	0	0	25	0	0	0	1	0	0	1.26	148	592	
8:30 - 8:45		85	24	1	1	0	35	0	0	1	0	0	0	1.31	147	588	
8:45 - 9:00		100	29	1	1	0	37	0	0	0	0	0	0	1.29	168	672	
9:00 - 9:15		83	20	1	3	0	23	0	0	2	0	0	0	1.47	132	528	
9:15 - 9:30		59	13	2	0	1	45	1	0	0	0	0	0	1.22	120	480	
9:30 - 9:45		85	11	1	0	0	26	0	0	1	1	0	0	1.24	125	500	
9:45 - 10:00		81	14	0	0	0	25	0	0	0	0	0	0	1.16	120	480	
PEAK PERIOD 6:00 - 10:00		Totals: 1326 260 11 8 4 432 4 0 7 2 0 0												2050			
		Percentage: 64.7% 12.7% 0.5% 0.4% 0.2% 21.1% 0.2% 0.0% 0.4% 0.1% 0.0% 0.0%												100%			
		Vehicle Occupants: 1326 519 37 84 4 518 4 0 29 23 0 0												2541	Occ. 1.24		
PEAK HOUR 8:00 - 9:00		Totals: 377 97 4 2 0 130 0 0 1 1 0 0												612			
		Percentage: 61.6% 15.8% 0.7% 0.3% 0.0% 21.2% 0.0% 0.0% 0.2% 0.2% 0.0% 0.0%												100%			
		Vehicle Occupants: 377 194 14 21 0 156 0 0 4 10 0 0												776	Occ. 1.27		
MIN. HOURLY VOL. 6:00 - 7:00		Totals: 266 43 2 2 1 80 1 0 1 0 0 0												395			
		Percentage: 67.4% 10.8% 0.5% 0.5% 0.3% 20.3% 0.3% 0.0% 0.3% 0.0% 0.0% 0.0%												100%			
		Vehicle Occupants: 266 85 6 21 1 96 1 0 5 0 0 0												481	Occ. 1.22		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
292					
14.2%					
105					
17.2%					
49					
12.4%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: N Y or N
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): GN,TN,TS,BC
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 N Y or N

HOW MANY HOURS IN COUNT?
 4 3 or 4

DAY: Tuesday

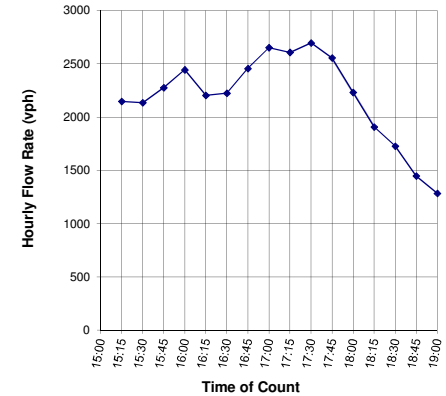
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

ALL LANES

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	357	116	13	1	2	47	0	0	0	1	0	0	1.33	537	2148	
15:15 - 15:30	352	127	2	1	3	47	0	0	0	1	1	0	1.33	534	2136	
15:30 - 15:45	393	123	9	1	2	38	2	0	0	1	0	2	1.44	569	2276	
15:45 - 16:00	430	135	7	0	2	36	2	0	0	1	0	0	1.27	611	2444	
16:00 - 16:15	383	120	13	0	2	31	2	0	0	0	1	1	1.39	551	2204	
16:15 - 16:30	389	124	11	0	3	27	1	0	0	0	0	2	1.42	556	2224	
16:30 - 16:45	415	150	8	1	2	37	4	0	0	1	0	0	1.32	614	2456	
16:45 - 17:00	491	136	7	0	1	26	1	0	2	0	0	0	1.25	663	2652	
17:00 - 17:15	481	127	12	1	2	29	8	0	0	0	0	0	1.26	652	2608	
17:15 - 17:30	498	126	6	0	1	43	2	0	0	0	0	0	1.22	674	2696	
17:30 - 17:45	527	82	0	1	1	27	1	0	0	0	0	1	1.21	639	2556	
17:45 - 18:00	ESTIMATED 420	99	5	0	1	31	0	0	0	0	1	0	1.29	558	2232	
18:00 - 18:15	ESTIMATED 368	75	5	1	2	23	0	0	0	1	1	0	1.32	477	1908	
18:15 - 18:30	ESTIMATED 327	65	4	2	1	31	0	0	0	1	0	0	1.30	432	1728	
18:30 - 18:45	ESTIMATED 285	56	4	1	1	12	1	0	0	0	2	0	1.37	362	1448	
18:45 - 19:00	ESTIMATED 250	49	3	0	1	17	2	0	0	0	0	0	1.24	321	1284	
PEAK PERIOD 15:00 - 19:00	Totals: 6366 1710 109 10 27 502 26 0 2 9 8 8												8750			
	Percentage: 72.8% 19.5% 1.2% 0.1% 0.3% 5.7% 0.3% 0.0% 0.0% 0.1% 0.1% 0.1%												100%			
	Vehicle Occupants: 6366 3420 369 105 27 602 29 0 10 86 151 303												11440	Occ. 1.31		
PEAK HOUR 16:45 - 17:45	Totals: 1997 471 25 2 5 125 12 0 2 0 0 1												2628			
	Percentage: 76.0% 17.9% 1.0% 0.1% 0.2% 4.8% 0.5% 0.0% 0.1% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 1997 942 85 21 5 150 13 0 8 0 0 40												3248	Occ. 1.24		
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 1231 245 15 4 5 83 3 0 0 4 4 1												1593			
	Percentage: 77.2% 15.4% 1.0% 0.3% 0.3% 5.2% 0.2% 0.0% 0.0% 0.3% 0.3% 0.1%												100%			
	Vehicle Occupants: 1231 490 52 42 5 100 3 0 1 41 83 47												2092	Occ. 1.31		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1882					
21.5%					
506					
19.3%					
279					
17.5%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): GN,TN,TS,BC
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

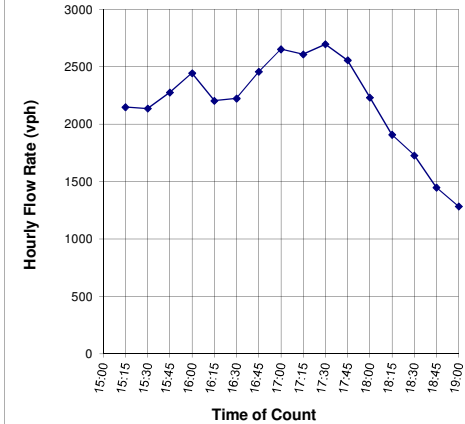
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

MIXED FLOW ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	357	116	13	1	2	47	0	0	0	1	0	0	1.33	537	2148		
15:15 - 15:30	352	127	2	1	3	47	0	0	0	1	1	0	1.33	534	2136		
15:30 - 15:45	393	123	9	1	2	38	2	0	0	1	0	2	1.44	569	2276		
15:45 - 16:00	430	135	7	0	2	36	2	0	0	1	0	0	1.27	611	2444	2251	
16:00 - 16:15	383	120	13	0	2	31	2	0	0	0	1	1	1.39	551	2204	2265	
16:15 - 16:30	389	124	11	0	3	27	1	0	0	0	0	2	1.42	556	2224	2287	
16:30 - 16:45	415	150	8	1	2	37	4	0	0	1	0	0	1.32	614	2456	2332	
16:45 - 17:00	491	136	7	0	1	26	1	0	2	0	0	0	1.25	663	2652	2384	
17:00 - 17:15	481	127	12	1	2	29	8	0	0	0	0	0	1.26	652	2608	2485	
17:15 - 17:30	498	126	6	0	1	43	2	0	0	0	0	0	1.22	674	2696	2603	
17:30 - 17:45	527	82	0	1	1	27	1	0	0	0	0	1	1.21	639	2556	2628	
17:45 - 18:00	ESTIMATED 420	99	5	0	1	31	0	0	0	0	1	0	1.29	558	2232	2523	
18:00 - 18:15	ESTIMATED 368	75	5	1	2	23	0	0	0	1	1	0	1.32	477	1908	2348	
18:15 - 18:30	ESTIMATED 327	65	4	2	1	31	0	0	0	1	0	0	1.30	432	1728	2106	
18:30 - 18:45	ESTIMATED 285	56	4	1	1	12	1	0	0	0	2	0	1.37	362	1448	1829	
18:45 - 19:00	ESTIMATED 250	49	3	0	1	17	2	0	0	0	0	0	1.24	321	1284	1592	
PEAK PERIOD 15:00 - 19:00	Totals:	6366	1710	109	10	27	502	26	0	2	9	8	8	8750			
	Percentage:	72.8%	19.5%	1.2%	0.1%	0.3%	5.7%	0.3%	0.0%	0.0%	0.1%	0.1%	0.1%	100%			
	Vehicle Occupants:	6366	3420	369	105	27	602	29	0	10	86	151	303	11440	Occ.	1.31	
PEAK HOUR 16:45 - 17:45	Totals:	1997	471	25	2	5	125	12	0	2	0	0	1	2628			
	Percentage:	76.0%	17.9%	1.0%	0.1%	0.2%	4.8%	0.5%	0.0%	0.1%	0.0%	0.0%	0.0%	100%			
	Vehicle Occupants:	1997	942	85	21	5	150	13	0	8	0	0	40	3248	Occ.	1.24	
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	1231	245	15	4	5	83	3	0	0	4	4	1	1593			
	Percentage:	77.2%	15.4%	1.0%	0.3%	0.3%	5.2%	0.2%	0.0%	0.0%	0.3%	0.3%	0.1%	100%			
	Vehicle Occupants:	1231	490	52	42	5	100	3	0	1	41	83	47	2092	Occ.	1.31	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1882					
21.5%					
506					
19.3%					
279					
17.5%					

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): GN,TN,TS,BC
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

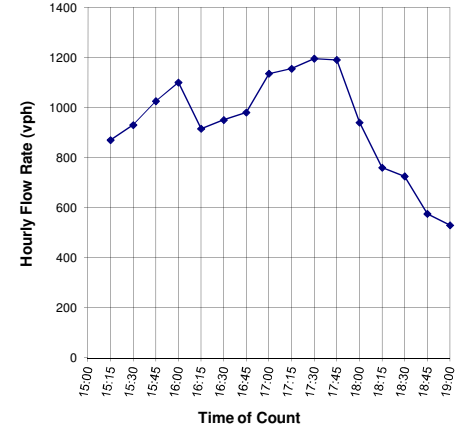
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	124	44	5	0	0	0	0	0	0	1	0	0	1.37	174	696		
15:15 - 15:30	131	50	2	0	1	0	0	0	0	1	1	0	1.45	186	744		
15:30 - 15:45	153	44	3	0	2	0	1	0	0	1	0	2	1.67	205	820		
15:45 - 16:00	161	53	3	0	2	0	2	0	0	1	0	0	1.31	220	880	785	
16:00 - 16:15	134	42	3	0	2	0	2	0	0	0	1	1	1.59	183	732	794	
16:15 - 16:30	151	34	2	0	1	0	0	0	0	0	0	2	1.61	190	760	798	
16:30 - 16:45	153	38	3	0	1	0	4	0	0	1	0	0	1.28	196	784	789	
16:45 - 17:00	181	43	1	0	0	0	1	0	2	0	0	0	1.23	227	908	796	
17:00 - 17:15	179	46	4	1	1	0	6	0	0	0	0	0	1.28	231	924	844	
17:15 - 17:30	193	43	2	0	0	1	0	0	0	0	0	0	1.20	239	956	893	
17:30 - 17:45	202	34	0	1	0	0	0	0	0	0	0	1	1.35	238	952	935	
17:45 - 18:00	ESTIMATED 156	28	2	0	0	0	0	0	0	0	1	0	1.42	188	752	896	
18:00 - 18:15	ESTIMATED 125	22	1	0	0	0	0	0	0	1	1	0	1.50	152	608	817	
18:15 - 18:30	ESTIMATED 118	21	1	2	1	0	0	0	0	1	0	0	1.50	145	580	723	
18:30 - 18:45	ESTIMATED 94	17	1	0	0	0	0	0	0	0	2	0	1.64	115	460	600	
18:45 - 19:00	ESTIMATED 88	16	1	0	1	0	1	0	0	0	0	0	1.31	106	424	518	
PEAK PERIOD 15:00 - 19:00	Totals:	2344	574	34	4	12	1	17	0	2	9	8	7	2995			
	Percentage:	78.3%	19.2%	1.1%	0.1%	0.4%	0.0%	0.6%	0.0%	0.1%	0.3%	0.3%	0.2%	100%			
	Vehicle Occupants:	2344	1148	115	42	12	1	19	0	10	86	151	299	4208	Occ.	1.41	
PEAK HOUR 16:45 - 17:45	Totals:	755	166	7	2	1	1	7	0	2	0	0	1	935			
	Percentage:	80.7%	17.8%	0.7%	0.2%	0.1%	0.1%	0.7%	0.0%	0.2%	0.0%	0.0%	0.1%	100%			
	Vehicle Occupants:	755	332	24	21	1	1	8	0	8	0	0	40	1182	Occ.	1.26	
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	426	75	4	2	2	0	1	0	0	4	4	1	519			
	Percentage:	82.0%	14.5%	0.8%	0.4%	0.4%	0.0%	0.2%	0.0%	0.1%	0.8%	0.8%	0.2%	100%			
	Vehicle Occupants:	426	151	15	21	2	0	1	0	1	41	83	43	783	Occ.	1.51	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
650					
21.7%					
179					
19.1%					
93					
18.0%					

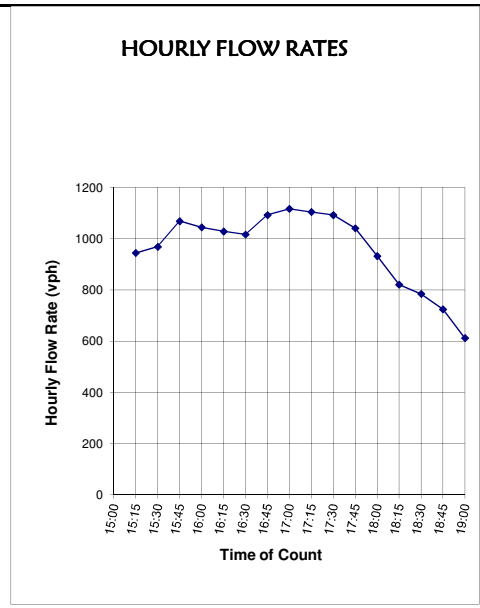
AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): GN,TN,TS,BC
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #2 ONLY



VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC					BUSES							
	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	160	58	6	1	2	9	0	0	0	0	0	0	1.35	236	944	
15:15 - 15:30	172	61	0	1	2	6	0	0	0	0	0	0	1.30	242	968	
15:30 - 15:45	186	65	5	0	0	11	0	0	0	0	0	0	1.30	267	1068	
15:45 - 16:00	184	68	4	0	0	5	0	0	0	0	0	0	1.30	261	1044	1006
16:00 - 16:15	186	55	9	0	0	7	0	0	0	0	0	0	1.30	257	1028	1027
16:15 - 16:30	175	65	6	0	1	7	1	0	0	0	0	0	1.32	254	1016	1039
16:30 - 16:45	191	72	3	0	1	6	0	0	0	0	0	0	1.29	273	1092	1045
16:45 - 17:00	209	60	1	0	1	8	0	0	0	0	0	0	1.23	279	1116	1063
17:00 - 17:15	204	60	6	0	1	5	0	0	0	0	0	0	1.27	276	1104	1082
17:15 - 17:30	206	55	3	0	1	8	2	0	0	0	0	0	1.23	273	1092	1101
17:30 - 17:45	213	44	0	0	1	2	0	0	0	0	0	0	1.17	260	1040	1088
17:45 - 18:00	ESTIMATED 170	53	2	0	1	6	0	0	0	0	0	0	1.26	233	932	1042
18:00 - 18:15	ESTIMATED 161	37	2	1	1	2	0	0	0	0	0	0	1.26	205	820	971
18:15 - 18:30	ESTIMATED 152	33	2	0	0	8	0	0	0	0	0	0	1.20	196	784	894
18:30 - 18:45	ESTIMATED 145	32	2	1	1	0	1	0	0	0	0	0	1.25	181	724	815
18:45 - 19:00	ESTIMATED 122	27	2	0	0	3	1	0	0	0	0	0	1.20	153	612	735
PEAK PERIOD 15:00 - 19:00	Totals:	2837	846	53	4	13	93	5	0	0	0	0		3846		
	Percentage:	73.8%	22.0%	1.4%	0.1%	0.3%	2.4%	0.1%	0.0%	0.0%	0.0%	0.0%		100%		
	Vehicle Occupants:	2837	1691	182	42	13	112	6	0	0	0	0		4876	Occ.	1.27
PEAK HOUR 16:30 - 17:30	Totals:	810	247	13	0	4	27	2	0	0	0	0		1101		
	Percentage:	73.6%	22.4%	1.2%	0.0%	0.4%	2.5%	0.2%	0.0%	0.0%	0.0%	0.0%		100%		
	Vehicle Occupants:	810	494	44	0	4	32	2	0	0	0	0		1385	Occ.	1.26
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	581	129	8	2	2	13	2	0	0	0	0		735		
	Percentage:	79.0%	17.6%	1.1%	0.3%	0.3%	1.8%	0.3%	0.0%	0.0%	0.0%	0.0%		100%		
	Vehicle Occupants:	581	259	27	21	2	16	2	0	0	0	0		905	Occ.	1.23

HOV-RELATED INFORMATION					
HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
916	23.8%				
264	24.0%				
141	19.2%				

AM/PM PEAK: PM
 COUNTY-RTE: 80
 LOCATION: Sierra College Road
 DIRECTION: WB
 TYPE: 0
 NO. LANES COUNTED: 3
 DATE: 1/31/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): GN,TN,TS,BC
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Tuesday

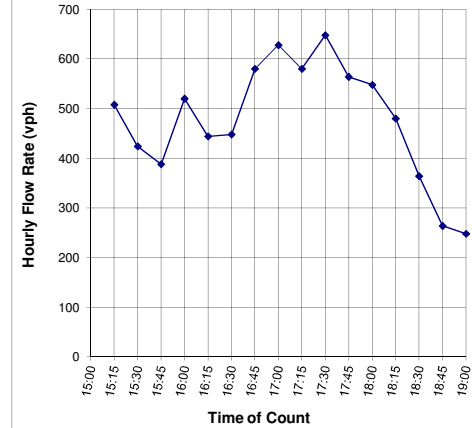
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #3 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			VP	MISC				BUSES								
TIME	1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	73	14	2	0	38	0	0	0	0	0	0	0	1.21	127	508		
15:15 - 15:30	49	16	0	0	41	0	0	0	0	0	0	0	1.23	106	424		
15:30 - 15:45	54	14	1	1	27	1	0	0	0	0	0	0	1.32	97	388		
15:45 - 16:00	85	14	0	0	31	0	0	0	0	0	0	0	1.16	130	520		
16:00 - 16:15	63	23	1	0	24	0	0	0	0	0	0	0	1.27	111	444		
16:15 - 16:30	63	25	3	0	20	0	0	0	0	0	0	0	1.32	112	448		
16:30 - 16:45	71	40	2	1	31	0	0	0	0	0	0	0	1.42	145	580		
16:45 - 17:00	101	33	5	0	18	0	0	0	0	0	0	0	1.31	157	628		
17:00 - 17:15	98	21	2	0	24	2	0	0	0	0	0	0	1.21	145	580		
17:15 - 17:30	99	28	1	0	34	0	0	0	0	0	0	0	1.23	162	648		
17:30 - 17:45	112	4	0	0	25	1	0	0	0	0	0	0	1.06	141	564		
17:45 - 18:00	ESTIMATED 93	17	1	0	25	0	0	0	0	0	0	0	1.18	137	548		
18:00 - 18:15	ESTIMATED 82	15	1	0	21	0	0	0	0	0	0	0	1.18	120	480		
18:15 - 18:30	ESTIMATED 57	11	1	0	23	0	0	0	0	0	0	0	1.19	91	364		
18:30 - 18:45	ESTIMATED 45	8	1	0	12	0	0	0	0	0	0	0	1.18	66	264		
18:45 - 19:00	ESTIMATED 40	7	1	0	14	0	0	0	0	0	0	0	1.18	62	248		
PEAK PERIOD 15:00 - 19:00	Totals:	1185	291	21	2	2	408	4	0	0	0	0		1909			
	Percentage:	62.1%	15.2%	1.1%	0.1%	0.1%	21.4%	0.2%	0.0%	0.0%	0.0%	0.0%		100%			
	Vehicle Occupants:	1185	582	72	21	2	490	4	0	0	0	0		2351	Occ.	1.23	
PEAK HOUR 16:30 - 17:30	Totals:	369	122	10	1	0	107	2	0	0	0	0		609			
	Percentage:	60.6%	20.0%	1.6%	0.2%	0.0%	17.6%	0.3%	0.0%	0.0%	0.0%	0.0%		100%			
	Vehicle Occupants:	369	244	34	11	0	128	2	0	0	0	0		786	Occ.	1.29	
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	224	42	3	0	1	70	0	0	0	0	0		339			
	Percentage:	66.0%	12.2%	0.8%	0.0%	0.3%	20.6%	0.0%	0.0%	0.0%	0.0%	0.0%		100%			
	Vehicle Occupants:	224	83	10	0	1	84	0	0	0	0	0		401	Occ.	1.18	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
316					
16.5%					
133					
21.8%					
45					
13.4%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: NB
 TYPE: N Y or N
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): DW,LT,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y or N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

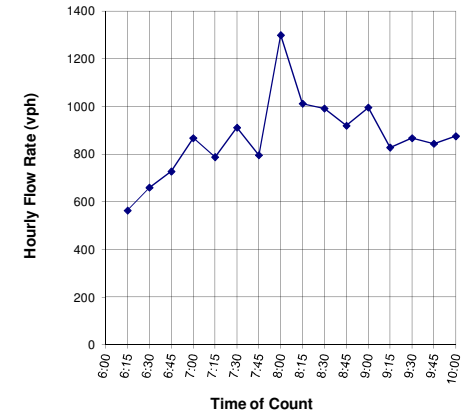
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

ALL LANES

VEHICLE TYPE			COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL.	
			CARS			VP	MISC				BUSES							
TIME			1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED		123	10	0	0	7	0	0	0	0	0	0	1.11	141	564		
6:15 - 6:30	ESTIMATED		148	12	0	0	1	0	0	0	0	3	0	1.45	165	660		
6:30 - 6:45	ESTIMATED		159	13	0	2	7	0	0	0	0	0	0	1.11	182	728		
6:45 - 7:00	ESTIMATED		183	28	1	0	4	0	0	0	1	0	0	1.25	217	868		
7:00 - 7:15			179	9	1	0	3	5	0	0	0	0	0	1.06	197	788		
7:15 - 7:30			199	24	1	0	1	3	0	0	0	0	0	1.12	228	912		
7:30 - 7:45			165	24	2	0	8	0	0	0	0	0	0	1.15	199	796		
7:45 - 8:00			290	23	4	1	7	0	0	0	0	0	0	1.13	325	1300		
8:00 - 8:15			222	23	0	0	8	0	0	0	0	0	0	1.10	253	1012		
8:15 - 8:30			226	18	0	0	4	0	0	0	0	0	0	1.08	248	992		
8:30 - 8:45			206	14	1	1	6	0	0	0	1	0	0	1.16	230	920		
8:45 - 9:00			218	17	0	0	12	0	0	0	1	0	0	1.15	249	996		
9:00 - 9:15			184	19	0	0	4	0	0	0	0	0	0	1.10	207	828		
9:15 - 9:30			180	19	0	0	17	0	0	0	0	0	0	1.10	217	868		
9:30 - 9:45			188	14	0	0	8	0	0	0	0	0	0	1.07	211	844		
9:45 - 10:00			174	36	0	0	9	0	0	0	0	0	0	1.17	219	876		
PEAK PERIOD																		
6:00 - 10:00			Totals:	3046	302	11	2	10	110	0	0	0	1	6	0	3488		
			Percentage:	87.3%	8.7%	0.3%	0.1%	0.3%	3.2%	0.0%	0.0%	0.0%	0.2%	0.0%	100%			
			Vehicle Occupants:	3046	604	37	21	10	132	0	0	0	12	119	0	3981	Occ.	1.14
PEAK HOUR																		
7:45 - 8:45			Totals:	944	78	5	2	1	25	0	0	0	1	0	0	1056		
			Percentage:	89.4%	7.4%	0.5%	0.2%	0.1%	2.4%	0.0%	0.0%	0.0%	0.1%	0.0%	100%			
			Vehicle Occupants:	944	156	17	21	1	30	0	0	0	10	0	0	1179	Occ.	1.12
MIN. HOURLY VOL.																		
6:00 - 7:00			Totals:	615	62	2	0	2	19	0	0	0	5	5	0	710		
			Percentage:	86.6%	8.8%	0.3%	0.0%	0.3%	2.7%	0.0%	0.0%	0.0%	0.7%	0.7%	0.0%	100%		
			Vehicle Occupants:	615	124	7	0	2	23	0	0	0	49	99	0	918	Occ.	1.29

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
332					
9.5%					
87					
8.2%					
76					
10.7%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: NB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): DW,LT,TW
 REMARKS:

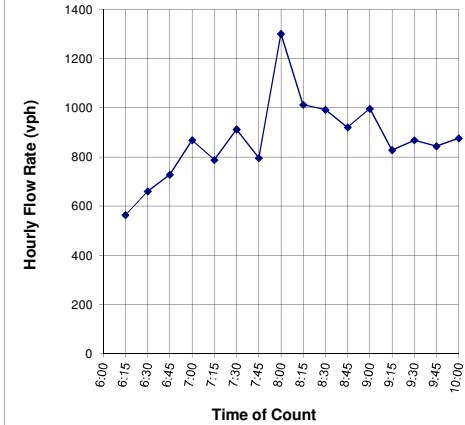
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			MISC				BUSES								
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	123	10	0	0	0	7	0	0	0	0	0	0	1.11	141	564	
6:15 - 6:30	ESTIMATED	148	12	0	0	0	1	0	0	0	0	3	0	1.45	165	660	
6:30 - 6:45	ESTIMATED	159	13	0	0	2	7	0	0	0	0	0	0	1.11	182	728	
6:45 - 7:00	ESTIMATED	183	28	1	0	0	4	0	0	0	0	1	0	1.25	217	868	
7:00 - 7:15		179	9	1	0	3	5	0	0	0	0	0	0	1.06	197	788	
7:15 - 7:30		199	24	1	0	1	3	0	0	0	0	0	0	1.12	228	912	
7:30 - 7:45		165	24	2	0	0	8	0	0	0	0	0	0	1.15	199	796	
7:45 - 8:00		290	23	4	1	0	7	0	0	0	0	0	0	1.13	325	1300	
8:00 - 8:15		222	23	0	0	0	8	0	0	0	0	0	0	1.10	253	1012	
8:15 - 8:30		226	18	0	0	0	4	0	0	0	0	0	0	1.08	248	992	
8:30 - 8:45		206	14	1	1	1	6	0	0	0	1	0	0	1.16	230	920	
8:45 - 9:00		218	17	0	0	1	12	0	0	0	1	0	0	1.15	249	996	
9:00 - 9:15		184	19	0	0	0	4	0	0	0	0	0	0	1.10	207	828	
9:15 - 9:30		180	19	0	0	1	17	0	0	0	0	0	0	1.10	217	868	
9:30 - 9:45		188	14	0	0	1	8	0	0	0	0	0	0	1.07	211	844	
9:45 - 10:00		174	36	0	0	0	9	0	0	0	0	0	0	1.17	219	876	
PEAK PERIOD 6:00 - 10:00		Totals:	3046	302	11	2	10	110	0	0	1	6	0		3488		
		Percentage:	87.3%	8.7%	0.3%	0.1%	0.3%	3.2%	0.0%	0.0%	0.0%	0.2%	0.0%		100%		
		Vehicle Occupants:	3046	604	37	21	10	132	0	0	12	119	0		3981	Occ. 1.14	
PEAK HOUR 7:45 - 8:45		Totals:	944	78	5	2	1	25	0	0	1	0	0		1056		
		Percentage:	89.4%	7.4%	0.5%	0.2%	0.1%	2.4%	0.0%	0.0%	0.1%	0.0%	0.0%		100%		
		Vehicle Occupants:	944	156	17	21	1	30	0	0	10	0	0		1179	Occ. 1.12	
MIN. HOURLY VOL. 6:00 - 7:00		Totals:	615	62	2	0	2	19	0	0	5	5	0		710		
		Percentage:	86.6%	8.8%	0.3%	0.0%	0.3%	2.7%	0.0%	0.0%	0.7%	0.7%	0.0%		100%		
		Vehicle Occupants:	615	124	7	0	2	23	0	0	49	99	0		918	Occ. 1.29	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
332					
9.5%					
87					
8.2%					
76					
10.7%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: NB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): DW,LT,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

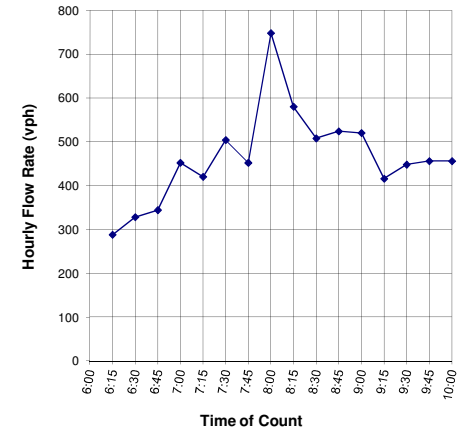
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
6:00 - 6:15	ESTIMATED	66	6	0	0	0	0	0	0	0	0	0	0	1.10	72	288	
6:15 - 6:30	ESTIMATED	75	7	0	0	0	0	0	0	0	0	0	0	1.10	82	328	
6:30 - 6:45	ESTIMATED	77	7	0	0	1	0	0	0	0	0	0	0	1.10	86	344	
6:45 - 7:00	ESTIMATED	97	15	0	0	0	0	0	0	0	0	0	0	1.15	113	452	353
7:00 - 7:15		94	7	1	0	3	0	0	0	0	0	0	0	1.09	105	420	386
7:15 - 7:30		108	16	0	0	1	1	0	0	0	0	0	0	1.13	126	504	430
7:30 - 7:45		98	13	1	0	0	1	0	0	0	0	0	0	1.14	113	452	457
7:45 - 8:00		167	17	3	0	0	0	0	0	0	0	0	0	1.13	187	748	531
8:00 - 8:15		126	18	0	0	0	1	0	0	0	0	0	0	1.13	145	580	571
8:15 - 8:30		113	13	0	0	0	1	0	0	0	0	0	0	1.10	127	508	572
8:30 - 8:45		114	13	0	1	1	1	0	0	0	1	0	0	1.24	131	524	590
8:45 - 9:00		118	10	0	0	1	1	0	0	0	0	0	0	1.08	130	520	533
9:00 - 9:15		95	8	0	0	0	1	0	0	0	0	0	0	1.08	104	416	492
9:15 - 9:30		95	15	0	0	1	1	0	0	0	0	0	0	1.14	112	448	477
9:30 - 9:45		106	6	0	0	0	2	0	0	0	0	0	0	1.06	114	456	460
9:45 - 10:00		92	19	0	0	0	3	0	0	0	0	0	0	1.17	114	456	444
PEAK PERIOD 6:00 - 10:00		Totals:	1641	191	6	1	8	13	0	0	1	0	0		1861		
		Percentage:	88.2%	10.2%	0.3%	0.1%	0.4%	0.7%	0.0%	0.0%	0.1%	0.0%	0.0%		100%		
		Vehicle Occupants:	1641	381	20	11	8	16	0	0	12	0	0		2089		Occ. 1.12
PEAK HOUR 7:45 - 8:45		Totals:	520	61	3	1	1	3	0	0	1	0	0		590		
		Percentage:	88.1%	10.3%	0.5%	0.2%	0.2%	0.5%	0.0%	0.0%	0.2%	0.0%	0.0%		100%		
		Vehicle Occupants:	520	122	10	11	1	4	0	0	10	0	0		677		Occ. 1.15
MIN. HOURLY VOL. 6:00 - 7:00		Totals:	315	36	1	0	1	0	0	0	0	0	0		353		
		Percentage:	89.3%	10.1%	0.3%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
		Vehicle Occupants:	315	71	3	0	1	0	0	0	0	0	0		391		Occ. 1.11

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
207					
11.1%					
67					
11.4%					
38					
10.7%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: NB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): DW,LT,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

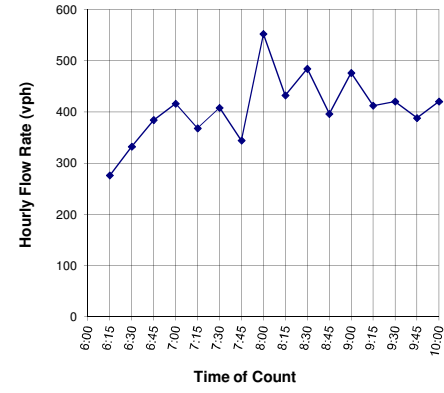
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #2 ONLY

VEHICLE TYPE		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL	
		CARS			MISC				BUSES								
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	58	4	0	0	0	7	0	0	0	0	0	0	1.13	69	276	
6:15 - 6:30	ESTIMATED	74	5	0	0	0	1	0	0	0	0	3	0	1.80	83	332	
6:30 - 6:45	ESTIMATED	82	5	0	0	1	7	0	0	0	0	0	0	1.13	96	384	
6:45 - 7:00	ESTIMATED	86	12	0	0	0	4	0	0	0	0	1	0	1.36	104	416	352
7:00 - 7:15		85	2	0	0	0	5	0	0	0	0	0	0	1.03	92	368	375
7:15 - 7:30		91	8	1	0	0	2	0	0	0	0	0	0	1.11	102	408	394
7:30 - 7:45		67	11	1	0	0	7	0	0	0	0	0	0	1.17	86	344	384
7:45 - 8:00		123	6	1	1	0	7	0	0	0	0	0	0	1.14	138	552	418
8:00 - 8:15		96	5	0	0	0	7	0	0	0	0	0	0	1.06	108	432	434
8:15 - 8:30		113	5	0	0	0	3	0	0	0	0	0	0	1.05	121	484	453
8:30 - 8:45		92	1	1	0	0	5	0	0	0	0	0	0	1.04	99	396	466
8:45 - 9:00		100	7	0	0	0	11	0	0	0	0	1	0	1.24	119	476	447
9:00 - 9:15		89	11	0	0	0	3	0	0	0	0	0	0	1.11	103	412	442
9:15 - 9:30		85	4	0	0	0	16	0	0	0	0	0	0	1.07	105	420	426
9:30 - 9:45		82	8	0	0	1	6	0	0	0	0	0	0	1.09	97	388	424
9:45 - 10:00		82	17	0	0	0	6	0	0	0	0	0	0	1.17	105	420	410
PEAK PERIOD 6:00 - 10:00		Totals:	1405	111	5	1	2	97	0	0	0	6	0		1627		
		Percentage:	86.4%	6.8%	0.3%	0.1%	0.1%	6.0%	0.0%	0.0%	0.0%	0.4%	0.0%		100%		
		Vehicle Occupants:	1405	221	17	11	2	116	0	0	0	119	0		1891		Occ. 1.16
PEAK HOUR 7:45 - 8:45		Totals:	424	17	2	1	0	22	0	0	0	0	0		466		
		Percentage:	91.0%	3.6%	0.4%	0.2%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
		Vehicle Occupants:	424	34	7	11	0	26	0	0	0	0	0		502		Occ. 1.08
MIN. HOURLY VOL. 6:00 - 7:00		Totals:	300	26	1	0	1	19	0	0	0	5	5	0	357		
		Percentage:	84.2%	7.2%	0.3%	0.0%	0.3%	5.3%	0.0%	0.0%	1.4%	1.4%	0.0%		100%		
		Vehicle Occupants:	300	51	3	0	1	23	0	0	0	49	99	0	527		Occ. 1.48

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
125					
7.7%					
20					
4.3%					
38					
10.5%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: NB
 TYPE: N Y or N
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,LT,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 N Y or N

HOW MANY HOURS IN COUNT?
 4 3 or 4

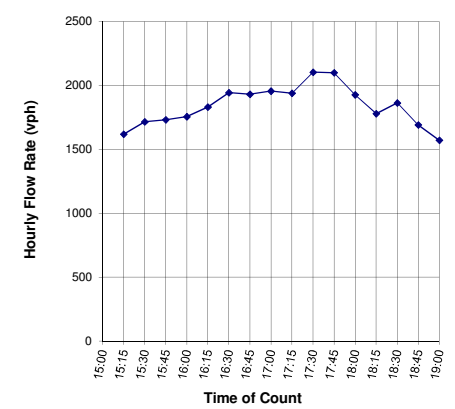
DAY: Wednesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
ALL LANES

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	306	83	3	2	2	8	0	0	0	1	0	0	1.30	405	1620	
15:15 - 15:30	324	93	3	0	4	4	0	0	0	0	1	0	1.28	429	1716	
15:30 - 15:45	353	75	1	0	2	2	1	0	0	0	0	0	1.18	433	1732	
15:45 - 16:00	335	91	8	1	3	1	0	0	0	0	0	0	1.27	439	1756	
16:00 - 16:15	331	106	16	0	1	3	0	0	0	0	0	1	1.40	458	1832	
16:15 - 16:30	374	89	17	1	3	2	0	0	0	0	0	0	1.29	486	1944	
16:30 - 16:45	406	67	4	1	1	3	2	0	0	0	0	1	1.26	483	1932	
16:45 - 17:00	420	64	1	1	2	1	0	0	0	0	0	0	1.16	489	1956	
17:00 - 17:15	416	63	0	2	3	1	0	0	0	0	0	0	1.17	485	1940	
17:15 - 17:30	444	73	4	0	1	4	0	0	0	0	0	0	1.16	526	2104	
17:30 - 17:45	444	75	1	0	3	2	0	0	0	0	0	0	1.15	525	2100	
17:45 - 18:00	ESTIMATED 405	71	4	0	1	1	1	0	0	0	0	0	1.18	482	1928	
18:00 - 18:15	ESTIMATED 381	55	4	0	1	3	0	0	0	0	0	0	1.16	445	1780	
18:15 - 18:30	ESTIMATED 400	58	4	0	2	2	0	0	0	0	0	0	1.16	466	1864	
18:30 - 18:45	ESTIMATED 364	53	4	0	0	2	0	0	0	0	0	0	1.16	423	1692	
18:45 - 19:00	ESTIMATED 337	49	3	0	0	3	0	0	0	0	0	0	1.16	393	1572	
PEAK PERIOD 15:00 - 19:00	Totals: 6040 1166 78 8 29 42 4 0 0 1 1 3												7367			
	Percentage: 82.0% 15.8% 1.1% 0.1% 0.4% 0.6% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 6040 2331 264 84 29 50 4 0 0 11 24 109												8942		Occ. 1.21	
PEAK HOUR 16:45 - 17:45	Totals: 1724 275 6 3 9 8 0 0 0 0 0 0												2025			
	Percentage: 85.1% 13.6% 0.3% 0.1% 0.4% 0.4% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 1724 550 20 32 9 10 0 0 0 0 0 0												2345		Occ. 1.16	
MIN. HOURLY VOL. 15:00 - 16:00	Totals: 1318 342 15 3 11 15 1 0 0 1 1 0												1706			
	Percentage: 77.3% 20.0% 0.9% 0.2% 0.6% 0.9% 0.1% 0.0% 0.0% 0.1% 0.1% 0.0%												100%			
	Vehicle Occupants: 1318 684 51 32 11 18 1 0 0 10 20 0												2144		Occ. 1.26	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1285					
17.4%					
293					
14.5%					
373					
21.9%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: NB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,LT,TW
 REMARKS:

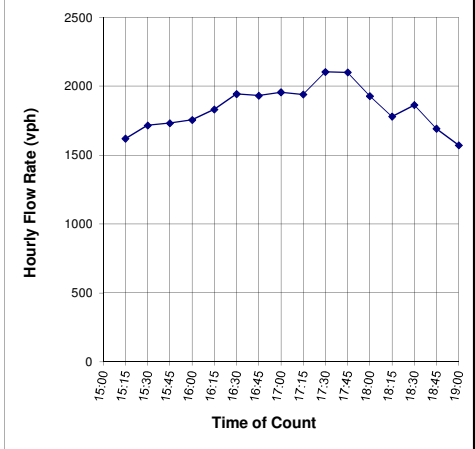
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	306	83	3	2	2	8	0	0	0	1	0	0	1.30	405	1620		
15:15 - 15:30	324	93	3	0	4	4	0	0	0	0	1	0	1.28	429	1716		
15:30 - 15:45	353	75	1	0	2	2	1	0	0	0	0	0	1.18	433	1732		
15:45 - 16:00	335	91	8	1	3	1	0	0	0	0	0	0	1.27	439	1756	1706	
16:00 - 16:15	331	106	16	0	1	3	0	0	0	0	0	1	1.40	458	1832	1759	
16:15 - 16:30	374	89	17	1	3	2	0	0	0	0	0	0	1.29	486	1944	1816	
16:30 - 16:45	406	67	4	1	1	3	2	0	0	0	0	1	1.26	483	1932	1866	
16:45 - 17:00	420	64	1	1	2	1	0	0	0	0	0	0	1.16	489	1956	1916	
17:00 - 17:15	416	63	0	2	3	1	0	0	0	0	0	0	1.17	485	1940	1943	
17:15 - 17:30	444	73	4	0	1	4	0	0	0	0	0	0	1.16	526	2104	1983	
17:30 - 17:45	444	75	1	0	3	2	0	0	0	0	0	0	1.15	525	2100	2025	
17:45 - 18:00	ESTIMATED 405	71	4	0	1	1	1	0	0	0	0	0	1.18	482	1928	2018	
18:00 - 18:15	ESTIMATED 381	55	4	0	1	3	0	0	0	0	0	0	1.16	445	1780	1978	
18:15 - 18:30	ESTIMATED 400	58	4	0	2	2	0	0	0	0	0	0	1.16	466	1864	1918	
18:30 - 18:45	ESTIMATED 364	53	4	0	2	2	0	0	0	0	0	0	1.16	423	1692	1816	
18:45 - 19:00	ESTIMATED 337	49	3	0	0	3	0	0	0	0	0	0	1.16	393	1572	1727	
PEAK PERIOD 15:00 - 19:00	Totals: 6040 1166 78 8 29 42 4 0 0 1 1 3													7367			
	Percentage: 82.0% 15.8% 1.1% 0.1% 0.4% 0.6% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%													100%			
	Vehicle Occupants: 6040 2331 264 84 29 50 4 0 0 11 24 109													8942		Occ. 1.21	
PEAK HOUR 16:45 - 17:45	Totals: 1724 275 6 3 9 8 0 0 0 0 0 0													2025			
	Percentage: 85.1% 13.6% 0.3% 0.1% 0.4% 0.4% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%													100%			
	Vehicle Occupants: 1724 550 20 32 9 10 0 0 0 0 0 0													2345		Occ. 1.16	
MIN. HOURLY VOL. 15:00 - 16:00	Totals: 1318 342 15 3 11 15 1 0 0 1 1 0													1706			
	Percentage: 77.3% 20.0% 0.9% 0.2% 0.6% 0.9% 0.1% 0.0% 0.0% 0.1% 0.1% 0.0%													100%			
	Vehicle Occupants: 1318 684 51 32 11 18 1 0 0 10 20 0													2144		Occ. 1.26	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1285					
17.4%					
293					
14.5%					
373					
21.9%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: NB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,LT,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

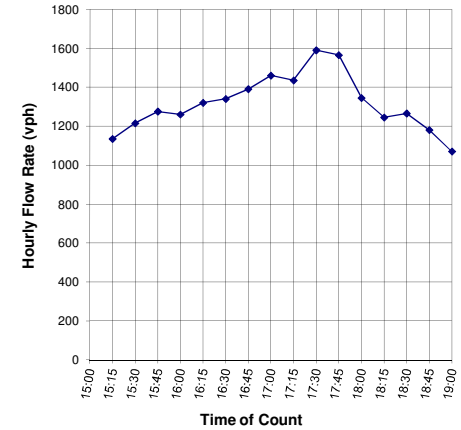
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES									
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	179	45	2	0	0	0	0	0	0	1	0	0	1.26	227	908		
15:15 - 15:30	184	56	0	0	2	0	0	0	0	0	1	0	1.31	243	972		
15:30 - 15:45	208	46	0	0	1	0	1	0	0	0	0	0	1.18	255	1020		
15:45 - 16:00	187	55	8	0	2	0	0	0	0	0	0	0	1.29	252	1008	977	
16:00 - 16:15	176	71	16	0	1	0	0	0	0	0	0	0	1.41	264	1056	1014	
16:15 - 16:30	222	39	3	1	3	0	0	0	0	0	0	0	1.21	268	1072	1039	
16:30 - 16:45	236	39	2	1	0	0	1	0	0	0	0	0	1.19	278	1112	1062	
16:45 - 17:00	246	42	1	1	2	0	0	0	0	0	0	0	1.18	292	1168	1102	
17:00 - 17:15	245	39	0	1	2	0	0	0	0	0	0	0	1.17	287	1148	1125	
17:15 - 17:30	274	42	1	0	1	0	0	0	0	0	0	0	1.14	318	1272	1175	
17:30 - 17:45	270	39	1	0	3	0	0	0	0	0	0	0	1.13	313	1252	1210	
17:45 - 18:00	ESTIMATED 231	34	3	0	1	0	0	0	0	0	0	0	1.15	269	1076	1187	
18:00 - 18:15	ESTIMATED 215	31	2	0	0	0	0	0	0	0	0	0	1.15	249	996	1149	
18:15 - 18:30	ESTIMATED 218	31	2	0	1	0	0	0	0	0	0	0	1.15	253	1012	1084	
18:30 - 18:45	ESTIMATED 204	29	2	0	0	0	0	0	0	0	0	0	1.15	236	944	1007	
18:45 - 19:00	ESTIMATED 185	27	2	0	0	0	0	0	0	0	0	0	1.15	214	856	952	
PEAK PERIOD 15:00 - 19:00	Totals:	3481	666	46	4	19	0	2	0	1	1	0		4218			
	Percentage:	82.5%	15.8%	1.1%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		100%			
	Vehicle Occupants:	3481	1332	155	42	19	0	2	0	11	24	0		5064	Occ.	1.20	
PEAK HOUR 16:45 - 17:45	Totals:	1035	162	3	2	8	0	0	0	0	0	0		1210			
	Percentage:	85.5%	13.4%	0.2%	0.2%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		100%			
	Vehicle Occupants:	1035	324	10	21	8	0	0	0	0	0	0		1398	Occ.	1.16	
MIN. HOURLY VOL. 18:00 - 19:00	Totals:	823	119	9	0	1	0	0	0	0	0	0		952			
	Percentage:	86.4%	12.5%	0.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		100%			
	Vehicle Occupants:	823	238	31	0	1	0	0	0	2	3	0		1097	Occ.	1.15	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
737					
17.5%					
175					
14.5%					
129					
13.6%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: NB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): DW,LT,TW
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

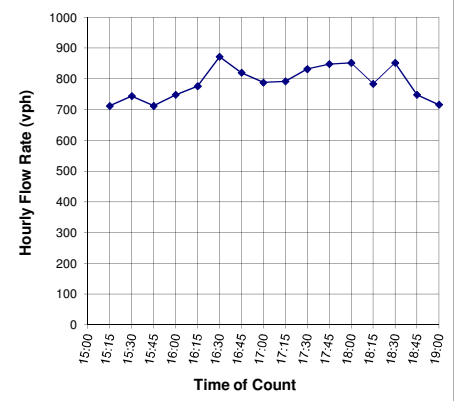
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #2 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	127	38	1	2	2	8	0	0	0	0	0	0	1.34	178	712	
15:15 - 15:30	140	37	3	0	2	4	0	0	0	0	0	0	1.24	186	744	
15:30 - 15:45	145	29	1	0	1	2	0	0	0	0	0	0	1.18	178	712	
15:45 - 16:00	148	36	0	1	1	1	0	0	0	0	0	0	1.24	187	748	729
16:00 - 16:15	155	35	0	0	0	3	0	0	0	0	0	1	1.38	194	776	745
16:15 - 16:30	152	50	14	0	0	2	0	0	0	0	0	0	1.39	218	872	777
16:30 - 16:45	170	28	2	0	1	3	1	0	0	0	0	1	1.35	205	820	804
16:45 - 17:00	174	22	0	0	0	1	0	0	0	0	0	0	1.11	197	788	814
17:00 - 17:15	171	24	0	1	1	1	0	0	0	0	0	0	1.17	198	792	818
17:15 - 17:30	170	31	3	0	0	4	0	0	0	0	0	0	1.19	208	832	808
17:30 - 17:45	174	36	0	0	0	2	0	0	0	0	0	0	1.17	212	848	815
17:45 - 18:00	ESTIMATED 174	36	2	0	0	1	1	0	0	0	0	0	1.22	213	852	831
18:00 - 18:15	ESTIMATED 166	24	2	0	1	3	0	0	0	0	0	0	1.18	196	784	829
18:15 - 18:30	ESTIMATED 182	27	2	0	1	2	0	0	0	0	0	0	1.18	213	852	834
18:30 - 18:45	ESTIMATED 160	23	1	0	0	2	0	0	0	0	0	0	1.18	187	748	809
18:45 - 19:00	ESTIMATED 152	22	1	0	0	3	0	0	0	0	0	0	1.18	179	716	775
PEAK PERIOD 15:00 - 19:00	Totals: 2560 499 32 4 10 42 2 0 0 0 0 0 3												3149			
	Percentage: 81.3% 15.8% 1.0% 0.1% 0.3% 1.3% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1%												100%			
	Vehicle Occupants: 2560 998 108 42 10 50 2 0 0 0 0 0 110												3878		Occ. 1.23	
PEAK HOUR 17:30 - 18:30	Totals: 695 123 5 0 2 8 1 0 0 0 0 0 0												834			
	Percentage: 83.4% 14.8% 0.6% 0.0% 0.2% 1.0% 0.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.1%												100%			
	Vehicle Occupants: 695 247 16 0 2 10 1 0 0 0 0 0 19												989		Occ. 1.19	
MIN. HOURLY VOL. 15:00 - 16:00	Totals: 560 140 5 3 6 15 0 0 0 0 0 0 0												729			
	Percentage: 76.8% 19.2% 0.7% 0.4% 0.8% 2.1% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 560 280 17 32 6 18 0 0 0 0 0 0 0												913		Occ. 1.25	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
547					
17.4%					
131					
15.7%					
154					
21.1%					

AM/PM PEAK: AM
COUNTY-RTE: 65
LOCATION: Twelve Bridges Drive
DIRECTION: SB
TYPE: N Y or N
NO. LANES COUNTED: 2
DATE: 2/8/2012
START TIME: 6:00
END TIME: 10:00
WEATHER: clear
RECORDER(S): BA,GJ,RL
REMARKS:

TIME INTERVAL FOR COUNT
15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
N Y or N

HOW MANY HOURS IN COUNT?
4 3 or 4

DAY: Wednesday

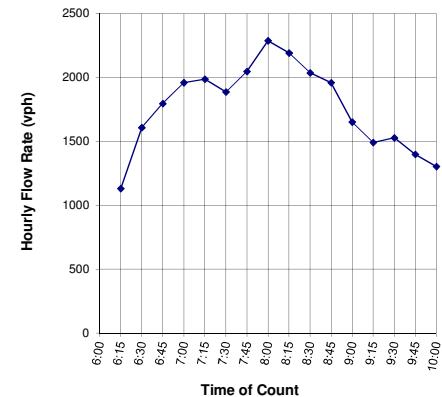
CALIFORNIA DEPARTMENT OF TRANSPORTATION
DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

ALL LANES

VEHICLE TYPE	TIME		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
			CARS			MISC				BUSES							
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL			
ESTIMATED	6:00 - 6:15		240	32	2	3	0	6	1	0	0	0	0	0	1.24	283	1132
ESTIMATED	6:15 - 6:30		343	44	3	0	3	9	0	0	0	0	0	0	1.14	402	1608
ESTIMATED	6:30 - 6:45		391	50	3	0	0	5	0	0	0	0	0	1.14	449	1796	
ESTIMATED	6:45 - 7:00		406	69	4	1	0	10	0	0	0	0	0	1.20	490	1960	
	7:00 - 7:15		442	47	2	0	0	6	0	0	0	0	0	1.11	497	1988	
	7:15 - 7:30		390	71	2	0	0	8	0	0	0	1	0	1.20	472	1888	
	7:30 - 7:45		462	41	2	0	0	7	0	0	0	0	0	1.09	512	2048	
	7:45 - 8:00		513	50	0	0	0	7	0	0	1	0	0	1.16	572	2288	
	8:00 - 8:15		479	56	5	2	0	6	1	0	0	0	0	1.16	548	2192	
	8:15 - 8:30		426	72	3	0	2	5	0	0	0	1	0	1.19	509	2036	
	8:30 - 8:45		403	74	7	0	1	5	0	0	0	0	0	1.19	490	1960	
	8:45 - 9:00		338	65	2	0	1	6	0	0	1	0	0	1.18	413	1652	
	9:00 - 9:15		298	61	7	0	0	7	0	0	0	0	0	1.21	373	1492	
	9:15 - 9:30		304	67	4	0	1	6	0	0	0	0	0	1.20	382	1528	
	9:30 - 9:45		270	59	6	0	0	14	0	0	1	0	0	1.23	350	1400	
	9:45 - 10:00		256	63	2	0	1	4	1	0	0	0	0	1.21	326	1304	
PEAK PERIOD																	
6:00 - 10:00			Totals: 5962 919 53 6 9 111 3 0 4 0 3 1											7068			
			Percentage: 84.4% 13.0% 0.8% 0.1% 0.1% 1.6% 0.0% 0.0% 0.1% 0.0% 0.0% 0.0%											100%			
			Vehicle Occupants: 5962 1838 182 63 9 133 3 0 15 0 50 49											8301	Occ.	1.17	
PEAK HOUR																	
7:30 - 8:30			Totals: 1880 219 10 2 2 25 1 0 1 0 1 1											2141			
			Percentage: 87.8% 10.2% 0.5% 0.1% 0.1% 1.2% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0%											100%			
			Vehicle Occupants: 1880 438 34 21 2 30 1 0 4 0 20 40											2469	Occ.	1.15	
MIN. HOURLY VOL.																	
9:00 - 10:00			Totals: 1128 250 19 0 2 31 1 0 1 0 0 0											1431			
			Percentage: 78.8% 17.5% 1.3% 0.0% 0.1% 2.2% 0.1% 0.0% 0.1% 0.0% 0.0% 0.0%											100%			
			Vehicle Occupants: 1128 500 65 0 2 37 1 0 4 0 0 0											1736	Occ.	1.21	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
995					
14.1%					
236					
11.0%					
272					
19.0%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: SB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): BA,GJ,RL
 REMARKS:

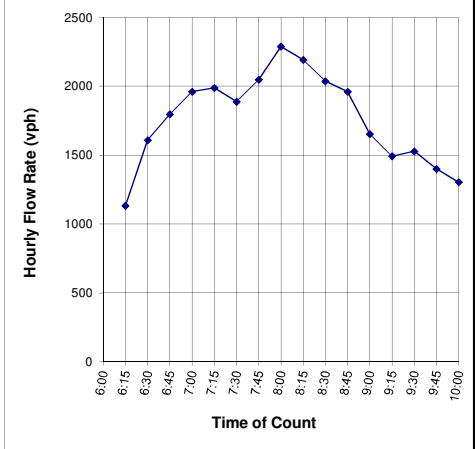
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			MISC				BUSES								
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	240	32	2	3	0	6	1	0	0	0	0	0	1.24	283	1132	
6:15 - 6:30	ESTIMATED	343	44	3	0	3	9	0	0	0	0	0	0	1.14	402	1608	
6:30 - 6:45	ESTIMATED	391	50	3	0	0	5	0	0	0	0	0	0	1.14	449	1796	
6:45 - 7:00	ESTIMATED	406	69	4	1	0	10	0	0	0	0	0	0	1.20	490	1960	1624
7:00 - 7:15		442	47	2	0	0	6	0	0	0	0	0	0	1.11	497	1988	1838
7:15 - 7:30		390	71	2	0	0	8	0	0	0	0	1	0	1.20	472	1888	1908
7:30 - 7:45		462	41	2	0	0	7	0	0	0	0	0	0	1.09	512	2048	1971
7:45 - 8:00		513	50	0	0	0	7	0	0	1	0	0	1	1.16	572	2288	2053
8:00 - 8:15		479	56	5	2	0	6	1	0	0	0	0	0	1.16	548	2192	2104
8:15 - 8:30		426	72	3	0	2	5	0	0	0	0	1	0	1.19	509	2036	2141
8:30 - 8:45		403	74	7	0	1	5	0	0	0	0	0	0	1.19	490	1960	2119
8:45 - 9:00		338	65	2	0	1	6	0	0	1	0	0	0	1.18	413	1652	1960
9:00 - 9:15		298	61	7	0	0	7	0	0	0	0	0	0	1.21	373	1492	1785
9:15 - 9:30		304	67	4	0	1	6	0	0	0	0	0	0	1.20	382	1528	1658
9:30 - 9:45		270	59	6	0	0	14	0	0	1	0	0	0	1.23	350	1400	1518
9:45 - 10:00		256	63	2	0	1	4	1	0	0	0	0	0	1.21	326	1304	1431
PEAK PERIOD 6:00 - 10:00		Totals:	5962	919	53	6	9	111	3	0	4	0	3	1	7068		
		Percentage:	84.4%	13.0%	0.8%	0.1%	0.1%	1.6%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	100%		
		Vehicle Occupants:	5962	1838	182	63	9	133	3	0	15	0	50	49	8301		Occ. 1.17
PEAK HOUR 7:30 - 8:30		Totals:	1880	219	10	2	2	25	1	0	1	0	1	1	2141		
		Percentage:	87.8%	10.2%	0.5%	0.1%	0.1%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%		
		Vehicle Occupants:	1880	438	34	21	2	30	1	0	4	0	20	40	2469		Occ. 1.15
MIN. HOURLY VOL. 9:00 - 10:00		Totals:	1128	250	19	0	2	31	1	0	1	0	0	0	1431		
		Percentage:	78.8%	17.5%	1.3%	0.0%	0.1%	2.2%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	100%		
		Vehicle Occupants:	1128	500	65	0	2	37	1	0	4	0	0	0	1736		Occ. 1.21

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
995					
14.1%					
236					
11.0%					
272					
19.0%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: SB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): BA,GJ,RL
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

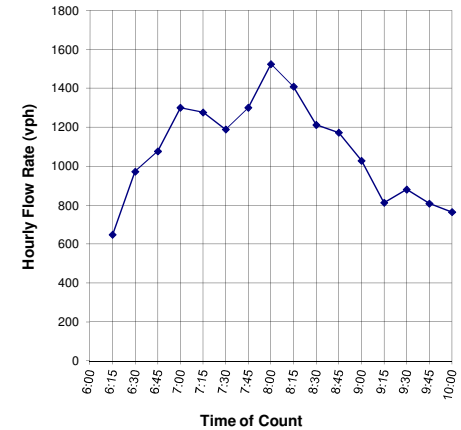
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE		COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
		CARS			MISC					BUSES							
TIME		1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
6:00 - 6:15	ESTIMATED	141	18	1	2	0	0	1	0	0	0	0	0	1.24	162	648	
6:15 - 6:30	ESTIMATED	213	27	1	0	1	0	0	0	0	0	0	0	1.13	243	972	
6:30 - 6:45	ESTIMATED	237	30	2	0	0	0	0	0	0	0	0	0	1.13	269	1076	
6:45 - 7:00	ESTIMATED	282	41	2	0	0	0	0	0	0	0	0	0	1.14	325	1300	
7:00 - 7:15		293	25	1	0	0	0	0	0	0	0	0	0	1.09	319	1276	
7:15 - 7:30		254	40	2	0	0	1	0	0	0	0	0	0	1.15	297	1188	
7:30 - 7:45		291	33	1	0	0	0	0	0	0	0	0	0	1.11	325	1300	
7:45 - 8:00		337	44	0	0	0	0	0	0	0	0	0	0	1.12	381	1524	
8:00 - 8:15		308	41	2	1	0	0	1	0	0	0	0	0	1.16	352	1408	
8:15 - 8:30		247	53	2	0	1	0	0	0	0	0	0	0	1.19	303	1212	
8:30 - 8:45		234	54	5	0	0	0	0	0	0	0	0	0	1.23	293	1172	
8:45 - 9:00		223	32	2	0	0	0	0	0	0	0	0	0	1.14	257	1028	
9:00 - 9:15		167	32	3	0	0	1	0	0	0	0	0	0	1.19	203	812	
9:15 - 9:30		179	37	2	0	1	1	0	0	0	0	0	0	1.19	220	880	
9:30 - 9:45		166	33	1	0	0	2	0	0	0	0	0	0	1.18	202	808	
9:45 - 10:00		154	35	1	0	1	0	0	0	0	0	0	0	1.20	191	764	
PEAK PERIOD 6:00 - 10:00		Totals:	3727	575	28	3	4	5	2	0	0	0	0		4342		
		Percentage:	85.8%	13.3%	0.6%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
		Vehicle Occupants:	3727	1151	94	32	4	6	2	0	0	0	0		5014	Occ. 1.15	
PEAK HOUR 7:30 - 8:30		Totals:	1183	171	5	1	1	0	1	0	0	0	0		1361		
		Percentage:	86.9%	12.6%	0.4%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%		100%		
		Vehicle Occupants:	1183	342	17	11	1	0	1	0	0	0	0		1554	Occ. 1.14	
MIN. HOURLY VOL. 9:00 - 10:00		Totals:	666	137	7	0	2	4	0	0	0	0	0		816		
		Percentage:	81.6%	16.8%	0.9%	0.0%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%		100%		
		Vehicle Occupants:	666	274	24	0	2	5	0	0	0	0	0		971	Occ. 1.19	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV's in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
610					
14.1%					
178					
13.1%					
146					
17.9%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: SB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 6:00
 END TIME: 10:00
 WEATHER: clear
 RECORDER(S): BA,GJ,RL
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

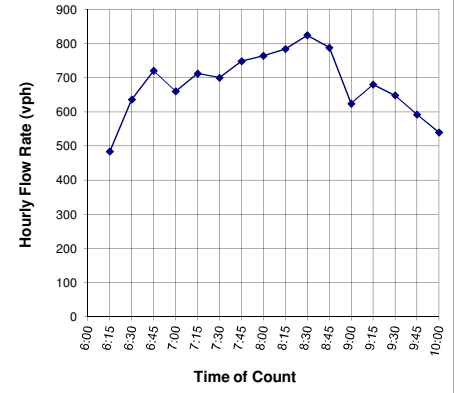
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #2 ONLY

VEHICLE TYPE	TIME		COUNT CLASSIFICATION											OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL		
			CARS			MISC				BUSES									
			1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
ESTIMATED	6:00 - 6:15		99	14	1	1	0	6	0	0	0	0	0	0	0	1.25	121	484	
ESTIMATED	6:15 - 6:30		130	16	1	0	2	9	0	0	0	0	0	0	0	1.17	159	636	
ESTIMATED	6:30 - 6:45		154	19	1	0	0	5	0	0	0	0	0	0	0	1.17	180	720	
ESTIMATED	6:45 - 7:00		124	28	2	1	0	10	0	0	0	0	0	0	0	1.30	165	660	625
	7:00 - 7:15		149	22	1	0	0	6	0	0	0	0	0	0	0	1.14	178	712	682
	7:15 - 7:30		136	31	0	0	0	7	0	0	0	0	1	0	0	1.29	175	700	698
	7:30 - 7:45		171	8	1	0	0	7	0	0	0	0	0	0	0	1.06	187	748	705
	7:45 - 8:00		176	6	0	0	0	7	0	0	1	0	0	1	0	1.26	191	764	731
	8:00 - 8:15		171	15	3	1	0	6	0	0	0	0	0	0	0	1.17	196	784	749
	8:15 - 8:30		179	19	1	0	1	5	0	0	0	0	1	0	0	1.20	206	824	780
	8:30 - 8:45		169	20	2	0	1	5	0	0	0	0	0	0	0	1.13	197	788	790
	8:45 - 9:00		115	33	0	0	1	6	0	0	1	0	0	0	0	1.24	156	624	755
	9:00 - 9:15		131	29	4	0	0	6	0	0	0	0	0	0	0	1.23	170	680	729
	9:15 - 9:30		125	30	2	0	0	5	0	0	0	0	0	0	0	1.22	162	648	685
	9:30 - 9:45		104	26	5	0	0	12	0	0	1	0	0	0	0	1.29	148	592	636
	9:45 - 10:00		102	28	1	0	0	4	1	0	0	0	0	0	0	1.23	135	540	615
PEAK PERIOD																			
6:00 - 10:00			Totals: 2235 344 26 3 5 106 1 0 4 0 2 1													2726			
			Percentage: 82.0% 12.6% 0.9% 0.1% 0.2% 3.9% 0.0% 0.0% 0.1% 0.0% 0.1% 0.0%													100%			
			Vehicle Occupants: 2235 688 87 32 5 127 1 0 15 0 50 50													3288		Occ.	1.21
PEAK HOUR																			
7:45 - 8:45			Totals: 695 60 6 1 2 23 0 0 1 0 1 1													790			
			Percentage: 88.0% 7.6% 0.8% 0.1% 0.3% 2.9% 0.0% 0.0% 0.1% 0.0% 0.1% 0.1%													100%			
			Vehicle Occupants: 695 120 20 11 2 28 0 0 4 0 20 40													940		Occ.	1.19
MIN. HOURLY VOL.																			
9:00 - 10:00			Totals: 462 113 12 0 0 27 1 0 1 0 0 0													615			
			Percentage: 75.1% 18.4% 2.0% 0.0% 0.0% 4.4% 0.2% 0.0% 0.2% 0.0% 0.0% 0.0%													100%			
			Vehicle Occupants: 462 226 41 0 0 32 1 0 4 0 0 0													765		Occ.	1.24

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
385					
14.1%					
72					
9.1%					
126					
20.5%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: SB
 TYPE: N Y or N
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): BA,GJ,RL
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES

IS THERE AN EXISTING HOV LANE?
 N Y or N

HOW MANY HOURS IN COUNT?
 4 3 or 4

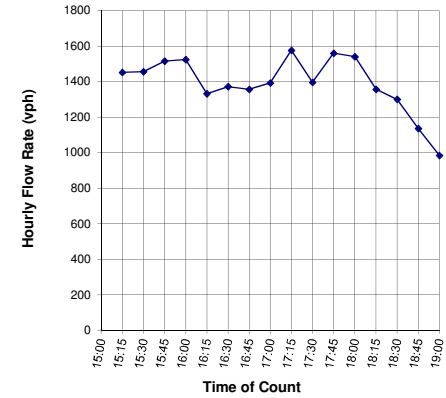
DAY: Wednesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 ALL LANES

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	255	79	24	0	1	4	0	0	0	0	0	0	1.38	363	1452	
15:15 - 15:30	239	92	28	0	1	4	0	0	0	0	0	0	1.44	364	1456	
15:30 - 15:45	255	88	21	0	4	10	0	0	1	0	0	0	1.38	379	1516	
15:45 - 16:00	249	100	23	0	2	7	0	0	0	0	0	0	1.41	381	1524	
16:00 - 16:15	240	72	15	1	0	4	0	0	1	0	0	0	1.36	333	1332	
16:15 - 16:30	252	75	14	1	1	0	0	0	0	0	0	0	1.34	343	1372	
16:30 - 16:45	242	76	18	0	1	2	0	0	0	0	0	0	1.35	339	1356	
16:45 - 17:00	254	69	17	1	1	6	0	0	0	0	0	0	1.35	348	1392	
17:00 - 17:15	249	106	32	1	3	3	0	0	0	0	0	0	1.49	394	1576	
17:15 - 17:30	246	80	17	1	1	4	0	0	0	0	0	0	1.38	349	1396	
17:30 - 17:45	270	103	12	0	0	3	0	0	1	0	0	1	1.45	390	1560	
17:45 - 18:00	266	104	7	1	2	5	0	0	0	0	0	0	1.34	385	1540	
18:00 - 18:15	ESTIMATED	199	123	12	0	4	1	0	0	0	0	0	1.46	339	1356	
18:15 - 18:30	ESTIMATED	239	68	13	0	1	4	0	0	0	0	0	1.32	325	1300	
18:30 - 18:45	ESTIMATED	206	58	11	0	3	5	0	0	0	0	0	1.31	284	1136	
18:45 - 19:00	ESTIMATED	179	51	10	0	1	5	0	0	0	0	0	1.32	246	984	
PEAK PERIOD 15:00 - 19:00	Totals: 3840 1344 274 6 22 70 1 0 4 0 0 1												5562			
	Percentage: 69.0% 24.2% 4.9% 0.1% 0.4% 1.3% 0.0% 0.0% 0.1% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 3840 2689 933 63 22 84 1 0 15 0 0 49												7695		Occ. 1.38	
PEAK HOUR 17:00 - 18:00	Totals: 1031 393 68 3 6 15 0 0 1 0 0 1												1518			
	Percentage: 67.9% 25.9% 4.5% 0.2% 0.4% 1.0% 0.0% 0.0% 0.1% 0.0% 0.0% 0.1%												100%			
	Vehicle Occupants: 1031 786 231 32 6 18 0 0 4 0 0 40												2148		Occ. 1.41	
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 823 300 46 0 5 18 1 0 1 0 0 0												1194			
	Percentage: 69.0% 25.2% 3.9% 0.0% 0.4% 1.5% 0.1% 0.0% 0.1% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 823 601 158 0 5 22 1 0 3 0 0 9												1620		Occ. 1.36	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1652					
29.7%					
472					
31.1%					
353					
29.5%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: SB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): BA,GJ,RL
 REMARKS:

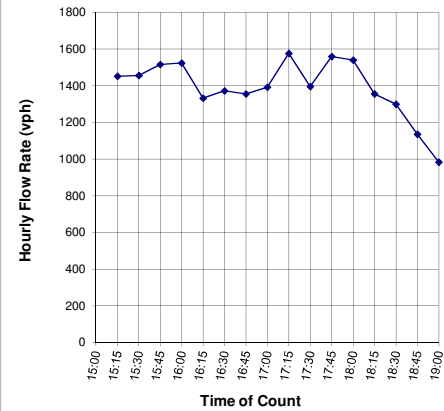
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 MIXED FLOW ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	255	79	24	0	1	4	0	0	0	0	0	0	1.38	363	1452	
15:15 - 15:30	239	92	28	0	1	4	0	0	0	0	0	0	1.44	364	1456	
15:30 - 15:45	255	88	21	0	4	10	0	0	1	0	0	0	1.38	379	1516	
15:45 - 16:00	249	100	23	0	2	7	0	0	0	0	0	0	1.41	381	1524	
16:00 - 16:15	240	72	15	1	0	4	0	0	1	0	0	0	1.36	333	1332	
16:15 - 16:30	252	75	14	1	1	0	0	0	0	0	0	0	1.34	343	1372	
16:30 - 16:45	242	76	18	0	1	2	0	0	0	0	0	0	1.35	339	1356	
16:45 - 17:00	254	69	17	1	1	6	0	0	0	0	0	0	1.35	348	1392	
17:00 - 17:15	249	106	32	1	3	3	0	0	0	0	0	0	1.49	394	1576	
17:15 - 17:30	246	80	17	1	1	4	0	0	0	0	0	0	1.38	349	1396	
17:30 - 17:45	270	103	12	0	0	3	0	0	1	0	0	1	1.45	390	1560	
17:45 - 18:00	266	104	7	1	2	5	0	0	0	0	0	0	1.34	385	1540	
18:00 - 18:15	ESTIMATED 199	123	12	0	0	4	1	0	0	0	0	0	1.46	339	1356	
18:15 - 18:30	ESTIMATED 239	68	13	0	1	4	0	0	0	0	0	0	1.32	325	1300	
18:30 - 18:45	ESTIMATED 206	58	11	0	3	5	0	0	0	0	0	0	1.31	284	1136	
18:45 - 19:00	ESTIMATED 179	51	10	0	1	5	0	0	0	0	0	0	1.32	246	984	
PEAK PERIOD 15:00 - 19:00	Totals: 3840 1344 274 6 22 70 1 0 4 0 0 1												5562			
	Percentage: 69.0% 24.2% 4.9% 0.1% 0.4% 1.3% 0.0% 0.0% 0.1% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 3840 2689 933 63 22 84 1 0 15 0 0 49												7695		Occ. 1.38	
PEAK HOUR 17:00 - 18:00	Totals: 1031 393 68 3 6 15 0 0 1 0 0 1												1518			
	Percentage: 67.9% 25.9% 4.5% 0.2% 0.4% 1.0% 0.0% 0.0% 0.1% 0.0% 0.0% 0.1%												100%			
	Vehicle Occupants: 1031 786 231 32 6 18 0 0 4 0 0 40												2148		Occ. 1.41	
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 823 300 46 0 5 18 1 0 1 0 0 0												1194			
	Percentage: 69.0% 25.2% 3.9% 0.0% 0.4% 1.5% 0.1% 0.0% 0.1% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 823 601 158 0 5 22 1 0 3 0 0 9												1620		Occ. 1.36	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
1652					
29.7%					
472					
31.1%					
353					
29.5%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: SB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): BA,GJ,RL
 REMARKS:

TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

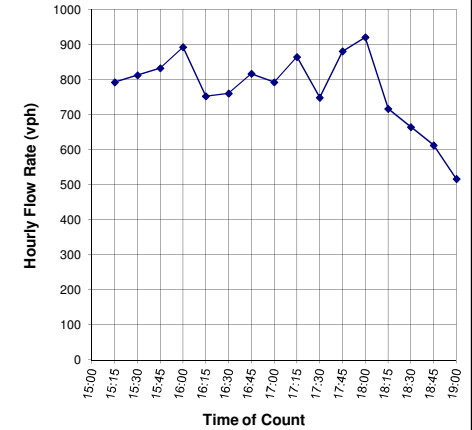
CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR

LANE #1 ONLY
 HOV LANE

VEHICLE TYPE	COUNT CLASSIFICATION													OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			VP	MISC				BUSES								
TIME	1	2	3+		MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL					
15:00 - 15:15	134	47	15	0	1	1	0	0	0	0	0	0	1.42	198	792		
15:15 - 15:30	142	43	16	0	1	1	0	0	0	0	0	0	1.40	203	812		
15:30 - 15:45	147	48	9	0	2	1	0	0	1	0	0	0	1.35	208	832		
15:45 - 16:00	142	69	10	0	1	1	0	0	0	0	0	0	1.42	223	892	832	
16:00 - 16:15	143	36	8	1	0	0	0	0	0	0	0	0	1.34	188	752	822	
16:15 - 16:30	147	41	1	1	0	0	0	0	0	0	0	0	1.28	190	760	809	
16:30 - 16:45	152	42	9	0	1	0	0	0	0	0	0	0	1.31	204	816	805	
16:45 - 17:00	147	40	8	1	0	2	0	0	0	0	0	0	1.35	198	792	780	
17:00 - 17:15	132	58	22	1	3	0	0	0	0	0	0	0	1.56	216	864	808	
17:15 - 17:30	140	41	3	1	1	1	0	0	0	0	0	0	1.31	187	748	805	
17:30 - 17:45	168	50	2	0	0	0	0	0	0	0	0	0	1.25	220	880	821	
17:45 - 18:00	172	52	3	1	2	0	0	0	0	0	0	0	1.30	230	920	853	
18:00 - 18:15	ESTIMATED	112	62	5	0	0	0	1	0	0	0	0	1.41	179	716	816	
18:15 - 18:30	ESTIMATED	127	33	5	0	1	0	0	0	0	0	0	1.28	166	664	795	
18:30 - 18:45	ESTIMATED	115	30	5	0	2	1	0	0	0	0	0	1.27	153	612	728	
18:45 - 19:00	ESTIMATED	99	26	4	0	0	0	0	0	0	0	0	1.28	129	516	627	
PEAK PERIOD 15:00 - 19:00	Totals:		2218	719	125	6	15	8	1	0	1	0	0	3092			
	Percentage:		71.7%	23.2%	4.0%	0.2%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100%			
	Vehicle Occupants:		2218	1437	424	63	15	10	1	0	5	0	0	4172	Occ.	1.35	
PEAK HOUR 17:00 - 18:00	Totals:		612	201	30	3	6	1	0	0	0	0	0	853			
	Percentage:		71.7%	23.6%	3.5%	0.4%	0.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100%			
	Vehicle Occupants:		612	402	102	32	6	1	0	0	0	0	0	1155	Occ.	1.35	
MIN. HOURLY VOL. 18:00 - 19:00	Totals:		452	152	19	0	3	1	1	0	0	0	0	627			
	Percentage:		72.2%	24.2%	3.0%	0.0%	0.5%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	100%			
	Vehicle Occupants:		452	303	64	0	3	1	1	0	1	0	0	824	Occ.	1.31	

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
866					
28.0%					
240					
28.1%					
174					
27.7%					

AM/PM PEAK: AM
 COUNTY-RTE: 65
 LOCATION: Twelve Bridges Drive
 DIRECTION: SB
 TYPE: 0
 NO. LANES COUNTED: 2
 DATE: 2/8/2012
 START TIME: 15:00
 END TIME: 19:00
 WEATHER: clear
 RECORDER(S): BA,GJ,RL
 REMARKS:

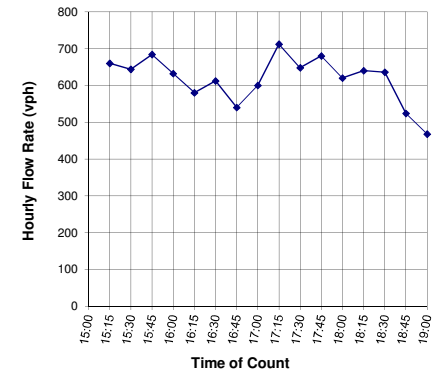
TIME INTERVAL FOR COUNT
 15 OUT OF 15 MINUTES
 IS THERE AN EXISTING HOV LANE?
 N Y/N
 HOW MANY HOURS IN COUNT?
 4 3 or 4
 DAY: Wednesday

CALIFORNIA DEPARTMENT OF TRANSPORTATION
 DISTRICT 03-OFFICE OF TRAFFIC OPERATIONS, RANCHO CORDOVA

OCCUPANCY COUNT SHEET FOR
 LANE #2 ONLY

VEHICLE TYPE	COUNT CLASSIFICATION												OCC.	(15/15) TOTAL COUNTS	FLOW RATE (vph)	HOURLY VOL
	CARS			MISC				BUSES								
TIME	1	2	3+	VP	MC	TRK	CHP	CLN AIR	EMP	QTR	HALF	FULL				
15:00 - 15:15	121	32	9	0	0	3	0	0	0	0	0	0	1.33	165	660	
15:15 - 15:30	97	49	12	0	0	3	0	0	0	0	0	0	1.49	161	644	
15:30 - 15:45	108	40	12	0	2	9	0	0	0	0	0	0	1.41	171	684	
15:45 - 16:00	107	31	13	0	1	6	0	0	0	0	0	0	1.40	158	632	
16:00 - 16:15	97	36	7	0	0	4	0	0	1	0	0	0	1.39	145	580	
16:15 - 16:30	105	34	13	0	1	0	0	0	0	0	0	0	1.43	153	612	
16:30 - 16:45	90	34	9	0	0	2	0	0	0	0	0	0	1.41	135	540	
16:45 - 17:00	107	29	9	0	1	4	0	0	0	0	0	0	1.34	150	600	
17:00 - 17:15	117	48	10	0	0	3	0	0	0	0	0	0	1.41	178	712	
17:15 - 17:30	106	39	14	0	0	3	0	0	0	0	0	0	1.45	162	648	
17:30 - 17:45	102	53	10	0	0	3	0	0	1	0	0	1	1.70	170	680	
17:45 - 18:00	94	52	4	0	0	5	0	0	0	0	0	0	1.40	155	620	
18:00 - 18:15	ESTIMATED 87	61	7	0	0	4	0	0	0	0	0	0	1.52	160	640	
18:15 - 18:30	ESTIMATED 111	35	8	0	0	4	0	0	0	0	0	0	1.37	159	636	
18:30 - 18:45	ESTIMATED 91	28	7	0	1	4	0	0	0	0	0	0	1.37	131	524	
18:45 - 19:00	ESTIMATED 80	25	6	0	1	5	0	0	0	0	0	0	1.36	117	468	
PEAK PERIOD 15:00 - 19:00	Totals: 1620 627 151 0 7 62 0 0 3 0 0 1												2470			
	Percentage: 65.6% 25.4% 6.1% 0.0% 0.3% 2.5% 0.0% 0.0% 0.1% 0.0% 0.0% 0.1%												100%			
	Vehicle Occupants: 1620 1254 512 0 7 74 0 0 10 0 0 49												3526	Occ. 1.43		
PEAK HOUR 17:00 - 18:00	Totals: 419 192 38 0 0 14 0 0 1 0 0 1												665			
	Percentage: 63.0% 28.9% 5.7% 0.0% 0.0% 2.1% 0.0% 0.0% 0.2% 0.0% 0.0% 0.2%												100%			
	Vehicle Occupants: 419 384 129 0 0 17 0 0 4 0 0 40												993	Occ. 1.49		
MIN. HOURLY VOL. 18:00 - 19:00	Totals: 369 150 29 0 2 17 0 0 1 0 0 0												567			
	Percentage: 65.1% 26.4% 5.0% 0.0% 0.4% 3.0% 0.0% 0.0% 0.1% 0.0% 0.0% 0.0%												100%			
	Vehicle Occupants: 369 300 97 0 2 20 0 0 2 0 0 9												799	Occ. 1.41		

HOURLY FLOW RATES



HOV-RELATED INFORMATION

HOV's in the Lane(s)	HOVL Volume	%HOVL Vol. of Total Vol.	HOV'S in Mix Flow Lanes	Violators in the HOV Lane	Compliance of the Non-HOV's
788					
31.9%					
232					
34.9%					
181					
31.9%					

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-005 I-80 EB on from Auburn
Site Code : 00000000
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

Start Time	Southbound				I-80 eastbound on-ramp from Auburn Blvd. Westbound				Northbound				I-80 eastbound on-ramp from Auburn Blvd. Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Autos	Trucks	App. Total		
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	5	55	55
06:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	5	73	73
06:30	0	0	0	0	0	0	0	0	0	0	0	0	0	94	4	98	98	
06:45	0	0	0	0	0	0	0	0	0	0	0	0	0	108	3	111	111	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	320	17	337	337	
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	124	5	129	129	
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	160	8	168	168	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	218	4	222	222	
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	232	6	238	238	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	734	23	757	757	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	187	3	190	190	
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	177	6	183	183	
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	174	4	178	178	
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	156	6	162	162	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	694	19	713	713	
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	164	5	169	169	
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	114	6	120	120	
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	133	2	135	135	
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	140	3	143	143	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	551	16	567	567	
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	175	2	177	177	
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	181	3	184	184	
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	169	3	172	172	
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	172	2	174	174	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	697	10	707	707	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	200	1	201	201	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	192	2	194	194	

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-005 I-80 EB on from Auburn
Site Code : 00000000
Start Date : 1/31/2012
Page No : 2

Groups Printed- Unshifted

Start Time	Southbound				I-80 eastbound on-ramp from Auburn Blvd. Westbound				Northbound				I-80 eastbound on-ramp from Auburn Blvd. Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Autos	Trucks	App. Total	
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	182	5	187	187
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	169	1	170	170
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	743	9	752	752
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	160	1	161	161
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	158	4	162	162
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	164	2	166	166
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	156	3	159	159
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	638	10	648	648
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	144	1	145	145
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	139	0	139	139
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	118	0	118	118
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	115	1	116	116
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	516	2	518	518
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	4893	106	4999	4999
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	97.9	2.1		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	97.9	2.1	100	

Start Time	Southbound				I-80 eastbound on-ramp from Auburn Blvd. Westbound				Northbound				I-80 eastbound on-ramp from Auburn Blvd. Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Autos	Trucks	App. Total	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	218	4	222	222
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	232	6	238	238
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	187	3	190	190
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	177	6	183	183
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	814	19	833	833
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	97.7	2.3		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.877	.792	.875	.875

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-005 I-80 EB on from Auburn
Site Code : 00000000
Start Date : 1/31/2012
Page No : 3

Start Time	Southbound				I-80 eastbound on-ramp from Auburn Blvd. Westbound				Northbound				I-80 eastbound on-ramp from Auburn Blvd. Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Autos	Trucks	App. Total		
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 15:45																		
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172	2	174	174
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	1	201	201
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192	2	194	194
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182	5	187	187
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	746	10	756	756
% App. Total	0	0	0		0	0	0		0	0	0		0	98.7	1.3			
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.933	.500	.940	.940

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-004 I-80 WB on from Taylor
Site Code : 00000000
Start Date : 1/31/2012
Page No : 2

Groups Printed- Unshifted

Start Time	Southbound				I-80 westbound on-ramp from Taylor Road Westbound				Northbound				I-80 westbound on-ramp from Taylor Road Eastbound				Int. Total	
	Left	Thru	Right	App. Total		Autos	Trucks	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
16:30	0	0	0	0	0	110	0	110	0	0	0	0	0	0	0	0	0	110
16:45	0	0	0	0	0	117	3	120	0	0	0	0	0	0	0	0	0	120
Total	0	0	0	0	0	432	6	438	0	0	0	0	0	0	0	0	0	438
17:00	0	0	0	0	0	139	0	139	0	0	0	0	0	0	0	0	0	139
17:15	0	0	0	0	0	122	0	122	0	0	0	0	0	0	0	0	0	122
17:30	0	0	0	0	0	101	1	102	0	0	0	0	0	0	0	0	0	102
17:45	0	0	0	0	0	97	0	97	0	0	0	0	0	0	0	0	0	97
Total	0	0	0	0	0	459	1	460	0	0	0	0	0	0	0	0	0	460
18:00	0	0	0	0	0	84	1	85	0	0	0	0	0	0	0	0	0	85
18:15	0	0	0	0	0	81	0	81	0	0	0	0	0	0	0	0	0	81
18:30	0	0	0	0	0	60	0	60	0	0	0	0	0	0	0	0	0	60
18:45	0	0	0	0	0	59	1	60	0	0	0	0	0	0	0	0	0	60
Total	0	0	0	0	0	284	2	286	0	0	0	0	0	0	0	0	0	286
Grand Total	0	0	0	0	0	3395	46	3441	0	0	0	0	0	0	0	0	0	3441
Apprch %	0	0	0	0	0	98.7	1.3		0	0	0	0	0	0	0	0	0	
Total %	0	0	0	0	0	98.7	1.3	100	0	0	0	0	0	0	0	0	0	

Start Time	Southbound				I-80 westbound on-ramp from Taylor Road Westbound				Northbound				I-80 westbound on-ramp from Taylor Road Eastbound				Int. Total	
	Left	Thru	Right	App. Total		Autos	Trucks	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
06:45	0	0	0	0	0	127	3	130	0	0	0	0	0	0	0	0	0	130
07:00	0	0	0	0	0	161	0	161	0	0	0	0	0	0	0	0	0	161
07:15	0	0	0	0	0	133	0	133	0	0	0	0	0	0	0	0	0	133
07:30	0	0	0	0	0	132	3	135	0	0	0	0	0	0	0	0	0	135
Total Volume	0	0	0	0	0	553	6	559	0	0	0	0	0	0	0	0	0	559
% App. Total	0	0	0	0	0	98.9	1.1		0	0	0	0	0	0	0	0	0	
PHF	.000	.000	.000	.000	.000	.859	.500	.868	.000	.000	.000	.000	.000	.000	.000	.000	.000	.868

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 06:45

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-003 I-80 EB off to Taylor
Site Code : 00000000
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

Start Time	Southbound				I-80 eastbound off-ramp to Taylor Road Westbound				Northbound				I-80 eastbound off-ramp to Taylor Road Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Autos	Trucks	App. Total		
06:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	14	14
06:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	0	20	20
06:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33	1	34	34
06:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	0	44	44
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	1	112	112
07:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	2	37	37
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	1	43	43
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	2	47	47
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	65	1	66	66
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	187	6	193	193
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	0	62	62
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	1	57	57
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	0	44	44
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	1	63	63
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	224	2	226	226
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	62	0	62	62
09:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	1	45	45
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57	3	60	60
09:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	2	46	46
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	207	6	213	213
15:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	4	84	84
15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	95	1	96	96
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	88	1	89	89
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	119	1	120	120
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	382	7	389	389
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	115	1	116	116
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107	0	107	107

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-003 I-80 EB off to Taylor
Site Code : 00000000
Start Date : 1/31/2012
Page No : 2

Groups Printed- Unshifted

Start Time	Southbound				I-80 eastbound off-ramp to Taylor Road Westbound				Northbound				I-80 eastbound off-ramp to Taylor Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Autos	Trucks	App. Total	
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	112	2	114	114
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	113	0	113	113
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	447	3	450	450
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	130	0	130	130
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	165	0	165	165
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	136	1	137	137
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	136	0	136	136
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	567	1	568	568
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	115	0	115	115
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	105	0	105	105
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	100	2	102	102
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	79	1	80	80
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	399	3	402	402
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2524	29	2553	2553
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	98.9	1.1		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	98.9	1.1	100	

Start Time	Southbound				I-80 eastbound off-ramp to Taylor Road Westbound				Northbound				I-80 eastbound off-ramp to Taylor Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Autos	Trucks	App. Total	
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	45	2	47	47
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	65	1	66	66
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	62	0	62	62
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	56	1	57	57
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	228	4	232	232
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	98.3	1.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.877	.500	.879	.879

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-003 I-80 EB off to Taylor
Site Code : 00000000
Start Date : 1/31/2012
Page No : 3

Start Time	Southbound				I-80 eastbound off-ramp to Taylor Road Westbound				Northbound				I-80 eastbound off-ramp to Taylor Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Autos	Trucks	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	130	0	130	130
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	165	0	165	165
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	136	1	137	137
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	136	0	136	136
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	567	1	568	568
% App. Total	0	0	0		0	0	0		0	0	0		0	99.8	0.2		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.859	.250	.861	.861

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-002 SR-65 SB to I-80 WB
Site Code : 00000000
Start Date : 1/31/2012
Page No : 2

Groups Printed- Unshifted

Start Time	SR-65 southbound to I-80 westbound Southbound				Westbound				SR-65 southbound to I-80 westbound Northbound				Eastbound				Int. Total	
	Autos	Trucks	App. Total		Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
16:30	0	612	5	617	0	0	0	0	0	0	0	0	0	0	0	0	0	617
16:45	0	619	9	628	0	0	0	0	0	0	0	0	0	0	0	0	0	628
Total	0	2491	29	2520	0	0	0	0	0	0	0	0	0	0	0	0	0	2520
17:00	0	630	8	638	0	0	0	0	0	0	0	0	0	0	0	0	0	638
17:15	0	607	7	614	0	0	0	0	0	0	0	0	0	0	0	0	0	614
17:30	0	532	8	540	0	0	0	0	0	0	0	0	0	0	0	0	0	540
17:45	0	566	6	572	0	0	0	0	0	0	0	0	0	0	0	0	0	572
Total	0	2335	29	2364	0	0	0	0	0	0	0	0	0	0	0	0	0	2364
18:00	0	538	4	542	0	0	0	0	0	0	0	0	0	0	0	0	0	542
18:15	0	548	5	553	0	0	0	0	0	0	0	0	0	0	0	0	0	553
18:30	0	469	5	474	0	0	0	0	0	0	0	0	0	0	0	0	0	474
18:45	0	457	3	460	0	0	0	0	0	0	0	0	0	0	0	0	0	460
Total	0	2012	17	2029	0	0	0	0	0	0	0	0	0	0	0	0	0	2029
Grand Total	0	19875	430	20305	0	0	0	0	0	0	0	0	0	0	0	0	0	20305
Apprch %	0	97.9	2.1		0	0	0		0	0	0		0	0	0			
Total %	0	97.9	2.1	100	0	0	0		0	0	0		0	0	0			

Start Time	SR-65 southbound to I-80 westbound Southbound				Westbound				SR-65 southbound to I-80 westbound Northbound				Eastbound				Int. Total	
	Autos	Trucks	App. Total		Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total		
06:15	0	773	13	786	0	0	0	0	0	0	0	0	0	0	0	0	0	786
06:30	0	803	12	815	0	0	0	0	0	0	0	0	0	0	0	0	0	815
06:45	0	814	18	832	0	0	0	0	0	0	0	0	0	0	0	0	0	832
07:00	0	804	20	824	0	0	0	0	0	0	0	0	0	0	0	0	0	824
Total Volume	0	3194	63	3257	0	0	0	0	0	0	0	0	0	0	0	0	0	3257
% App. Total	0	98.1	1.9		0	0	0		0	0	0		0	0	0			
PHF	.000	.981	.788	.979	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.979

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 06:15

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-001 I-80 EB to SR-65 NB
Site Code : 00000000
Start Date : 1/31/2012
Page No : 1

Groups Printed- Unshifted

Start Time	I-80 eastbound to SR-65 northbound Southbound				Westbound				I-80 eastbound to SR-65 northbound Northbound				Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Autos	Trucks	App. Total	Left	Thru	Right	App. Total			
06:00	0	0	0	0	0	0	0	0	0	0	218	7	225	0	0	0	0	225
06:15	0	0	0	0	0	0	0	0	0	0	283	9	292	0	0	0	0	292
06:30	0	0	0	0	0	0	0	0	0	0	364	11	375	0	0	0	0	375
06:45	0	0	0	0	0	0	0	0	0	0	472	15	487	0	0	0	0	487
Total	0	0	0	0	0	0	0	0	0	0	1337	42	1379	0	0	0	0	1379
07:00	0	0	0	0	0	0	0	0	0	0	369	24	393	0	0	0	0	393
07:15	0	0	0	0	0	0	0	0	0	0	513	20	533	0	0	0	0	533
07:30	0	0	0	0	0	0	0	0	0	0	663	23	686	0	0	0	0	686
07:45	0	0	0	0	0	0	0	0	0	0	733	18	751	0	0	0	0	751
Total	0	0	0	0	0	0	0	0	0	0	2278	85	2363	0	0	0	0	2363
08:00	0	0	0	0	0	0	0	0	0	0	585	21	606	0	0	0	0	606
08:15	0	0	0	0	0	0	0	0	0	0	580	26	606	0	0	0	0	606
08:30	0	0	0	0	0	0	0	0	0	0	536	21	557	0	0	0	0	557
08:45	0	0	0	0	0	0	0	0	0	0	602	17	619	0	0	0	0	619
Total	0	0	0	0	0	0	0	0	0	0	2303	85	2388	0	0	0	0	2388
09:00	0	0	0	0	0	0	0	0	0	0	508	23	531	0	0	0	0	531
09:15	0	0	0	0	0	0	0	0	0	0	486	27	513	0	0	0	0	513
09:30	0	0	0	0	0	0	0	0	0	0	536	25	561	0	0	0	0	561
09:45	0	0	0	0	0	0	0	0	0	0	506	31	537	0	0	0	0	537
Total	0	0	0	0	0	0	0	0	0	0	2036	106	2142	0	0	0	0	2142
15:00	0	0	0	0	0	0	0	0	0	0	661	5	666	0	0	0	0	666
15:15	0	0	0	0	0	0	0	0	0	0	780	8	788	0	0	0	0	788
15:30	0	0	0	0	0	0	0	0	0	0	763	6	769	0	0	0	0	769
15:45	0	0	0	0	0	0	0	0	0	0	832	7	839	0	0	0	0	839
Total	0	0	0	0	0	0	0	0	0	0	3036	26	3062	0	0	0	0	3062
16:00	0	0	0	0	0	0	0	0	0	0	831	9	840	0	0	0	0	840
16:15	0	0	0	0	0	0	0	0	0	0	844	16	860	0	0	0	0	860
16:30	0	0	0	0	0	0	0	0	0	0	833	3	836	0	0	0	0	836

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-001 I-80 EB to SR-65 NB
Site Code : 00000000
Start Date : 1/31/2012
Page No : 2

Groups Printed- Unshifted

Start Time	I-80 eastbound to SR-65 northbound Southbound				Westbound				I-80 eastbound to SR-65 northbound Northbound			Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Autos	Trucks	App. Total	Left	Thru	Right	App. Total		
16:45	0	0	0	0	0	0	0	0	0	842	4	846	0	0	0	0	846
Total	0	0	0	0	0	0	0	0	0	3350	32	3382	0	0	0	0	3382
17:00	0	0	0	0	0	0	0	0	0	784	5	789	0	0	0	0	789
17:15	0	0	0	0	0	0	0	0	0	770	7	777	0	0	0	0	777
17:30	0	0	0	0	0	0	0	0	0	731	5	736	0	0	0	0	736
17:45	0	0	0	0	0	0	0	0	0	688	1	689	0	0	0	0	689
Total	0	0	0	0	0	0	0	0	0	2973	18	2991	0	0	0	0	2991
18:00	0	0	0	0	0	0	0	0	0	757	5	762	0	0	0	0	762
18:15	0	0	0	0	0	0	0	0	0	647	3	650	0	0	0	0	650
18:30	0	0	0	0	0	0	0	0	0	796	1	797	0	0	0	0	797
18:45	0	0	0	0	0	0	0	0	0	603	2	605	0	0	0	0	605
Total	0	0	0	0	0	0	0	0	0	2803	11	2814	0	0	0	0	2814
Grand Total	0	0	0	0	0	0	0	0	0	20116	405	20521	0	0	0	0	20521
Apprch %	0	0	0	0	0	0	0	0	0	98	2		0	0	0		
Total %	0	0	0	0	0	0	0	0	0	98	2	100	0	0	0	0	

Start Time	I-80 eastbound to SR-65 northbound Southbound				Westbound				I-80 eastbound to SR-65 northbound Northbound			Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Autos	Trucks	App. Total	Left	Thru	Right	App. Total		
07:30	0	0	0	0	0	0	0	0	0	663	23	686	0	0	0	0	686
07:45	0	0	0	0	0	0	0	0	0	733	18	751	0	0	0	0	751
08:00	0	0	0	0	0	0	0	0	0	585	21	606	0	0	0	0	606
08:15	0	0	0	0	0	0	0	0	0	580	26	606	0	0	0	0	606
Total Volume	0	0	0	0	0	0	0	0	0	2561	88	2649	0	0	0	0	2649
% App. Total	0	0	0	0	0	0	0	0	0	96.7	3.3		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.873	.846	.882	.000	.000	.000	.000	.882

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700

Placer County
7-10AM from 2/14/2012

File Name : 12-7002-001 I-80 EB to SR-65 NB
Site Code : 00000000
Start Date : 1/31/2012
Page No : 3

Start Time	I-80 eastbound to SR-65 northbound Southbound				Westbound				I-80 eastbound to SR-65 northbound Northbound			Eastbound				Int. Total	
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Autos	Trucks	App. Total	Left	Thru	Right	App. Total		
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:00																	
16:00	0	0	0	0	0	0	0	0	0	831	9	840	0	0	0	0	840
16:15	0	0	0	0	0	0	0	0	0	844	16	860	0	0	0	0	860
16:30	0	0	0	0	0	0	0	0	0	833	3	836	0	0	0	0	836
16:45	0	0	0	0	0	0	0	0	0	842	4	846	0	0	0	0	846
Total Volume	0	0	0	0	0	0	0	0	0	3350	32	3382	0	0	0	0	3382
% App. Total	0	0	0	0	0	0	0	0	0	99.1	0.9		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.992	.500	.983	.000	.000	.000	.000	.983

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-001 SR65-Sterling
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound				Sterling Parkway Westbound				SR-65 Northbound				Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	185	0	185	147	0	0	147	0	143	19	162	0	0	0	0	494
06:15	1	241	0	242	213	0	1	214	0	154	29	183	0	0	0	0	639
06:30	0	237	0	237	261	0	0	261	0	150	45	195	0	0	0	0	693
06:45	2	330	0	332	201	0	3	204	0	180	57	237	0	0	0	0	773
Total	3	993	0	996	822	0	4	826	0	627	150	777	0	0	0	0	2599
07:00	0	270	0	270	275	0	3	278	0	191	47	238	0	0	0	0	786
07:15	0	325	0	325	251	0	1	252	0	218	54	272	0	0	0	0	849
07:30	2	345	0	347	275	0	2	277	0	196	50	246	0	0	0	0	870
07:45	4	438	0	442	255	0	4	259	0	328	103	431	0	0	0	0	1132
Total	6	1378	0	1384	1056	0	10	1066	0	933	254	1187	0	0	0	0	3637
08:00	4	351	0	355	255	0	10	265	0	235	103	338	0	0	0	0	958
08:15	7	336	0	343	259	0	1	260	0	204	86	290	0	0	0	0	893
08:30	7	321	0	328	227	0	5	232	0	224	89	313	0	0	0	0	873
08:45	7	288	0	295	179	0	4	183	0	228	83	311	0	0	0	0	789
Total	25	1296	0	1321	920	0	20	940	0	891	361	1252	0	0	0	0	3513
09:00	11	252	0	263	170	0	4	174	0	183	62	245	0	0	0	0	682
09:15	10	230	0	240	180	0	8	188	0	203	68	271	0	0	0	0	699
09:30	7	279	0	286	172	0	7	179	0	193	64	257	0	0	0	0	722
09:45	16	260	0	276	120	0	6	126	0	212	78	290	0	0	0	0	692
Total	44	1021	0	1065	642	0	25	667	0	791	272	1063	0	0	0	0	2795
15:00	7	314	0	321	136	0	17	153	0	312	157	469	0	0	0	0	943
15:15	5	294	0	299	131	0	7	138	0	399	169	568	0	0	0	0	1005
15:30	8	313	0	321	142	0	6	148	0	345	164	509	0	0	0	0	978
15:45	7	289	0	296	130	0	6	136	0	342	186	528	0	0	0	0	960
Total	27	1210	0	1237	539	0	36	575	0	1398	676	2074	0	0	0	0	3886
16:00	8	267	0	275	136	0	9	145	0	342	165	507	0	0	0	0	927
16:15	9	289	0	298	119	0	5	124	0	381	206	587	0	0	0	0	1009
16:30	16	306	0	322	125	0	6	131	0	363	193	556	0	0	0	0	1009

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-001 SR65-Sterling
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound				Sterling Parkway Westbound				SR-65 Northbound				Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	6	280	0	286	122	0	7	129	0	382	230	612	0	0	0	0	1027
Total	39	1142	0	1181	502	0	27	529	0	1468	794	2262	0	0	0	0	3972
17:00	8	295	0	303	152	0	9	161	0	324	191	515	0	0	0	0	979
17:15	4	272	0	276	130	0	2	132	0	385	231	616	0	0	0	0	1024
17:30	4	280	0	284	162	0	6	168	0	376	243	619	0	0	0	0	1071
17:45	4	285	0	289	136	0	6	142	0	337	231	568	0	0	0	0	999
Total	20	1132	0	1152	580	0	23	603	0	1422	896	2318	0	0	0	0	4073
18:00	5	257	0	262	134	0	6	140	0	308	202	510	0	0	0	0	912
18:15	1	230	0	231	141	0	14	155	0	328	203	531	0	0	0	0	917
18:30	8	202	0	210	113	0	9	122	0	295	186	481	0	0	0	0	813
18:45	6	175	0	181	75	0	2	77	0	255	188	443	0	0	0	0	701
Total	20	864	0	884	463	0	31	494	0	1186	779	1965	0	0	0	0	3343
Grand Total	184	9036	0	9220	5524	0	176	5700	0	8716	4182	12898	0	0	0	0	27818
Apprch %	2	98	0		96.9	0	3.1		0	67.6	32.4		0	0	0		
Total %	0.7	32.5	0	33.1	19.9	0	0.6	20.5	0	31.3	15	46.4	0	0	0	0	
Unshifted	181	8754	0	8935	5459	0	169	5628	0	8411	4086	12497	0	0	0	0	27060
% Unshifted	98.4	96.9	0	96.9	98.8	0	96	98.7	0	96.5	97.7	96.9	0	0	0	0	97.3
Bank 2	3	282	0	285	65	0	7	72	0	305	96	401	0	0	0	0	758
% Bank 2	1.6	3.1	0	3.1	1.2	0	4	1.3	0	3.5	2.3	3.1	0	0	0	0	2.7

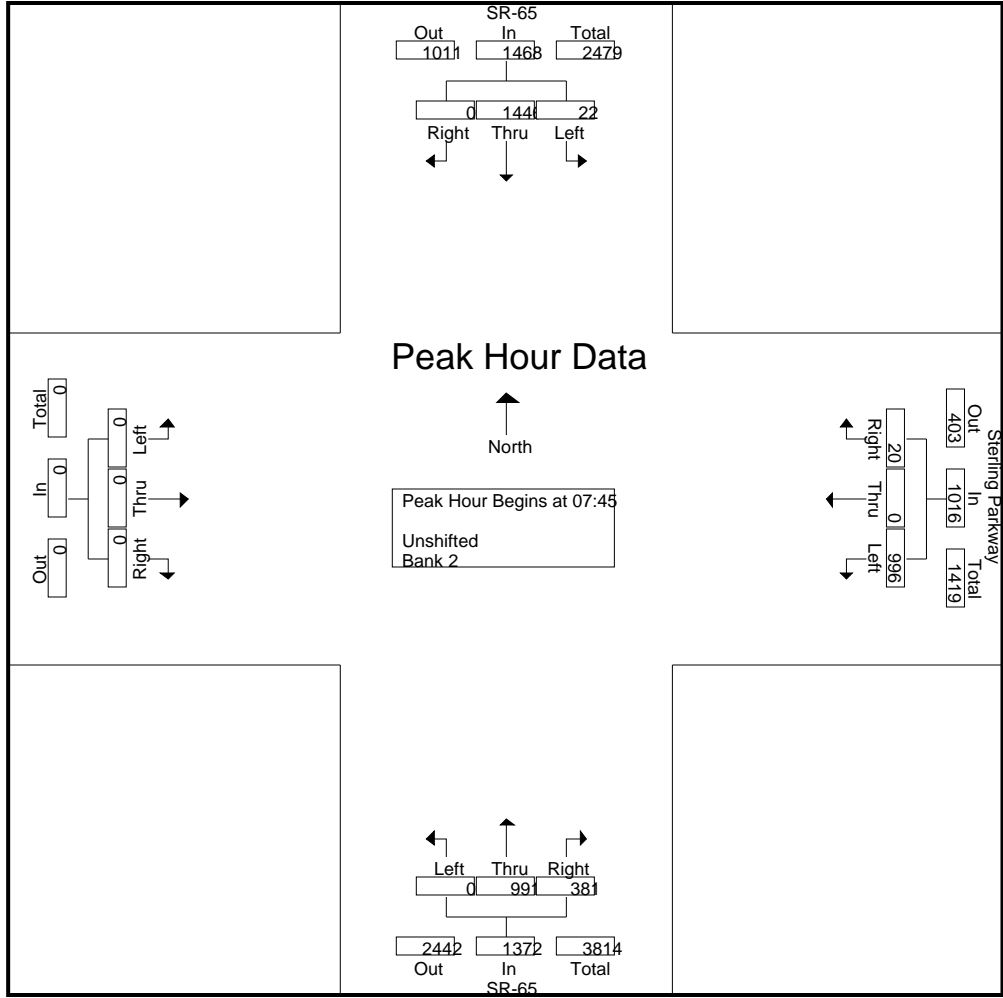
Start Time	SR-65 Southbound				Sterling Parkway Westbound				SR-65 Northbound				Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45																	
07:45	4	438	0	442	255	0	4	259	0	328	103	431	0	0	0	0	1132
08:00	4	351	0	355	255	0	10	265	0	235	103	338	0	0	0	0	958
08:15	7	336	0	343	259	0	1	260	0	204	86	290	0	0	0	0	893
08:30	7	321	0	328	227	0	5	232	0	224	89	313	0	0	0	0	873
Total Volume	22	1446	0	1468	996	0	20	1016	0	991	381	1372	0	0	0	0	3856
% App. Total	1.5	98.5	0		98	0	2		0	72.2	27.8		0	0	0		
PHF	.786	.825	.000	.830	.961	.000	.500	.958	.000	.755	.925	.796	.000	.000	.000	.000	.852

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-001 SR65-Sterling
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-001 SR65-Sterling
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

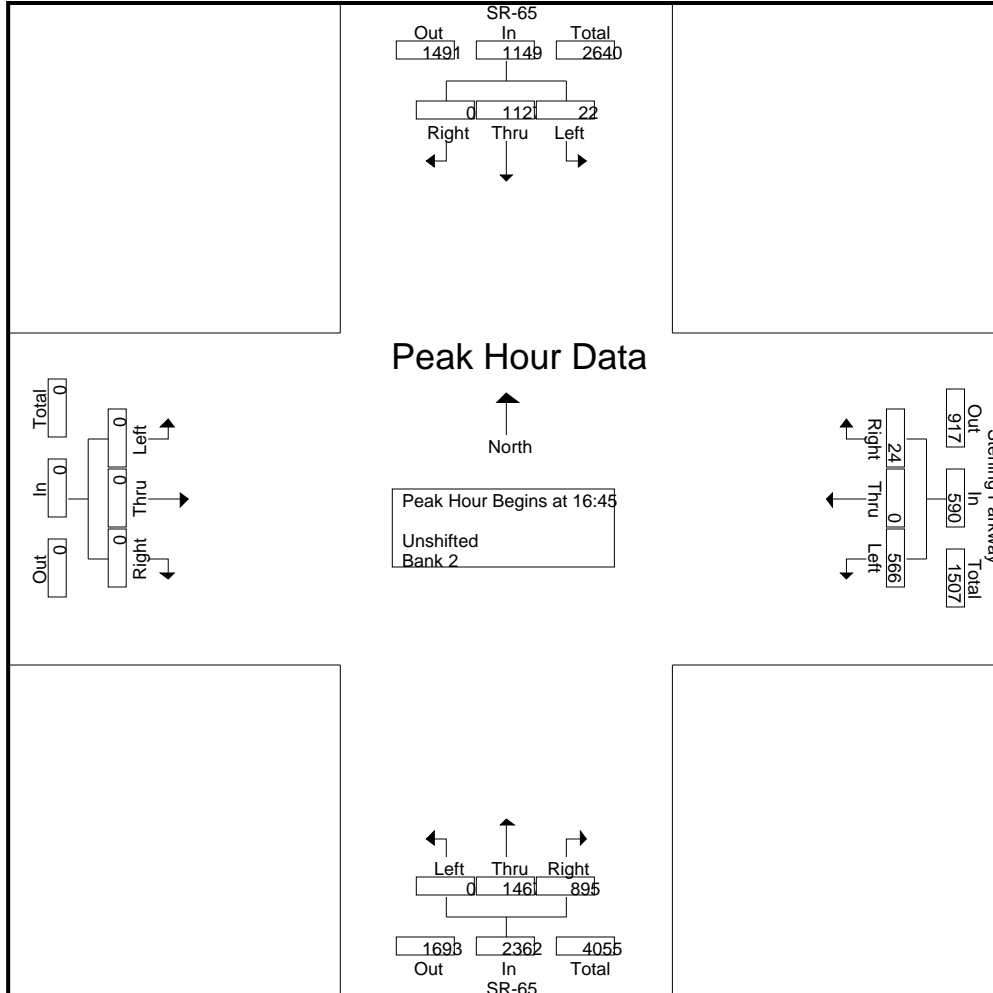
Start Time	SR-65 Southbound				Sterling Parkway Westbound				SR-65 Northbound				Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	6	280	0	286	122	0	7	129	0	382	230	612	0	0	0	0	1027
17:00	8	295	0	303	152	0	9	161	0	324	191	515	0	0	0	0	979
17:15	4	272	0	276	130	0	2	132	0	385	231	616	0	0	0	0	1024
17:30	4	280	0	284	162	0	6	168	0	376	243	619	0	0	0	0	1071
Total Volume	22	1127	0	1149	566	0	24	590	0	1467	895	2362	0	0	0	0	4101
% App. Total	1.9	98.1	0		95.9	0	4.1		0	62.1	37.9		0	0	0		
PHF	.688	.955	.000	.948	.873	.000	.667	.878	.000	.953	.921	.954	.000	.000	.000	.000	.957

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-001 SR65-Sterling
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-003 SR65 SB-Twelve Bridges
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound Ramps Southbound				Twelve Bridges Drive Westbound				SR-65 Southbound Ramps Northbound				Twelve Bridges Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	2	0	22	24	0	9	69	78	1	1	0	2	3	5	0	8	112
06:15	3	0	17	20	0	5	66	71	0	0	0	0	5	4	0	9	100
06:30	4	0	26	30	0	9	91	100	0	0	0	0	3	9	0	12	142
06:45	11	0	21	32	0	21	93	114	0	0	0	0	3	16	2	21	167
Total	20	0	86	106	0	44	319	363	1	1	0	2	14	34	2	50	521
07:00	16	0	28	44	0	21	106	127	0	0	0	0	1	22	0	23	194
07:15	34	0	43	77	0	20	126	146	0	0	0	0	4	27	0	31	254
07:30	37	0	39	76	0	32	128	160	0	0	0	0	2	35	0	37	273
07:45	68	0	45	113	0	30	155	185	0	0	0	0	3	44	0	47	345
Total	155	0	155	310	0	103	515	618	0	0	0	0	10	128	0	138	1066
08:00	32	0	27	59	0	45	169	214	0	0	0	0	4	51	0	55	328
08:15	37	0	34	71	0	33	142	175	0	0	0	0	1	37	0	38	284
08:30	25	0	30	55	0	27	109	136	0	0	0	0	3	35	0	38	229
08:45	27	0	23	50	0	32	112	144	0	0	0	0	3	47	0	50	244
Total	121	0	114	235	0	137	532	669	0	0	0	0	11	170	0	181	1085
09:00	26	0	23	49	0	22	134	156	0	0	0	0	5	27	0	32	237
09:15	19	0	29	48	0	35	110	145	0	0	0	0	2	37	0	39	232
09:30	29	0	30	59	0	34	134	168	0	0	0	0	2	26	0	28	255
09:45	28	0	30	58	0	37	127	164	0	0	0	0	10	33	0	43	265
Total	102	0	112	214	0	128	505	633	0	0	0	0	19	123	0	142	989
15:00	49	0	29	78	0	39	123	162	0	0	0	0	12	77	0	89	329
15:15	46	0	35	81	0	41	117	158	0	0	0	0	12	59	0	71	310
15:30	35	0	34	69	0	38	96	134	0	0	0	0	15	72	0	87	290
15:45	29	0	27	56	0	27	99	126	0	0	0	0	9	73	0	82	264
Total	159	0	125	284	0	145	435	580	0	0	0	0	48	281	0	329	1193
16:00	17	0	29	46	0	54	82	136	0	0	0	0	15	83	0	98	280
16:15	22	0	45	67	0	46	109	155	0	0	0	0	9	60	0	69	291
16:30	37	0	31	68	0	28	81	109	0	0	0	0	7	65	0	72	249

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-003 SR65 SB-Twelve Bridges
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound Ramps Southbound				Twelve Bridges Drive Westbound				SR-65 Southbound Ramps Northbound				Twelve Bridges Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	27	2	24	53	0	33	79	112	0	0	0	0	7	67	0	74	239
Total	103	2	129	234	0	161	351	512	0	0	0	0	38	275	0	313	1059
17:00	24	0	26	50	0	37	105	142	0	0	0	0	6	77	0	83	275
17:15	28	0	16	44	0	32	82	114	0	0	0	0	11	87	0	98	256
17:30	29	0	22	51	0	27	79	106	0	0	0	0	10	112	0	122	279
17:45	20	0	17	37	0	23	75	98	0	0	0	0	4	73	0	77	212
Total	101	0	81	182	0	119	341	460	0	0	0	0	31	349	0	380	1022
18:00	33	0	19	52	0	27	71	98	0	0	0	0	7	49	0	56	206
18:15	19	0	25	44	0	18	62	80	0	0	0	0	9	68	0	77	201
18:30	11	0	18	29	0	34	64	98	0	0	0	0	6	48	0	54	181
18:45	17	0	15	32	0	23	47	70	0	0	0	0	9	44	0	53	155
Total	80	0	77	157	0	102	244	346	0	0	0	0	31	209	0	240	743
Grand Total	841	2	879	1722	0	939	3242	4181	1	1	0	2	202	1569	2	1773	7678
Apprch %	48.8	0.1	51		0	22.5	77.5		50	50	0		11.4	88.5	0.1		
Total %	11	0	11.4	22.4	0	12.2	42.2	54.5	0	0	0	0	2.6	20.4	0	23.1	
Unshifted	834	0	847	1681	0	930	3231	4161	0	0	0	0	194	1538	0	1732	7574
% Unshifted	99.2	0	96.4	97.6	0	99	99.7	99.5	0	0	0	0	96	98	0	97.7	98.6
Bank 2	7	2	32	41	0	9	11	20	1	1	0	2	8	31	2	41	104
% Bank 2	0.8	100	3.6	2.4	0	1	0.3	0.5	100	100	0	100	4	2	100	2.3	1.4

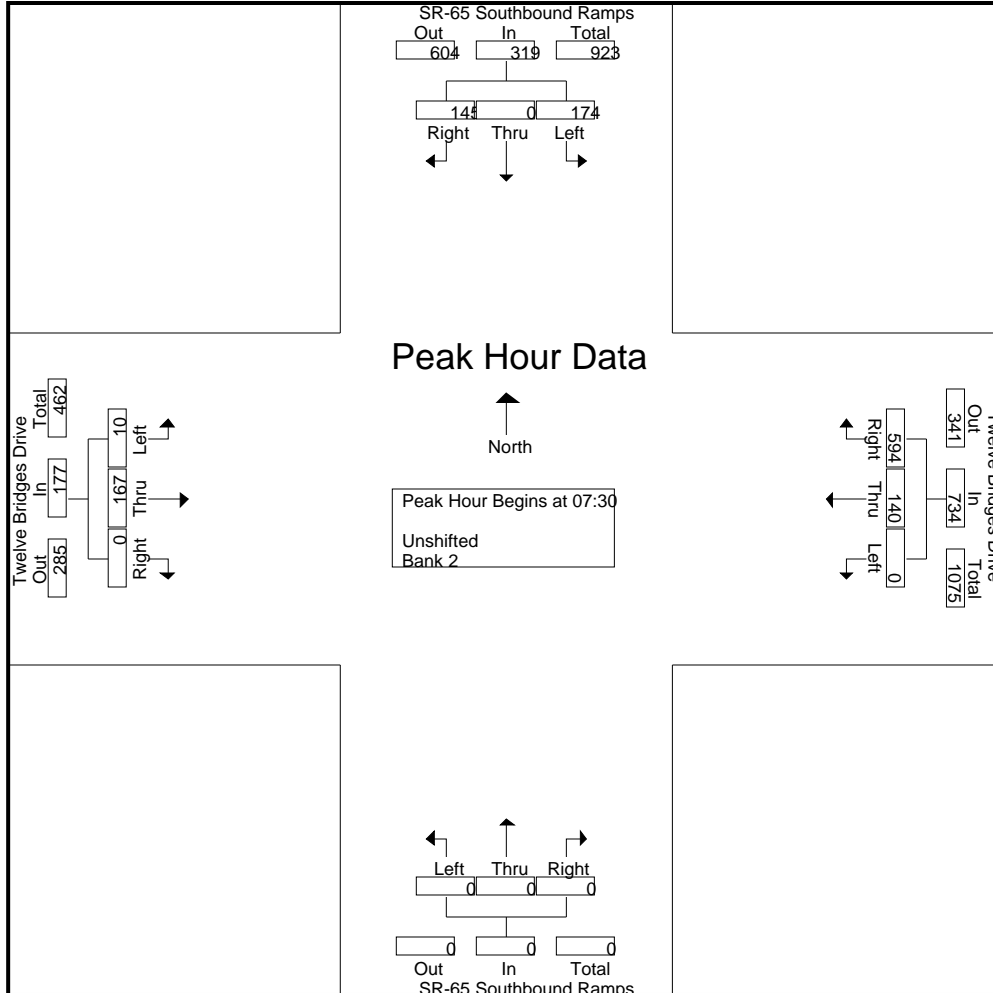
Start Time	SR-65 Southbound Ramps Southbound				Twelve Bridges Drive Westbound				SR-65 Southbound Ramps Northbound				Twelve Bridges Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	37	0	39	76	0	32	128	160	0	0	0	0	2	35	0	37	273
07:45	68	0	45	113	0	30	155	185	0	0	0	0	3	44	0	47	345
08:00	32	0	27	59	0	45	169	214	0	0	0	0	4	51	0	55	328
08:15	37	0	34	71	0	33	142	175	0	0	0	0	1	37	0	38	284
Total Volume	174	0	145	319	0	140	594	734	0	0	0	0	10	167	0	177	1230
% App. Total	54.5	0	45.5		0	19.1	80.9		0	0	0		5.6	94.4	0		
PHF	.640	.000	.806	.706	.000	.778	.879	.857	.000	.000	.000	.000	.625	.819	.000	.805	.891

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-003 SR65 SB-Twelve Bridges
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-003 SR65 SB-Twelve Bridges
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

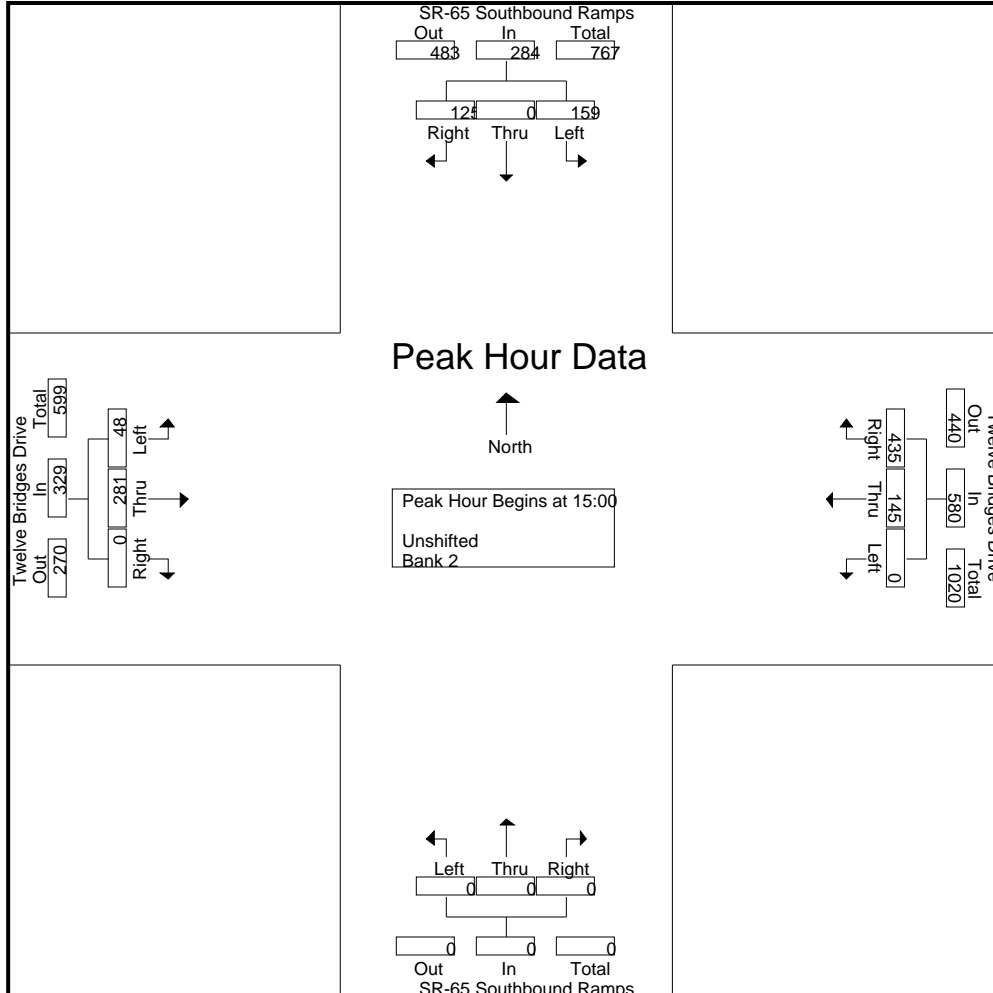
Start Time	SR-65 Southbound Ramps Southbound				Twelve Bridges Drive Westbound				SR-65 Southbound Ramps Northbound				Twelve Bridges Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:00																	
15:00	49	0	29	78	0	39	123	162	0	0	0	0	12	77	0	89	329
15:15	46	0	35	81	0	41	117	158	0	0	0	0	12	59	0	71	310
15:30	35	0	34	69	0	38	96	134	0	0	0	0	15	72	0	87	290
15:45	29	0	27	56	0	27	99	126	0	0	0	0	9	73	0	82	264
Total Volume	159	0	125	284	0	145	435	580	0	0	0	0	48	281	0	329	1193
% App. Total	56	0	44		0	25	75		0	0	0		14.6	85.4	0		
PHF	.811	.000	.893	.877	.000	.884	.884	.895	.000	.000	.000	.000	.800	.912	.000	.924	.907

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-003 SR65 SB-Twelve Bridges
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-002 SR65 NB-Twelve Bridges
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Northbound Ramps Southbound				Twelve Bridges Drive Westbound				SR-65 Northbound Ramps Northbound				Twelve Bridges Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	0	0	0	0	75	5	80	3	0	8	11	4	4	0	8	99
06:15	0	0	0	0	0	74	15	89	4	0	17	21	2	4	0	6	116
06:30	0	0	0	0	0	94	13	107	4	0	24	28	6	7	0	13	148
06:45	0	0	0	0	0	110	7	117	4	0	24	28	12	16	0	28	173
Total	0	0	0	0	0	353	40	393	15	0	73	88	24	31	0	55	536
07:00	0	0	0	0	0	126	16	142	3	0	30	33	16	23	0	39	214
07:15	0	0	0	0	0	141	22	163	3	1	45	49	15	48	0	63	275
07:30	0	0	0	0	0	156	43	199	4	1	61	66	21	55	0	76	341
07:45	0	0	0	0	0	182	53	235	7	1	58	66	20	90	0	110	411
Total	0	0	0	0	0	605	134	739	17	3	194	214	72	216	0	288	1241
08:00	0	0	0	0	0	207	24	231	8	2	78	88	33	56	0	89	408
08:15	0	0	0	0	0	164	18	182	9	4	77	90	20	57	0	77	349
08:30	0	0	0	0	0	123	20	143	13	1	73	87	28	35	0	63	293
08:45	0	0	0	0	0	135	18	153	10	0	83	93	27	43	0	70	316
Total	0	0	0	0	0	629	80	709	40	7	311	358	108	191	0	299	1366
09:00	0	0	0	0	0	153	13	166	6	0	69	75	18	44	0	62	303
09:15	0	0	0	0	0	126	27	153	19	0	74	93	21	39	0	60	306
09:30	0	0	0	0	0	166	23	189	11	0	72	83	15	35	0	50	322
09:45	0	0	0	0	0	148	27	175	8	0	60	68	19	42	0	61	304
Total	0	0	0	0	0	593	90	683	44	0	275	319	73	160	0	233	1235
15:00	0	0	0	0	0	173	47	220	10	1	126	137	39	91	0	130	487
15:15	0	0	0	0	0	129	29	158	21	1	132	154	41	72	0	113	425
15:30	0	0	0	0	0	117	37	154	24	0	143	167	41	60	0	101	422
15:45	0	0	0	0	0	109	26	135	17	1	131	149	48	65	0	113	397
Total	0	0	0	0	0	528	139	667	72	3	532	607	169	288	0	457	1731
16:00	0	0	0	0	0	111	34	145	24	0	118	142	57	44	0	101	388
16:15	0	0	0	0	0	138	24	162	18	0	143	161	35	49	0	84	407
16:30	0	0	0	0	0	99	29	128	14	0	124	138	40	59	0	99	365

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-002 SR65 NB-Twelve Bridges
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Northbound Ramps Southbound				Twelve Bridges Drive Westbound				SR-65 Northbound Ramps Northbound				Twelve Bridges Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	0	0	0	0	103	30	133	19	2	108	129	40	63	0	103	365
Total	0	0	0	0	0	451	117	568	75	2	493	570	172	215	0	387	1525
17:00	0	0	0	0	0	123	27	150	16	1	125	142	44	54	0	98	390
17:15	0	0	0	0	0	101	17	118	15	0	145	160	55	61	0	116	394
17:30	0	0	0	0	0	98	23	121	12	1	121	134	71	67	0	138	393
17:45	0	0	0	0	0	89	20	109	11	1	116	128	34	60	0	94	331
Total	0	0	0	0	0	411	87	498	54	3	507	564	204	242	0	446	1508
18:00	0	0	0	0	0	84	18	102	15	0	120	135	31	50	0	81	318
18:15	0	0	0	0	0	71	26	97	9	0	103	112	51	45	0	96	305
18:30	0	0	0	0	0	82	9	91	20	0	96	116	29	26	0	55	262
18:45	0	0	0	0	0	47	12	59	20	0	111	131	28	34	0	62	252
Total	0	0	0	0	0	284	65	349	64	0	430	494	139	155	0	294	1137
Grand Total	0	0	0	0	0	3854	752	4606	381	18	2815	3214	961	1498	0	2459	10279
Apprch %	0	0	0	0	0	83.7	16.3		11.9	0.6	87.6		39.1	60.9	0		
Total %	0	0	0	0	0	37.5	7.3	44.8	3.7	0.2	27.4	31.3	9.3	14.6	0	23.9	
Unshifted	0	0	0	0	0	3804	736	4540	366	15	2743	3124	920	1472	0	2392	10056
% Unshifted	0	0	0	0	0	98.7	97.9	98.6	96.1	83.3	97.4	97.2	95.7	98.3	0	97.3	97.8
Bank 2	0	0	0	0	0	50	16	66	15	3	72	90	41	26	0	67	223
% Bank 2	0	0	0	0	0	1.3	2.1	1.4	3.9	16.7	2.6	2.8	4.3	1.7	0	2.7	2.2

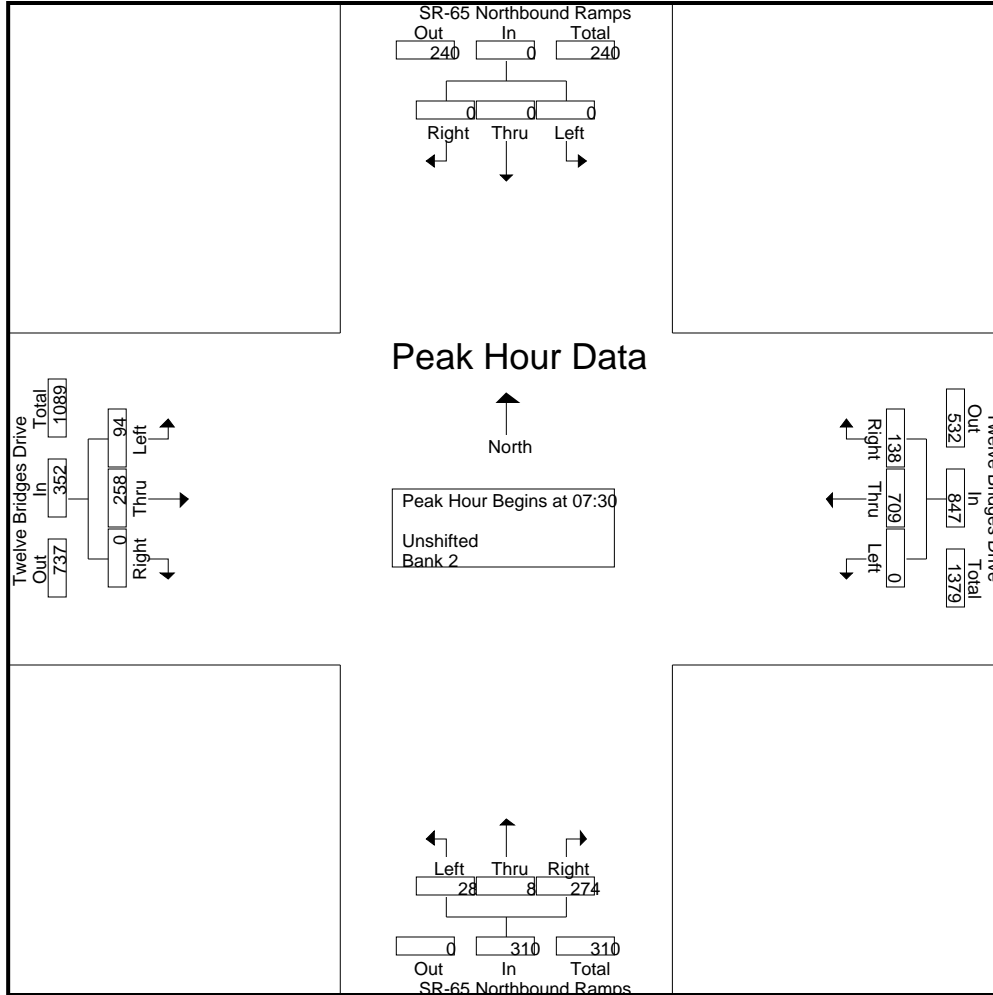
Start Time	SR-65 Northbound Ramps Southbound				Twelve Bridges Drive Westbound				SR-65 Northbound Ramps Northbound				Twelve Bridges Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	0	0	0	156	43	199	4	1	61	66	21	55	0	76	341
07:45	0	0	0	0	0	182	53	235	7	1	58	66	20	90	0	110	411
08:00	0	0	0	0	0	207	24	231	8	2	78	88	33	56	0	89	408
08:15	0	0	0	0	0	164	18	182	9	4	77	90	20	57	0	77	349
Total Volume	0	0	0	0	0	709	138	847	28	8	274	310	94	258	0	352	1509
% App. Total	0	0	0	0	0	83.7	16.3		9	2.6	88.4		26.7	73.3	0		
PHF	.000	.000	.000	.000	.000	.856	.651	.901	.778	.500	.878	.861	.712	.717	.000	.800	.918

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-002 SR65 NB-Twelve Bridges
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-002 SR65 NB-Twelve Bridges
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

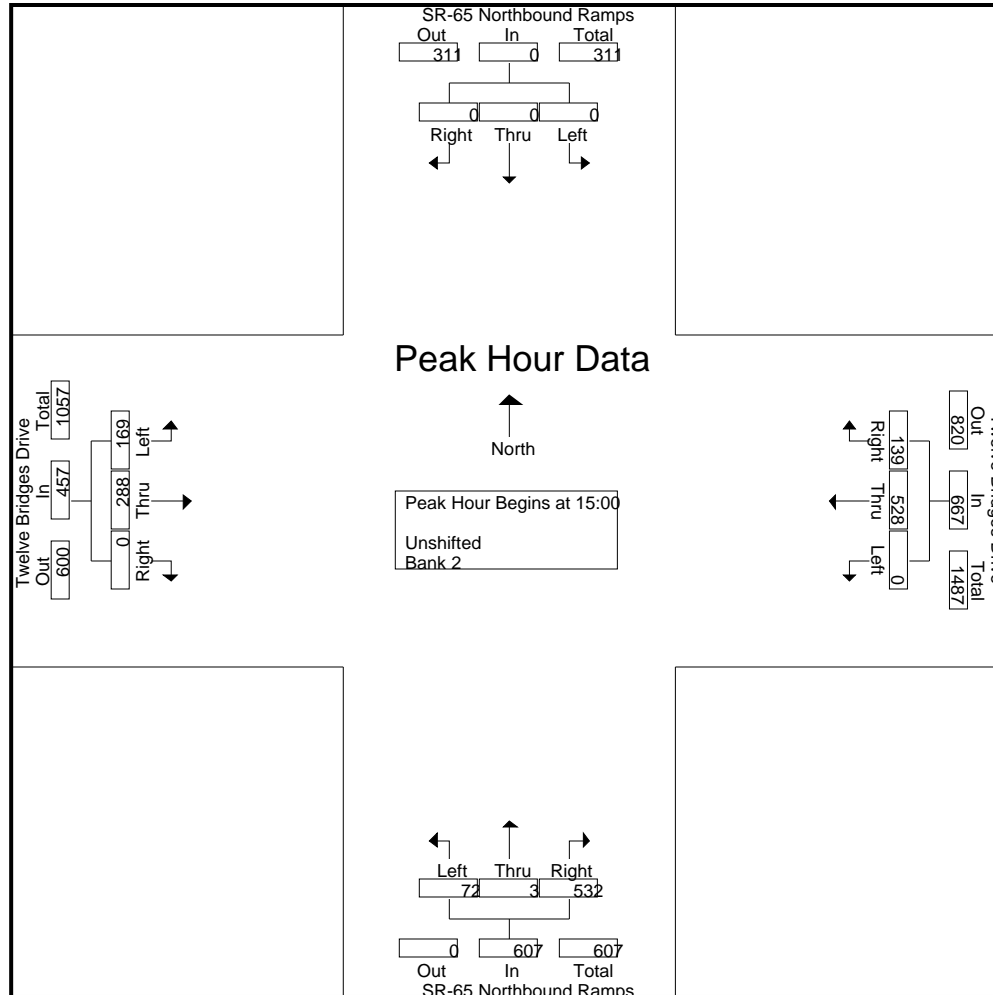
Start Time	SR-65 Northbound Ramps Southbound				Twelve Bridges Drive Westbound				SR-65 Northbound Ramps Northbound				Twelve Bridges Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 15:00																	
15:00	0	0	0	0	0	173	47	220	10	1	126	137	39	91	0	130	487
15:15	0	0	0	0	0	129	29	158	21	1	132	154	41	72	0	113	425
15:30	0	0	0	0	0	117	37	154	24	0	143	167	41	60	0	101	422
15:45	0	0	0	0	0	109	26	135	17	1	131	149	48	65	0	113	397
Total Volume	0	0	0	0	0	528	139	667	72	3	532	607	169	288	0	457	1731
% App. Total	0	0	0	0	0	79.2	20.8		11.9	0.5	87.6		37	63	0		
PHF	.000	.000	.000	.000	.000	.763	.739	.758	.750	.750	.930	.909	.880	.791	.000	.879	.889

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-002 SR65 NB-Twelve Bridges
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-005 SR65 SB-Sunset
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound Ramps Southbound				Sunset Boulevard Westbound				SR-65 Southbound Ramps Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	12	0	14	26	0	82	40	122	0	0	0	0	0	9	42	51	199
06:15	25	0	20	45	0	106	54	160	0	0	0	0	0	7	28	35	240
06:30	34	0	16	50	0	135	67	202	0	0	0	0	0	10	41	51	303
06:45	58	0	22	80	0	167	66	233	0	0	0	0	0	6	45	51	364
Total	129	0	72	201	0	490	227	717	0	0	0	0	0	32	156	188	1106
07:00	35	0	23	58	0	137	87	224	0	0	0	0	0	18	51	69	351
07:15	63	0	32	95	0	107	104	211	0	0	0	0	0	24	70	94	400
07:30	65	1	25	91	0	104	88	192	0	0	0	0	0	25	66	91	374
07:45	74	0	31	105	0	208	117	325	0	0	0	0	0	37	78	115	545
Total	237	1	111	349	0	556	396	952	0	0	0	0	0	104	265	369	1670
08:00	87	0	27	114	0	195	80	275	0	0	0	0	0	48	71	119	508
08:15	69	0	23	92	0	201	119	320	0	0	0	0	0	36	79	115	527
08:30	44	0	17	61	0	143	73	216	0	0	0	0	0	48	92	140	417
08:45	64	1	19	84	0	165	86	251	0	0	0	0	0	26	91	117	452
Total	264	1	86	351	0	704	358	1062	0	0	0	0	0	158	333	491	1904
09:00	31	0	11	42	0	142	65	207	0	0	0	0	0	37	81	118	367
09:15	40	0	17	57	0	163	59	222	0	0	0	0	0	27	75	102	381
09:30	25	0	11	36	0	159	49	208	0	0	0	0	0	48	79	127	371
09:45	29	0	16	45	0	161	70	231	0	0	0	0	0	29	84	113	389
Total	125	0	55	180	0	625	243	868	0	0	0	0	0	141	319	460	1508
15:00	48	1	6	55	0	125	117	242	0	0	0	0	0	45	163	208	505
15:15	39	0	12	51	0	153	106	259	0	0	0	0	0	63	154	217	527
15:30	47	1	7	55	0	119	152	271	0	0	0	0	0	57	172	229	555
15:45	54	0	8	62	0	128	98	226	0	0	0	0	0	61	146	207	495
Total	188	2	33	223	0	525	473	998	0	0	0	0	0	226	635	861	2082
16:00	43	0	6	49	0	130	111	241	0	0	0	0	0	82	172	254	544
16:15	46	0	13	59	0	135	105	240	0	0	0	0	0	51	163	214	513
16:30	43	0	14	57	0	121	151	272	0	0	0	0	0	86	168	254	583

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-005 SR65 SB-Sunset
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound Ramps Southbound				Sunset Boulevard Westbound				SR-65 Southbound Ramps Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	51	0	14	65	0	136	113	249	0	0	0	0	0	61	114	175	489
Total	183	0	47	230	0	522	480	1002	0	0	0	0	0	280	617	897	2129
17:00	59	0	12	71	0	86	183	269	0	0	0	0	0	77	158	235	575
17:15	60	0	14	74	0	134	127	261	0	0	0	0	0	78	167	245	580
17:30	52	0	10	62	0	102	134	236	0	0	0	0	0	84	142	226	524
17:45	46	0	5	51	0	90	87	177	0	0	0	0	0	58	116	174	402
Total	217	0	41	258	0	412	531	943	0	0	0	0	0	297	583	880	2081
18:00	40	0	8	48	0	114	91	205	0	0	0	0	0	62	115	177	430
18:15	34	1	27	62	0	161	70	231	0	0	0	0	0	43	132	175	468
18:30	32	0	13	45	0	116	82	198	0	0	0	0	0	65	117	182	425
18:45	34	0	12	46	0	136	55	191	0	0	0	0	0	28	97	125	362
Total	140	1	60	201	0	527	298	825	0	0	0	0	0	198	461	659	1685
Grand Total	1483	5	505	1993	0	4361	3006	7367	0	0	0	0	0	1436	3369	4805	14165
Apprch %	74.4	0.3	25.3		0	59.2	40.8		0	0	0		0	29.9	70.1		
Total %	10.5	0	3.6	14.1	0	30.8	21.2	52	0	0	0	0	0	10.1	23.8	33.9	
Unshifted	1459	5	475	1939	0	4107	2921	7028	0	0	0	0	0	1362	3108	4470	13437
% Unshifted	98.4	100	94.1	97.3	0	94.2	97.2	95.4	0	0	0	0	0	94.8	92.3	93	94.9
Bank 2	24	0	30	54	0	254	85	339	0	0	0	0	0	74	261	335	728
% Bank 2	1.6	0	5.9	2.7	0	5.8	2.8	4.6	0	0	0	0	0	5.2	7.7	7	5.1

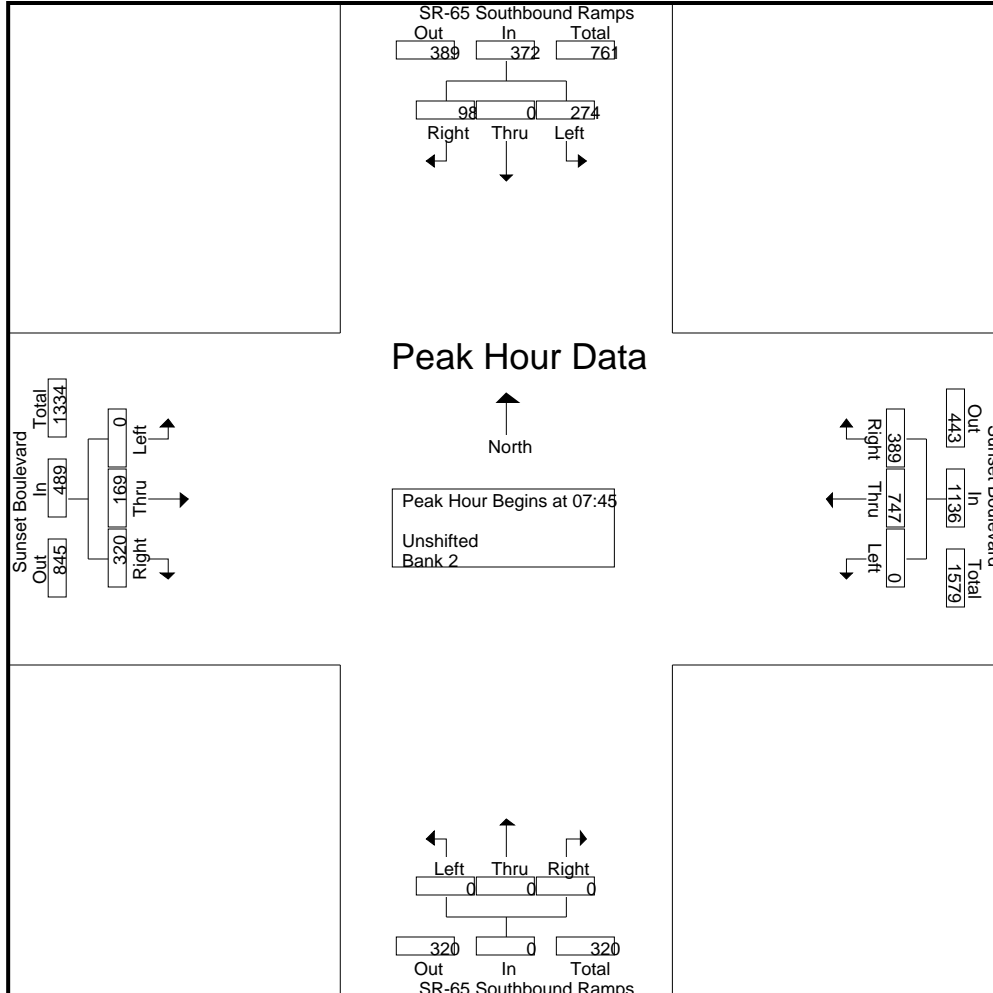
Start Time	SR-65 Southbound Ramps Southbound				Sunset Boulevard Westbound				SR-65 Southbound Ramps Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45																	
07:45	74	0	31	105	0	208	117	325	0	0	0	0	0	37	78	115	545
08:00	87	0	27	114	0	195	80	275	0	0	0	0	0	48	71	119	508
08:15	69	0	23	92	0	201	119	320	0	0	0	0	0	36	79	115	527
08:30	44	0	17	61	0	143	73	216	0	0	0	0	0	48	92	140	417
Total Volume	274	0	98	372	0	747	389	1136	0	0	0	0	0	169	320	489	1997
% App. Total	73.7	0	26.3		0	65.8	34.2		0	0	0		0	34.6	65.4		
PHF	.787	.000	.790	.816	.000	.898	.817	.874	.000	.000	.000	.000	.000	.880	.870	.873	.916

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-005 SR65 SB-Sunset
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-005 SR65 SB-Sunset
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

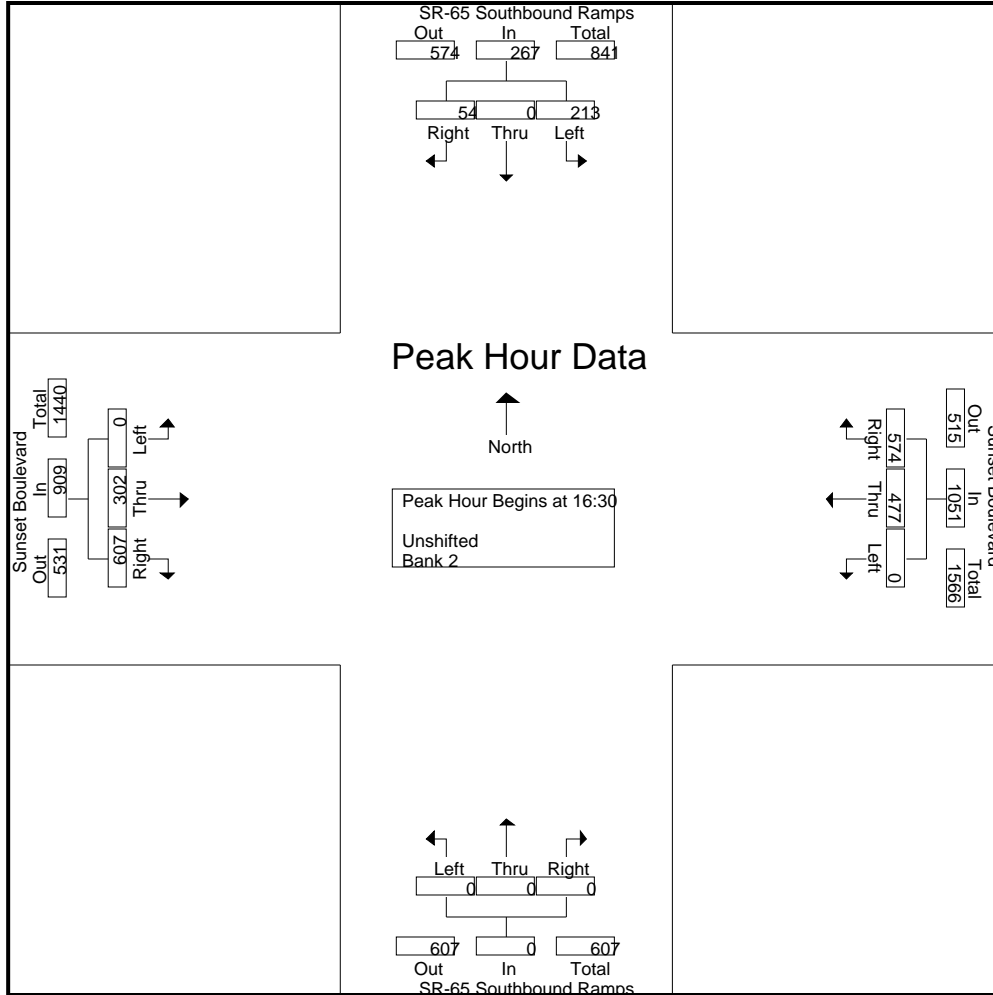
Start Time	SR-65 Southbound Ramps Southbound				Sunset Boulevard Westbound				SR-65 Southbound Ramps Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	43	0	14	57	0	121	151	272	0	0	0	0	0	86	168	254	583
16:45	51	0	14	65	0	136	113	249	0	0	0	0	0	61	114	175	489
17:00	59	0	12	71	0	86	183	269	0	0	0	0	0	77	158	235	575
17:15	60	0	14	74	0	134	127	261	0	0	0	0	0	78	167	245	580
Total Volume	213	0	54	267	0	477	574	1051	0	0	0	0	0	302	607	909	2227
% App. Total	79.8	0	20.2		0	45.4	54.6		0	0	0		0	33.2	66.8		
PHF	.888	.000	.964	.902	.000	.877	.784	.966	.000	.000	.000	.000	.000	.878	.903	.895	.955

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-005 SR65 SB-Sunset
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-004 SR65 NB-Sunset
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Northbound Ramps Southbound				Sunset Boulevard Westbound				SR-65 Northbound Ramps Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	0	0	0	0	49	26	75	73	0	26	99	0	15	6	21	195
06:15	0	0	0	0	0	72	25	97	98	0	40	138	0	29	3	32	267
06:30	0	0	0	0	0	90	29	119	112	0	66	178	0	42	3	45	342
06:45	0	0	0	0	0	103	37	140	132	0	102	234	0	59	0	59	433
Total	0	0	0	0	0	314	117	431	415	0	234	649	0	145	12	157	1237
07:00	0	0	0	0	0	113	32	145	100	0	85	185	0	54	5	59	389
07:15	0	0	0	0	0	140	53	193	66	0	98	164	0	74	12	86	443
07:30	0	0	0	0	0	116	65	181	78	0	98	176	0	82	4	86	443
07:45	0	0	0	0	0	190	62	252	141	0	195	336	0	102	11	113	701
Total	0	0	0	0	0	559	212	771	385	0	476	861	0	312	32	344	1976
08:00	0	0	0	0	0	129	48	177	145	0	197	342	0	120	12	132	651
08:15	0	0	0	0	0	167	59	226	156	0	153	309	0	96	6	102	637
08:30	0	0	0	0	0	99	34	133	104	0	94	198	0	79	8	87	418
08:45	0	0	0	0	0	119	24	143	127	0	121	248	0	80	8	88	479
Total	0	0	0	0	0	514	165	679	532	0	565	1097	0	375	34	409	2185
09:00	0	0	0	0	0	91	20	111	120	0	81	201	0	59	9	68	380
09:15	0	0	0	0	0	100	37	137	131	0	84	215	0	58	8	66	418
09:30	0	0	0	0	0	85	36	121	123	0	55	178	0	58	10	68	367
09:45	0	0	0	0	0	108	22	130	113	0	57	170	0	52	8	60	360
Total	0	0	0	0	0	384	115	499	487	0	277	764	0	227	35	262	1525
15:00	0	0	0	0	0	149	55	204	97	1	69	167	0	76	13	89	460
15:15	0	0	0	0	0	151	58	209	111	0	82	193	0	90	14	104	506
15:30	0	0	0	0	0	175	68	243	88	3	88	179	0	82	17	99	521
15:45	0	0	0	0	0	133	60	193	91	0	83	174	0	109	12	121	488
Total	0	0	0	0	0	608	241	849	387	4	322	713	0	357	56	413	1975
16:00	0	0	0	0	0	146	57	203	97	1	73	171	0	100	23	123	497
16:15	0	0	0	0	0	147	72	219	100	1	88	189	0	83	15	98	506
16:30	0	0	0	0	0	169	67	236	96	1	88	185	0	113	22	135	556

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-004 SR65 NB-Sunset
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Northbound Ramps Southbound				Sunset Boulevard Westbound				SR-65 Northbound Ramps Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	0	0	0	0	152	59	211	103	0	102	205	0	98	9	107	523
Total	0	0	0	0	0	614	255	869	396	3	351	750	0	394	69	463	2082
17:00	0	0	0	0	0	228	68	296	51	0	93	144	0	117	18	135	575
17:15	0	0	0	0	0	169	68	237	91	0	84	175	0	119	15	134	546
17:30	0	0	0	0	0	159	71	230	73	0	85	158	0	117	19	136	524
17:45	0	0	0	0	0	108	70	178	67	0	83	150	0	88	18	106	434
Total	0	0	0	0	0	664	277	941	282	0	345	627	0	441	70	511	2079
18:00	0	0	0	0	0	129	68	197	79	1	79	159	0	83	18	101	457
18:15	0	0	0	0	0	117	61	178	114	0	82	196	0	64	13	77	451
18:30	0	0	0	0	0	98	43	141	97	0	67	164	0	82	15	97	402
18:45	0	0	0	0	0	83	49	132	105	0	66	171	0	56	6	62	365
Total	0	0	0	0	0	427	221	648	395	1	294	690	0	285	52	337	1675
Grand Total	0	0	0	0	0	4084	1603	5687	3279	8	2864	6151	0	2536	360	2896	14734
Apprch %	0	0	0	0	0	71.8	28.2		53.3	0.1	46.6		0	87.6	12.4		
Total %	0	0	0	0	0	27.7	10.9	38.6	22.3	0.1	19.4	41.7	0	17.2	2.4	19.7	
Unshifted	0	0	0	0	0	3968	1595	5563	3083	8	2801	5892	0	2469	331	2800	14255
% Unshifted	0	0	0	0	0	97.2	99.5	97.8	94	100	97.8	95.8	0	97.4	91.9	96.7	96.7
Bank 2	0	0	0	0	0	116	8	124	196	0	63	259	0	67	29	96	479
% Bank 2	0	0	0	0	0	2.8	0.5	2.2	6	0	2.2	4.2	0	2.6	8.1	3.3	3.3

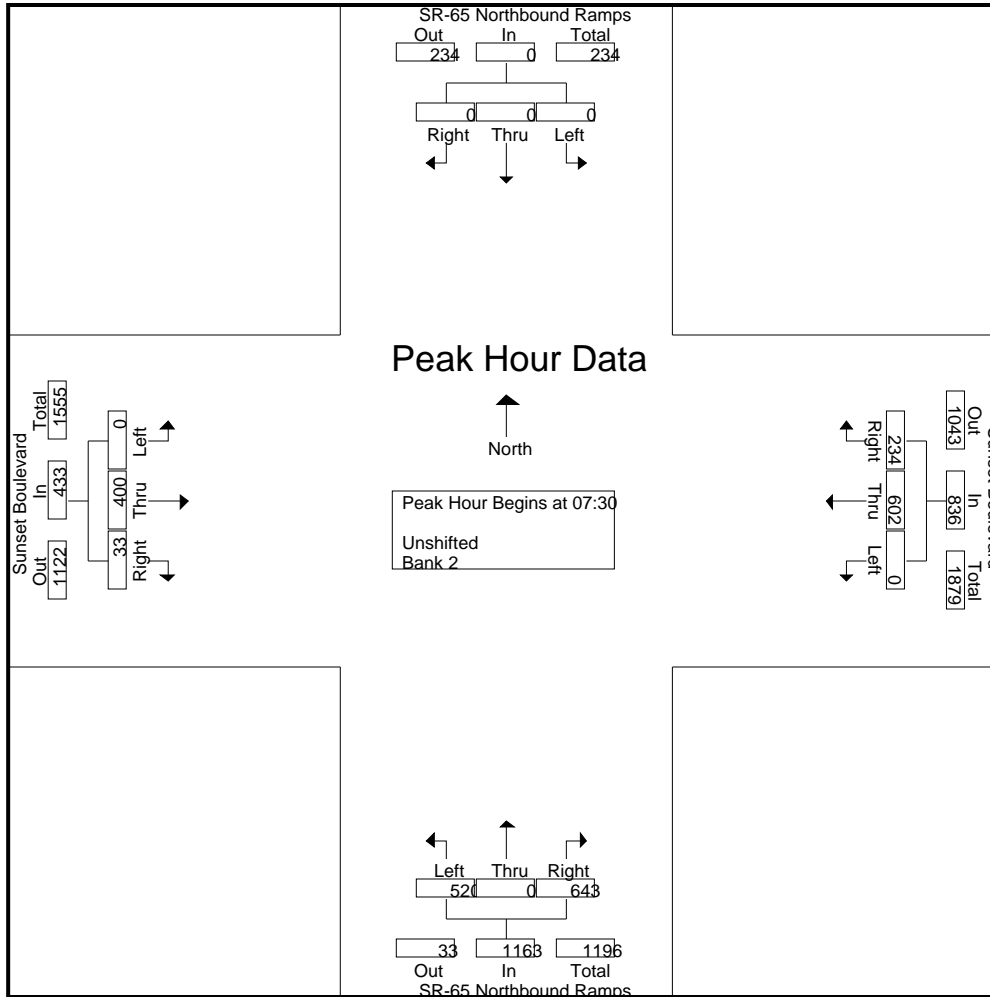
Start Time	SR-65 Northbound Ramps Southbound				Sunset Boulevard Westbound				SR-65 Northbound Ramps Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	0	0	0	116	65	181	78	0	98	176	0	82	4	86	443
07:45	0	0	0	0	0	190	62	252	141	0	195	336	0	102	11	113	701
08:00	0	0	0	0	0	129	48	177	145	0	197	342	0	120	12	132	651
08:15	0	0	0	0	0	167	59	226	156	0	153	309	0	96	6	102	637
Total Volume	0	0	0	0	0	602	234	836	520	0	643	1163	0	400	33	433	2432
% App. Total	0	0	0	0	0	72	28		44.7	0	55.3		0	92.4	7.6		
PHF	.000	.000	.000	.000	.000	.792	.900	.829	.833	.000	.816	.850	.000	.833	.688	.820	.867

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-004 SR65 NB-Sunset
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-004 SR65 NB-Sunset
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

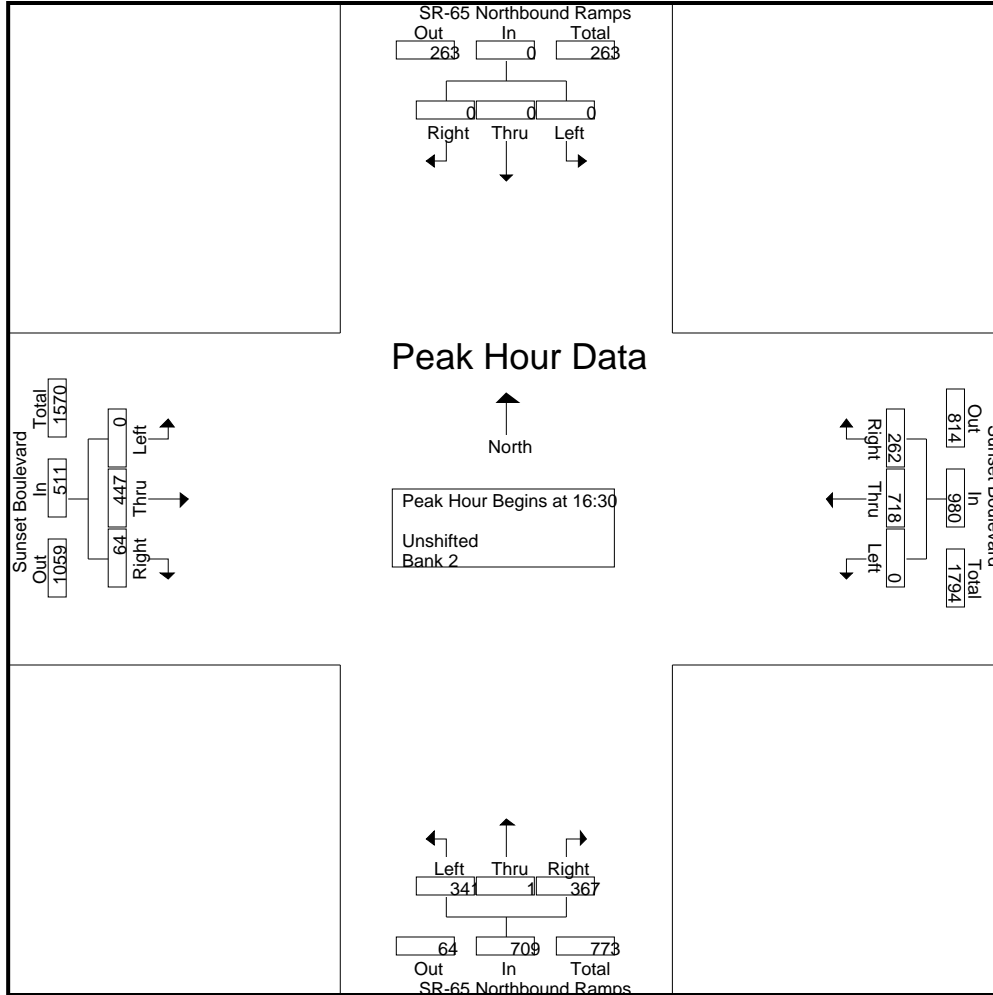
Start Time	SR-65 Northbound Ramps Southbound				Sunset Boulevard Westbound				SR-65 Northbound Ramps Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	0	0	0	0	169	67	236	96	1	88	185	0	113	22	135	556
16:45	0	0	0	0	0	152	59	211	103	0	102	205	0	98	9	107	523
17:00	0	0	0	0	0	228	68	296	51	0	93	144	0	117	18	135	575
17:15	0	0	0	0	0	169	68	237	91	0	84	175	0	119	15	134	546
Total Volume	0	0	0	0	0	718	262	980	341	1	367	709	0	447	64	511	2200
% App. Total	0	0	0	0	0	73.3	26.7		48.1	0.1	51.8		0	87.5	12.5		
PHF	.000	.000	.000	.000	.000	.787	.963	.828	.828	.250	.900	.865	.000	.939	.727	.946	.957

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-004 SR65 NB-Sunset
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-007 SR65 SB-Blue Oaks
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound Ramps Southbound					Blue Oaks Blvd Westbound					SR-65 Southbound Ramps Northwestbound					Washington Blvd Northbound					Blue Oaks Blvd Eastbound					Int. Total
	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	
06:00	10	0	21	25	56	0	16	28	59	103	0	0	0	0	0	7	0	21	9	37	0	43	107	6	156	352
06:15	4	0	21	33	58	0	24	39	62	125	0	0	0	0	0	8	0	17	6	31	0	64	137	5	206	420
06:30	7	0	40	41	88	0	24	28	88	140	0	0	0	0	0	9	0	17	21	47	0	50	174	19	243	518
06:45	9	1	61	74	145	0	56	75	91	222	0	0	0	0	0	12	0	35	10	57	0	89	161	23	273	697
Total	30	1	143	173	347	0	120	170	300	590	0	0	0	0	0	36	0	90	46	172	0	246	579	53	878	1987
07:00	8	0	38	55	101	0	23	76	110	209	0	0	0	0	0	22	0	31	17	70	0	91	182	36	309	689
07:15	20	0	52	65	137	0	36	93	108	237	0	0	0	0	0	34	0	48	10	92	0	146	227	49	422	888
07:30	21	0	73	58	152	0	46	103	103	252	0	0	0	0	0	27	0	52	7	86	0	129	217	46	392	882
07:45	12	0	66	80	158	0	74	149	75	298	0	0	0	0	0	40	0	63	10	113	0	166	223	66	455	1024
Total	61	0	229	258	548	0	179	421	396	996	0	0	0	0	0	123	0	194	44	361	0	532	849	197	1578	3483
08:00	24	0	56	78	158	0	57	128	108	293	0	0	0	0	0	40	0	49	11	100	0	157	175	40	372	923
08:15	14	0	47	70	131	0	59	122	105	286	0	0	0	0	0	33	0	52	20	105	0	150	197	42	389	911
08:30	17	1	36	64	118	0	46	96	92	234	0	0	0	0	0	47	0	46	13	106	0	168	182	66	416	874
08:45	20	0	45	57	122	0	47	82	73	202	0	0	0	0	0	40	0	50	18	108	0	180	231	59	470	902
Total	75	1	184	269	529	0	209	428	378	1015	0	0	0	0	0	160	0	197	62	419	0	655	785	207	1647	3610
09:00	13	2	30	39	84	0	21	80	68	169	0	0	0	0	0	35	0	35	19	89	0	137	198	39	374	716
09:15	17	0	29	52	98	0	26	69	72	167	0	0	0	0	0	39	0	37	4	80	0	101	160	29	290	635
09:30	12	0	26	26	64	0	25	77	55	157	0	0	0	0	0	34	0	37	11	82	0	109	159	29	297	600
09:45	15	0	29	47	91	0	27	81	61	169	0	0	0	0	0	33	0	39	14	86	0	107	170	53	330	676
Total	57	2	114	164	337	0	99	307	256	662	0	0	0	0	0	141	0	148	48	337	0	454	687	150	1291	2627
15:00	27	1	61	56	145	0	33	126	91	250	0	0	0	0	0	62	0	72	15	149	0	147	178	40	365	909
15:15	31	0	54	45	130	0	44	142	91	277	0	0	0	0	0	65	0	89	23	177	0	201	178	34	413	997
15:30	23	1	48	53	125	0	43	147	102	292	0	0	0	0	0	72	0	68	37	177	0	198	186	44	428	1022
15:45	25	0	44	67	136	0	49	145	73	267	0	0	0	0	0	59	0	78	23	160	0	197	182	40	419	982
Total	106	2	207	221	536	0	169	560	357	1086	0	0	0	0	0	258	0	307	98	663	0	743	724	158	1625	3910
16:00	26	1	39	76	142	0	39	128	78	245	0	0	0	0	0	48	0	86	24	158	0	165	210	51	426	971
16:15	31	0	35	48	114	0	34	91	81	206	0	0	0	0	0	43	0	80	9	132	0	211	217	41	469	921

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

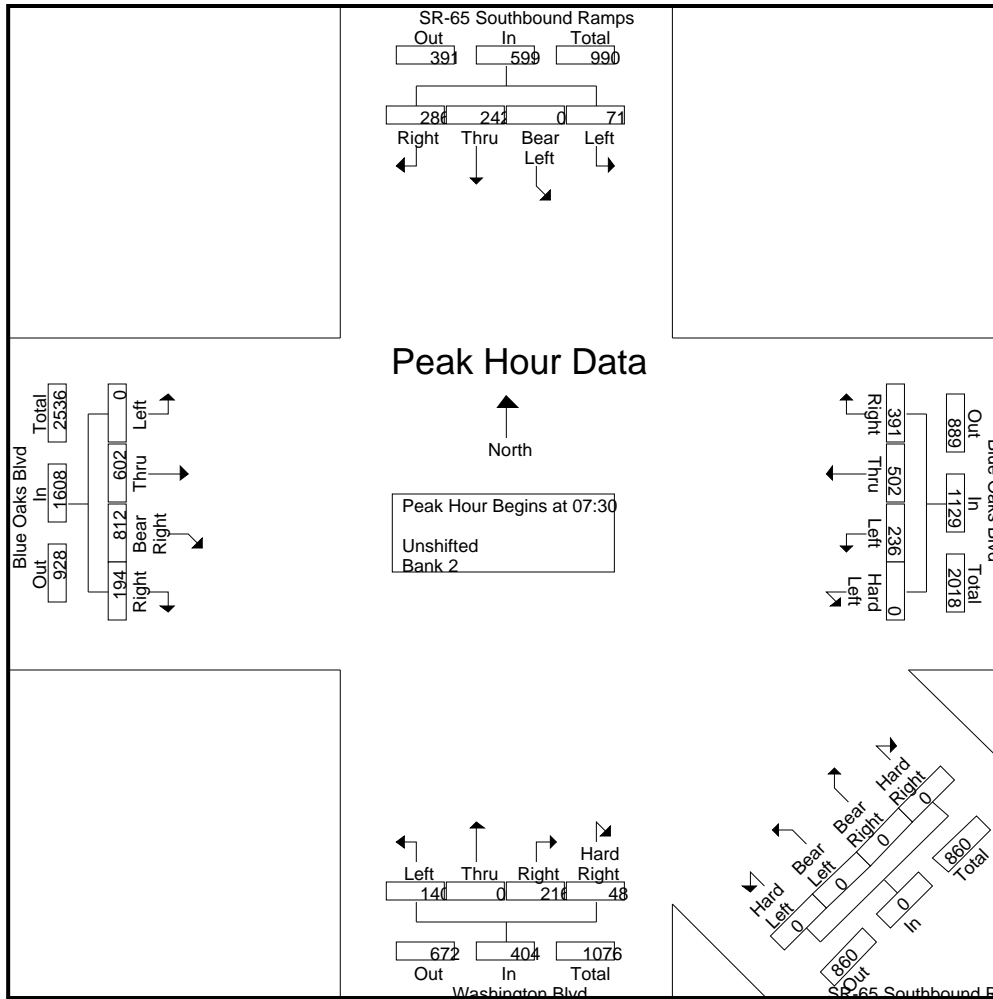
File Name : 12-7003-007 SR65 SB-Blue Oaks
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound Ramps Southbound					Blue Oaks Blvd Westbound					SR-65 Southbound Ramps Northwestbound					Washington Blvd Northbound					Blue Oaks Blvd Eastbound					Int. Total
	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	
16:30	32	0	51	45	128	0	38	133	81	252	0	0	0	0	0	54	0	78	30	162	0	213	210	56	479	1021
16:45	23	0	50	41	114	0	40	138	87	265	0	0	0	0	0	74	0	94	16	184	0	204	189	54	447	1010
Total	112	1	175	210	498	0	151	490	327	968	0	0	0	0	0	219	0	338	79	636	0	793	826	202	1821	3923
17:00	26	0	54	75	155	0	39	135	132	306	0	0	0	0	0	79	0	84	31	194	0	209	245	57	511	1166
17:15	28	0	43	65	136	0	45	160	93	298	0	0	0	0	0	92	0	97	20	209	0	281	206	62	549	1192
17:30	36	0	57	65	158	0	29	132	87	248	0	0	0	0	0	101	0	78	22	201	0	210	219	51	480	1087
17:45	32	0	42	63	137	0	39	139	103	281	0	0	0	0	0	73	0	72	24	169	0	224	185	34	443	1030
Total	122	0	196	268	586	0	152	566	415	1133	0	0	0	0	0	345	0	331	97	773	0	924	855	204	1983	4475
18:00	30	0	49	40	119	0	38	122	89	249	0	0	0	0	0	64	0	82	17	163	0	187	168	42	397	928
18:15	24	1	24	38	87	0	34	115	74	223	0	0	0	0	0	70	0	54	10	134	0	179	208	35	422	866
18:30	20	0	29	30	79	0	30	132	83	245	0	0	0	0	0	59	0	68	13	140	0	152	154	38	344	808
18:45	20	0	29	43	92	0	24	123	70	217	0	0	0	0	0	58	0	52	12	122	0	135	119	30	284	715
Total	94	1	131	151	377	0	126	492	316	934	0	0	0	0	0	251	0	256	52	559	0	653	649	145	1447	3317
Grand Total	657	8	1379	1714	3758	0	1205	3434	2745	7384	0	0	0	0	0	1533	0	1861	526	3920	0	5000	5954	1316	12270	27332
Apprch %	17.5	0.2	36.7	45.6		0	16.3	46.5	37.2		0	0	0	0		39.1	0	47.5	13.4		0	40.7	48.5	10.7		
Total %	2.4	0	5	6.3	13.7	0	4.4	12.6	10	27	0	0	0	0	0	5.6	0	6.8	1.9	14.3	0	18.3	21.8	4.8	44.9	
Unshifted	647	8	1336	1650	3641	0	1173	3390	2722	7285	0	0	0	0	0	1499	0	1839	484	3822	0	4943	5752	1272	11967	26715
% Unshifted	98.5	100	96.9	96.3	96.9	0	97.3	98.7	99.2	98.7	0	0	0	0	0	97.8	0	98.8	92	97.5	0	98.9	96.6	96.7	97.5	97.7
Bank 2	10	0	43	64	117	0	32	44	23	99	0	0	0	0	0	34	0	22	42	98	0	57	202	44	303	617
% Bank 2	1.5	0	3.1	3.7	3.1	0	2.7	1.3	0.8	1.3	0	0	0	0	0	2.2	0	1.2	8	2.5	0	1.1	3.4	3.3	2.5	2.3

Start Time	SR-65 Southbound Ramps Southbound					Blue Oaks Blvd Westbound					SR-65 Southbound Ramps Northwestbound					Washington Blvd Northbound					Blue Oaks Blvd Eastbound					Int. Total
	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	
07:30	21	0	73	58	152	0	46	103	103	252	0	0	0	0	0	27	0	52	7	86	0	129	217	46	392	882
07:45	12	0	66	80	158	0	74	149	75	298	0	0	0	0	0	40	0	63	10	113	0	166	223	66	455	1024
08:00	24	0	56	78	158	0	57	128	108	293	0	0	0	0	0	40	0	49	11	100	0	157	175	40	372	923
08:15	14	0	47	70	131	0	59	122	105	286	0	0	0	0	0	33	0	52	20	105	0	150	197	42	389	911
Total Volume	71	0	242	286	599	0	236	502	391	1129	0	0	0	0	0	140	0	216	48	404	0	602	812	194	1608	3740
% App. Total	11.9	0	40.4	47.7		0	20.9	44.5	34.6		0	0	0	0		34.7	0	53.5	11.9		0	37.4	50.5	12.1		
PHF	.740	.000	.829	.894	.948	.000	.797	.842	.905	.947	.000	.000	.000	.000	.000	.875	.000	.857	.600	.894	.000	.907	.910	.735	.884	.913

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1
Peak Hour for Entire Intersection Begins at 07:30



Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 17:00

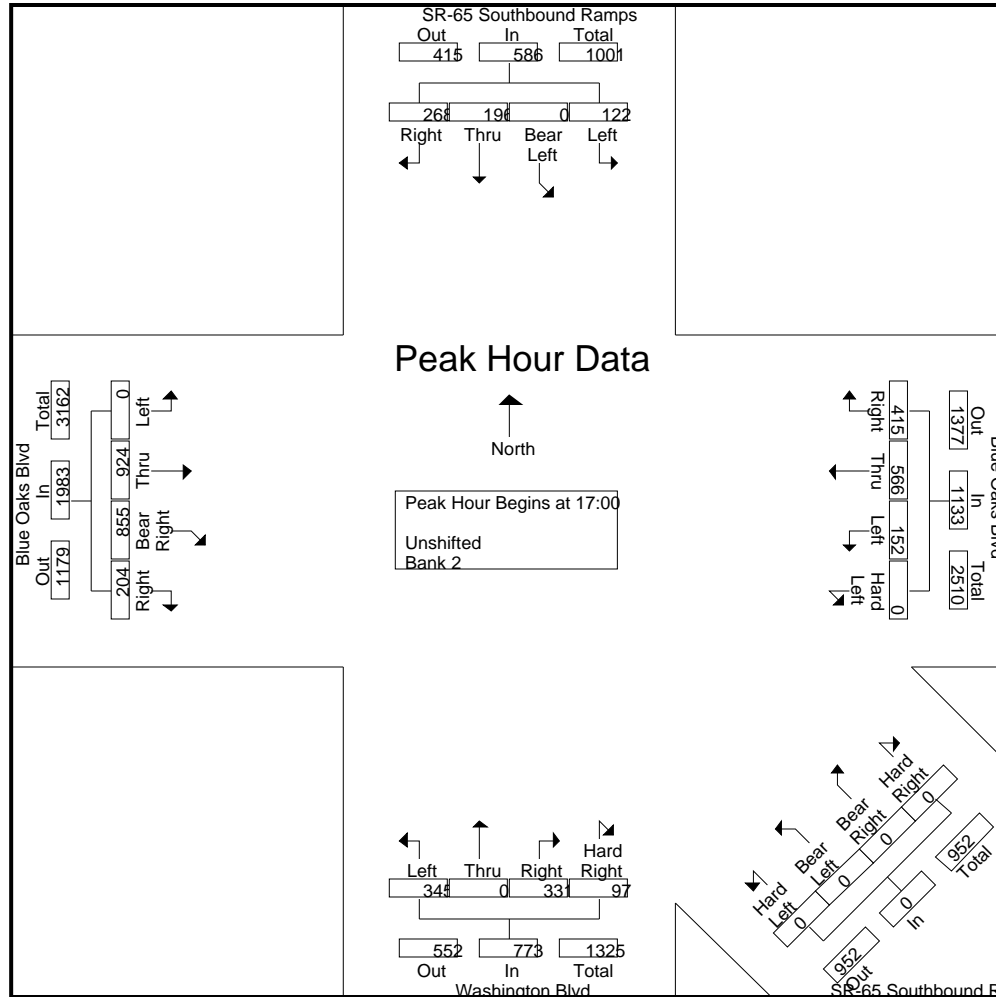
17:00	26	0	54	75	155	0	39	135	132	306	0	0	0	0	0	79	0	84	31	194	0	209	245	57	511	1166
17:15	28	0	43	65	136	0	45	160	93	298	0	0	0	0	0	92	0	97	20	209	0	281	206	62	549	1192
17:30	36	0	57	65	158	0	29	132	87	248	0	0	0	0	0	101	0	78	22	201	0	210	219	51	480	1087
17:45	32	0	42	63	137	0	39	139	103	281	0	0	0	0	0	73	0	72	24	169	0	224	185	34	443	1030
Total Volume	122	0	196	268	586	0	152	566	415	1133	0	0	0	0	0	345	0	331	97	773	0	924	855	204	1983	4475
% App. Total	20.8	0	33.4	45.7		0	13.4	50	36.6		0	0	0	0		44.6	0	42.8	12.5		0	46.6	43.1	10.3		
PHF	.847	.000	.860	.893	.927	.000	.844	.884	.786	.926	.000	.000	.000	.000	.000	.854	.000	.853	.782	.925	.000	.822	.872	.823	.903	.939

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-007 SR65 SB-Blue Oaks
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 Northbound Thru = Underpass

File Name : 12-7003-006 SR65 NB-Blue Oaks
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Northbound Ramps Southbound				Blue Oaks Boulevard Westbound				SR-65 Northbound Ramps Northbound				Blue Oaks Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	0	0	0	12	84	0	96	15	64	19	98	0	35	37	72	266
06:15	0	0	0	0	11	105	0	116	14	88	21	123	0	35	41	76	315
06:30	0	0	0	0	17	118	0	135	19	79	35	133	0	37	31	68	336
06:45	0	0	0	0	15	165	0	180	54	158	42	254	0	71	57	128	562
Total	0	0	0	0	55	472	0	527	102	389	117	608	0	178	166	344	1479
07:00	0	0	0	0	15	187	0	202	21	144	50	215	0	82	54	136	553
07:15	0	0	0	0	17	215	0	232	28	215	55	298	0	107	88	195	725
07:30	0	0	0	0	11	207	0	218	41	279	139	459	0	186	29	215	892
07:45	0	0	0	0	13	238	0	251	60	284	114	458	0	190	63	253	962
Total	0	0	0	0	56	847	0	903	150	922	358	1430	0	565	234	799	3132
08:00	0	0	0	0	9	249	0	258	37	261	79	377	0	157	79	236	871
08:15	0	0	0	0	7	233	0	240	41	243	56	340	0	140	71	211	791
08:30	0	0	0	0	11	185	0	196	41	203	57	301	0	142	79	221	718
08:45	0	0	0	0	13	180	0	193	27	190	71	288	0	175	82	257	738
Total	0	0	0	0	40	847	0	887	146	897	263	1306	0	614	311	925	3118
09:00	0	0	0	0	8	144	0	152	26	142	55	223	0	116	65	181	556
09:15	0	0	0	0	12	135	0	147	19	131	52	202	0	101	55	156	505
09:30	0	0	0	0	11	146	0	157	23	125	68	216	0	113	49	162	535
09:45	0	0	0	0	17	132	0	149	24	115	69	208	0	105	55	160	517
Total	0	0	0	0	48	557	0	605	92	513	244	849	0	435	224	659	2113
15:00	0	0	0	0	13	211	0	224	28	153	89	270	0	181	71	252	746
15:15	0	0	0	0	25	254	0	279	17	165	105	287	0	221	86	307	873
15:30	0	0	0	0	27	279	0	306	22	166	94	282	0	194	104	298	886
15:45	0	0	0	0	20	239	0	259	27	195	114	336	0	179	89	268	863
Total	0	0	0	0	85	983	0	1068	94	679	402	1175	0	775	350	1125	3368
16:00	0	0	0	0	16	221	0	237	24	156	92	272	0	203	93	296	805
16:15	0	0	0	0	19	181	0	200	14	168	106	288	0	208	94	302	790
16:30	0	0	0	0	21	244	0	265	20	171	128	319	0	222	99	321	905

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 Northbound Thru = Underpass

File Name : 12-7003-006 SR65 NB-Blue Oaks
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Northbound Ramps Southbound				Blue Oaks Boulevard Westbound				SR-65 Northbound Ramps Northbound				Blue Oaks Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	0	0	0	18	242	0	260	14	166	96	276	0	247	85	332	868
Total	0	0	0	0	74	888	0	962	72	661	422	1155	0	880	371	1251	3368
17:00	0	0	0	0	26	305	0	331	16	146	110	272	0	215	98	313	916
17:15	0	0	0	0	27	267	0	294	9	175	108	292	0	258	130	388	974
17:30	0	0	0	0	33	254	0	287	17	185	114	316	0	263	83	346	949
17:45	0	0	0	0	17	244	0	261	19	171	120	310	0	220	98	318	889
Total	0	0	0	0	103	1070	0	1173	61	677	452	1190	0	956	409	1365	3728
18:00	0	0	0	0	25	239	0	264	20	196	104	320	0	209	79	288	872
18:15	0	0	0	0	32	196	0	228	15	171	95	281	0	173	87	260	769
18:30	0	0	0	0	31	220	0	251	16	189	103	308	0	177	62	239	798
18:45	0	0	0	0	30	196	0	226	15	176	81	272	0	156	55	211	709
Total	0	0	0	0	118	851	0	969	66	732	383	1181	0	715	283	998	3148
Grand Total	0	0	0	0	579	6515	0	7094	783	5470	2641	8894	0	5118	2348	7466	23454
Apprch %	0	0	0		8.2	91.8	0		8.8	61.5	29.7		0	68.6	31.4		
Total %	0	0	0		2.5	27.8	0	30.2	3.3	23.3	11.3	37.9	0	21.8	10	31.8	
Unshifted	0	0	0	0	571	6474	0	7045	734	5470	2628	8832	0	5085	2306	7391	23268
% Unshifted	0	0	0	0	98.6	99.4	0	99.3	93.7	100	99.5	99.3	0	99.4	98.2	99	99.2
Bank 2	0	0	0	0	8	41	0	49	49	0	13	62	0	33	42	75	186
% Bank 2	0	0	0	0	1.4	0.6	0	0.7	6.3	0	0.5	0.7	0	0.6	1.8	1	0.8

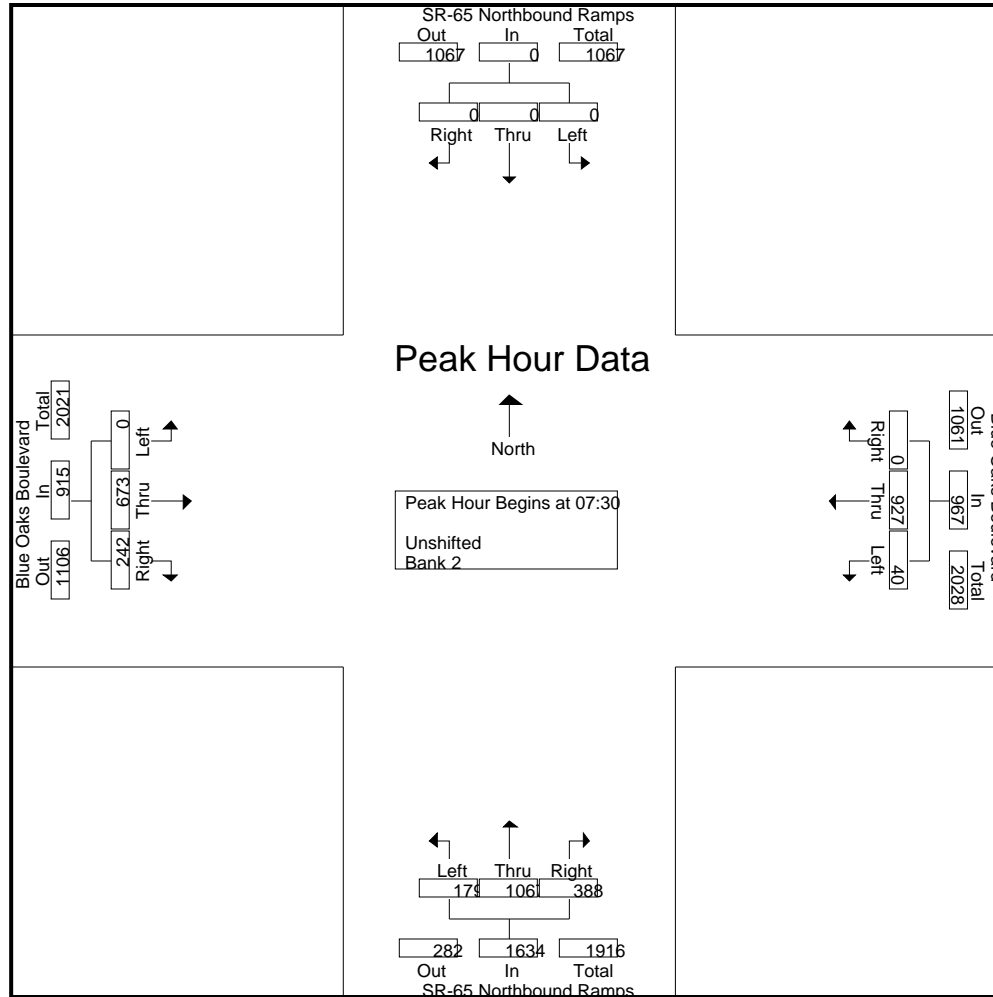
Start Time	SR-65 Northbound Ramps Southbound				Blue Oaks Boulevard Westbound				SR-65 Northbound Ramps Northbound				Blue Oaks Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	0	0	11	207	0	218	41	279	139	459	0	186	29	215	892
07:45	0	0	0	0	13	238	0	251	60	284	114	458	0	190	63	253	962
08:00	0	0	0	0	9	249	0	258	37	261	79	377	0	157	79	236	871
08:15	0	0	0	0	7	233	0	240	41	243	56	340	0	140	71	211	791
Total Volume	0	0	0	0	40	927	0	967	179	1067	388	1634	0	673	242	915	3516
% App. Total	0	0	0	0	4.1	95.9	0		11	65.3	23.7		0	73.6	26.4		
PHF	.000	.000	.000	.000	.769	.931	.000	.937	.746	.939	.698	.890	.000	.886	.766	.904	.914

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 Northbound Thru = Underpass

File Name : 12-7003-006 SR65 NB-Blue Oaks
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 Northbound Thru = Underpass

File Name : 12-7003-006 SR65 NB-Blue Oaks
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

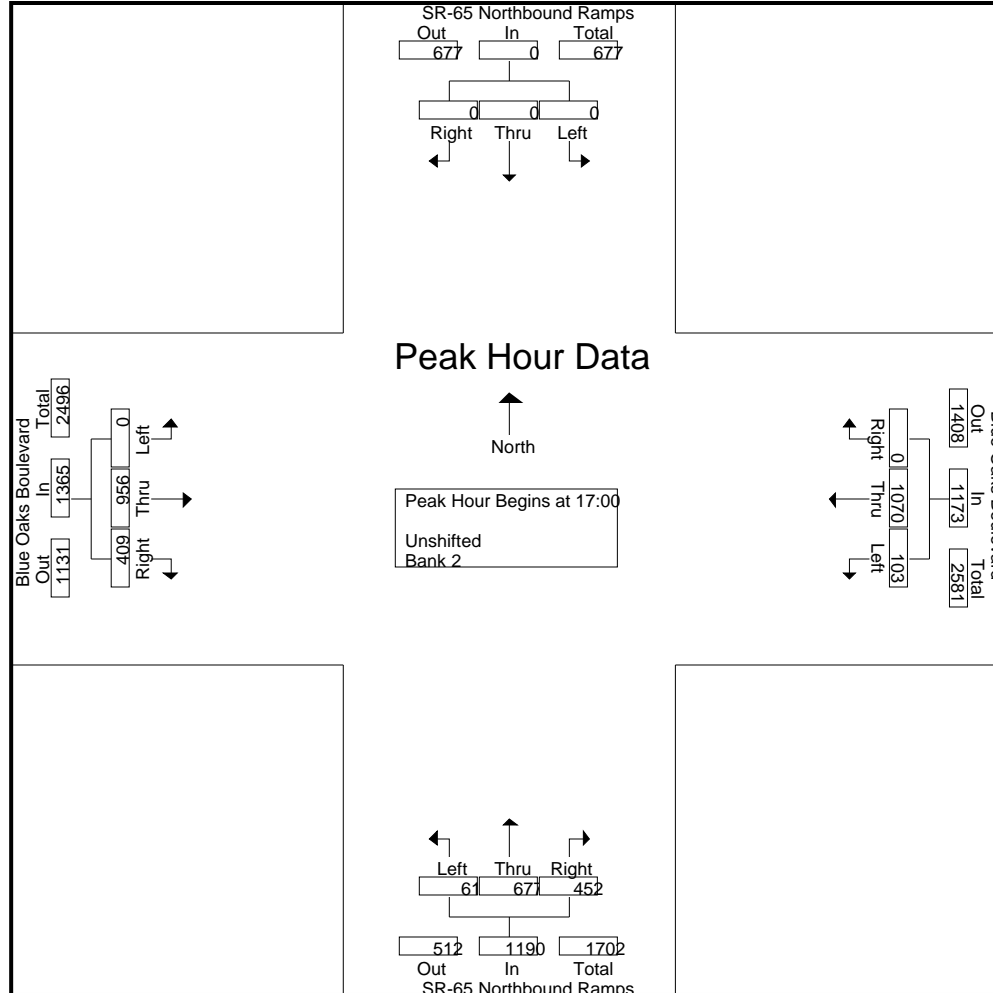
Start Time	SR-65 Northbound Ramps Southbound				Blue Oaks Boulevard Westbound				SR-65 Northbound Ramps Northbound				Blue Oaks Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	0	0	0	0	26	305	0	331	16	146	110	272	0	215	98	313	916
17:15	0	0	0	0	27	267	0	294	9	175	108	292	0	258	130	388	974
17:30	0	0	0	0	33	254	0	287	17	185	114	316	0	263	83	346	949
17:45	0	0	0	0	17	244	0	261	19	171	120	310	0	220	98	318	889
Total Volume	0	0	0	0	103	1070	0	1173	61	677	452	1190	0	956	409	1365	3728
% App. Total	0	0	0	0	8.8	91.2	0		5.1	56.9	38		0	70	30		
PHF	.000	.000	.000	.000	.780	.877	.000	.886	.803	.915	.942	.941	.000	.909	.787	.880	.957

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 Northbound Thru = Underpass

File Name : 12-7003-006 SR65 NB-Blue Oaks
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-009 SR65 SB-Pleasant Grove
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound Ramps Southbound				Pleasant Grove Blvd Westbound				SR-65 Southbound Ramps Northbound				Pleasant Grove Blvd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	7	0	14	21	0	64	81	145	0	0	0	0	0	40	56	96	262
06:15	10	0	16	26	0	93	95	188	0	0	0	0	0	49	72	121	335
06:30	9	0	30	39	0	100	103	203	0	0	0	0	0	69	95	164	406
06:45	11	0	41	52	0	158	135	293	0	0	0	0	0	102	92	194	539
Total	37	0	101	138	0	415	414	829	0	0	0	0	0	260	315	575	1542
07:00	9	0	45	54	0	188	109	297	0	0	0	0	0	98	139	237	588
07:15	20	0	105	125	0	226	110	336	0	0	0	0	0	123	165	288	749
07:30	23	3	166	192	0	304	112	416	0	0	0	0	0	165	148	313	921
07:45	24	0	191	215	0	307	99	406	0	0	0	0	0	222	140	362	983
Total	76	3	507	586	0	1025	430	1455	0	0	0	0	0	608	592	1200	3241
08:00	46	1	137	184	0	276	94	370	0	0	0	0	0	205	124	329	883
08:15	30	3	127	160	0	302	109	411	0	0	0	0	0	184	111	295	866
08:30	47	1	121	169	0	266	97	363	0	0	0	0	0	211	114	325	857
08:45	27	0	78	105	0	321	120	441	0	0	0	0	0	259	117	376	922
Total	150	5	463	618	0	1165	420	1585	0	0	0	0	0	859	466	1325	3528
09:00	24	1	60	85	0	251	111	362	0	0	0	0	0	201	161	362	809
09:15	21	0	51	72	0	178	112	290	0	0	0	0	0	189	112	301	663
09:30	38	0	59	97	0	203	81	284	0	0	0	0	0	193	106	299	680
09:45	27	0	57	84	0	254	81	335	0	0	0	0	0	181	78	259	678
Total	110	1	227	338	0	886	385	1271	0	0	0	0	0	764	457	1221	2830
15:00	59	1	121	181	0	406	75	481	0	0	0	0	0	360	140	500	1162
15:15	49	0	96	145	0	381	88	469	0	0	0	0	0	388	140	528	1142
15:30	38	2	135	175	0	393	60	453	0	0	0	0	0	330	126	456	1084
15:45	59	1	121	181	0	447	75	522	0	0	0	0	0	357	143	500	1203
Total	205	4	473	682	0	1627	298	1925	0	0	0	0	0	1435	549	1984	4591
16:00	39	1	54	94	0	398	77	475	0	0	0	0	0	354	142	496	1065
16:15	40	1	105	146	0	376	73	449	0	0	0	0	0	369	182	551	1146
16:30	36	3	79	118	0	361	75	436	0	0	0	0	0	375	134	509	1063

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-009 SR65 SB-Pleasant Grove
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	SR-65 Southbound Ramps Southbound				Pleasant Grove Blvd Westbound				SR-65 Southbound Ramps Northbound				Pleasant Grove Blvd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	28	1	77	106	0	363	89	452	0	0	0	0	0	439	141	580	1138
Total	143	6	315	464	0	1498	314	1812	0	0	0	0	0	1537	599	2136	4412
17:00	35	0	89	124	0	383	69	452	0	0	0	0	0	394	159	553	1129
17:15	47	1	155	203	0	442	71	513	0	0	0	0	0	432	149	581	1297
17:30	51	0	145	196	0	380	67	447	0	0	0	0	0	414	121	535	1178
17:45	35	1	104	140	0	409	76	485	0	0	0	0	0	472	132	604	1229
Total	168	2	493	663	0	1614	283	1897	0	0	0	0	0	1712	561	2273	4833
18:00	29	0	68	97	0	387	84	471	0	0	0	0	0	394	153	547	1115
18:15	37	0	55	92	0	417	94	511	0	0	0	0	0	395	158	553	1156
18:30	33	0	65	98	0	384	95	479	0	0	0	0	0	363	128	491	1068
18:45	28	0	53	81	0	347	84	431	0	0	0	0	0	330	121	451	963
Total	127	0	241	368	0	1535	357	1892	0	0	0	0	0	1482	560	2042	4302
Grand Total	1016	21	2820	3857	0	9765	2901	12666	0	0	0	0	0	8657	4099	12756	29279
Apprch %	26.3	0.5	73.1		0	77.1	22.9		0	0	0		0	67.9	32.1		
Total %	3.5	0.1	9.6	13.2	0	33.4	9.9	43.3	0	0	0	0	0	29.6	14	43.6	
Unshifted	1009	21	2805	3835	0	9714	2882	12596	0	0	0	0	0	8630	4009	12639	29070
% Unshifted	99.3	100	99.5	99.4	0	99.5	99.3	99.4	0	0	0	0	0	99.7	97.8	99.1	99.3
Bank 2	7	0	15	22	0	51	19	70	0	0	0	0	0	27	90	117	209
% Bank 2	0.7	0	0.5	0.6	0	0.5	0.7	0.6	0	0	0	0	0	0.3	2.2	0.9	0.7

Start Time	SR-65 Southbound Ramps Southbound				Pleasant Grove Blvd Westbound				SR-65 Southbound Ramps Northbound				Pleasant Grove Blvd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30	23	3	166	192	0	304	112	416	0	0	0	0	0	165	148	313	921
07:45	24	0	191	215	0	307	99	406	0	0	0	0	0	222	140	362	983
08:00	46	1	137	184	0	276	94	370	0	0	0	0	0	205	124	329	883
08:15	30	3	127	160	0	302	109	411	0	0	0	0	0	184	111	295	866
Total Volume	123	7	621	751	0	1189	414	1603	0	0	0	0	0	776	523	1299	3653
% App. Total	16.4	0.9	82.7		0	74.2	25.8		0	0	0		0	59.7	40.3		
PHF	.668	.583	.813	.873	.000	.968	.924	.963	.000	.000	.000	.000	.000	.874	.883	.897	.929

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

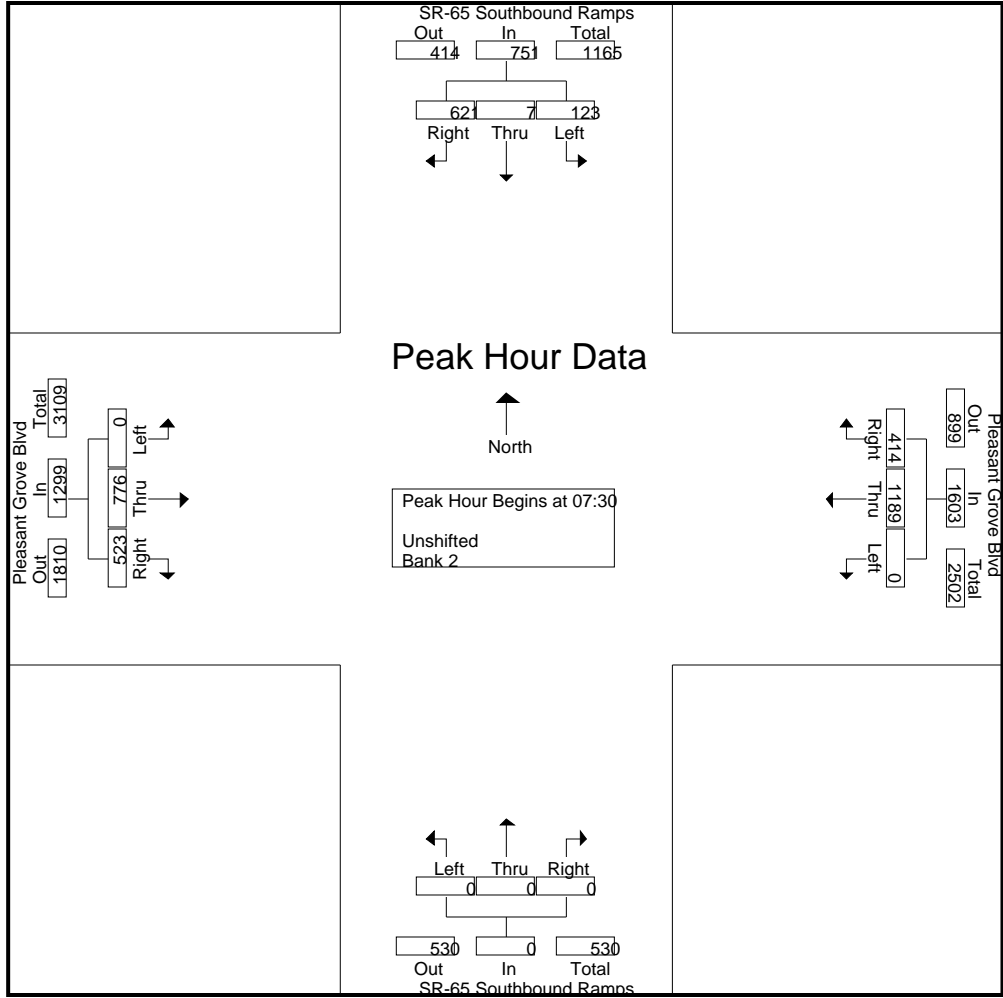
Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-009 SR65 SB-Pleasant Grove
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-009 SR65 SB-Pleasant Grove
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

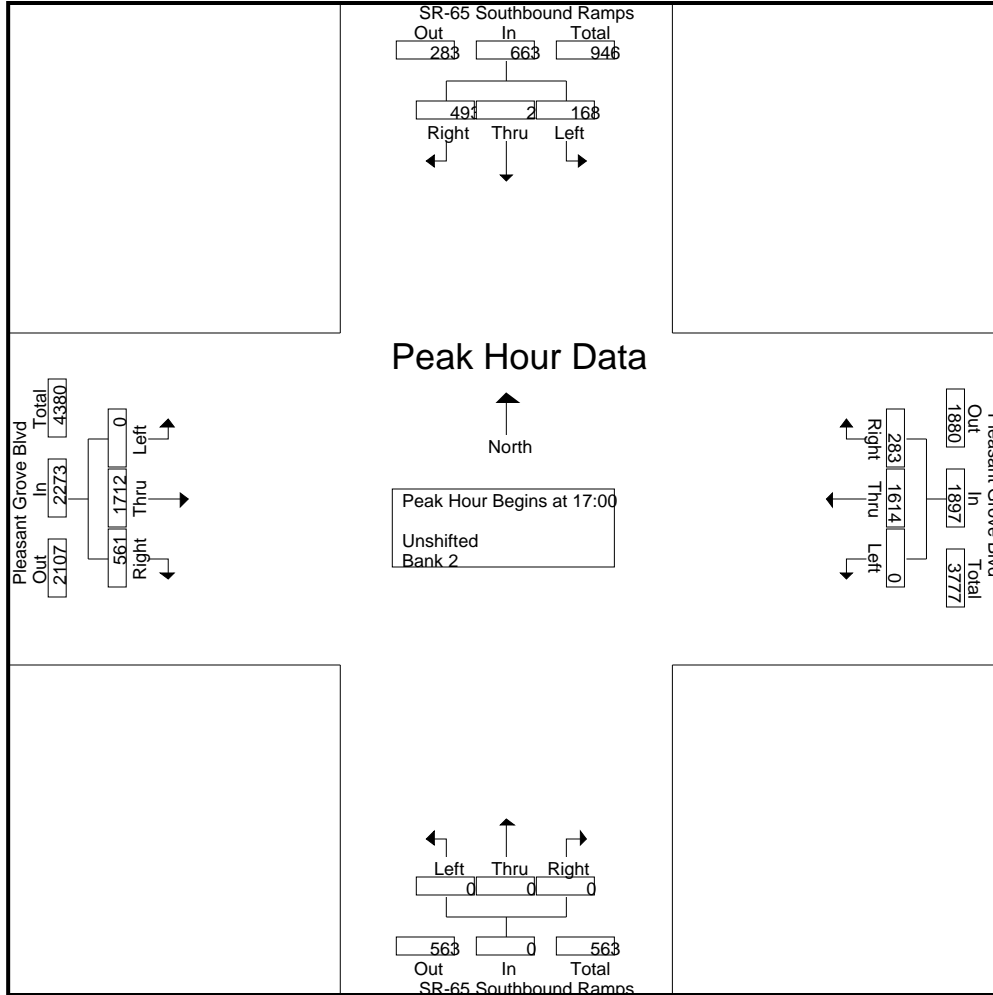
Start Time	SR-65 Southbound Ramps Southbound				Pleasant Grove Blvd Westbound				SR-65 Southbound Ramps Northbound				Pleasant Grove Blvd Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	35	0	89	124	0	383	69	452	0	0	0	0	0	394	159	553	1129
17:15	47	1	155	203	0	442	71	513	0	0	0	0	0	432	149	581	1297
17:30	51	0	145	196	0	380	67	447	0	0	0	0	0	414	121	535	1178
17:45	35	1	104	140	0	409	76	485	0	0	0	0	0	472	132	604	1229
Total Volume	168	2	493	663	0	1614	283	1897	0	0	0	0	0	1712	561	2273	4833
% App. Total	25.3	0.3	74.4		0	85.1	14.9		0	0	0		0	75.3	24.7		
PHF	.824	.500	.795	.817	.000	.913	.931	.924	.000	.000	.000	.000	.000	.907	.882	.941	.932

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-009 SR65 SB-Pleasant Grove
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-008 SR65 NB-Pleasant Grove
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Southbound				Pleasant Grove Boulevard Westbound				SR-65 Northbound Ramps Northbound				Pleasant Grove Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	0	0	0	7	109	0	116	34	0	26	60	0	27	19	46	222
06:15	0	0	0	0	8	159	0	167	39	0	23	62	0	38	22	60	289
06:30	0	0	0	0	12	168	0	180	32	0	40	72	0	53	22	75	327
06:45	0	0	0	0	23	225	0	248	60	0	42	102	0	77	33	110	460
Total	0	0	0	0	50	661	0	711	165	0	131	296	0	195	96	291	1298
07:00	0	0	0	0	15	243	0	258	60	0	44	104	0	82	25	107	469
07:15	0	0	0	0	10	260	0	270	67	0	59	126	0	118	34	152	548
07:30	0	0	0	0	10	319	0	329	82	0	63	145	0	136	40	176	650
07:45	0	0	0	0	13	320	0	333	98	0	85	183	0	201	49	250	766
Total	0	0	0	0	48	1142	0	1190	307	0	251	558	0	537	148	685	2433
08:00	0	0	0	0	18	272	0	290	92	0	62	154	0	195	50	245	689
08:15	0	0	0	0	16	329	0	345	86	0	84	170	0	190	31	221	736
08:30	0	0	0	0	25	282	0	307	74	0	79	153	0	207	30	237	697
08:45	0	0	0	0	28	345	0	373	91	0	89	180	0	270	39	309	862
Total	0	0	0	0	87	1228	0	1315	343	0	314	657	0	862	150	1012	2984
09:00	0	0	0	0	23	258	0	281	93	0	80	173	0	194	23	217	671
09:15	0	0	0	0	20	249	0	269	53	0	75	128	0	174	52	226	623
09:30	0	0	0	0	31	206	0	237	75	0	83	158	0	192	35	227	622
09:45	0	0	0	0	31	251	0	282	89	0	72	161	0	187	36	223	666
Total	0	0	0	0	105	964	0	1069	310	0	310	620	0	747	146	893	2582
15:00	0	0	0	0	42	302	0	344	128	0	116	244	0	313	83	396	984
15:15	0	0	0	0	36	354	0	390	123	0	137	260	0	361	85	446	1096
15:30	0	0	0	0	46	366	0	412	143	0	135	278	0	335	60	395	1085
15:45	0	0	0	0	45	386	0	431	121	0	123	244	0	334	81	415	1090
Total	0	0	0	0	169	1408	0	1577	515	0	511	1026	0	1343	309	1652	4255
16:00	0	0	0	0	42	333	0	375	158	0	135	293	0	288	83	371	1039
16:15	0	0	0	0	39	310	0	349	121	0	139	260	0	362	77	439	1048
16:30	0	0	0	0	41	331	0	372	131	0	137	268	0	329	101	430	1070

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-008 SR65 NB-Pleasant Grove
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Southbound				Pleasant Grove Boulevard Westbound				SR-65 Northbound Ramps Northbound				Pleasant Grove Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	0	0	0	44	340	0	384	97	0	132	229	0	353	96	449	1062
Total	0	0	0	0	166	1314	0	1480	507	0	543	1050	0	1332	357	1689	4219
17:00	0	0	0	0	38	333	0	371	141	0	140	281	0	332	104	436	1088
17:15	0	0	0	0	32	375	0	407	104	0	100	204	0	396	95	491	1102
17:30	0	0	0	0	42	360	0	402	122	0	136	258	0	344	107	451	1111
17:45	0	0	0	0	36	348	0	384	103	0	124	227	0	414	114	528	1139
Total	0	0	0	0	148	1416	0	1564	470	0	500	970	0	1486	420	1906	4440
18:00	0	0	0	0	46	343	0	389	144	0	139	283	0	342	78	420	1092
18:15	0	0	0	0	34	381	0	415	111	0	117	228	0	329	113	442	1085
18:30	0	0	0	0	43	348	0	391	124	0	123	247	0	297	84	381	1019
18:45	0	0	0	0	46	310	0	356	110	0	116	226	0	297	76	373	955
Total	0	0	0	0	169	1382	0	1551	489	0	495	984	0	1265	351	1616	4151
Grand Total	0	0	0	0	942	9515	0	10457	3106	0	3055	6161	0	7767	1977	9744	26362
Apprch %	0	0	0		9	91	0		50.4	0	49.6		0	79.7	20.3		
Total %	0	0	0		3.6	36.1	0	39.7	11.8	0	11.6	23.4	0	29.5	7.5	37	
Unshifted	0	0	0	0	934	9468	0	10402	3068	0	3014	6082	0	7739	1960	9699	26183
% Unshifted	0	0	0	0	99.2	99.5	0	99.5	98.8	0	98.7	98.7	0	99.6	99.1	99.5	99.3
Bank 2	0	0	0	0	8	47	0	55	38	0	41	79	0	28	17	45	179
% Bank 2	0	0	0	0	0.8	0.5	0	0.5	1.2	0	1.3	1.3	0	0.4	0.9	0.5	0.7

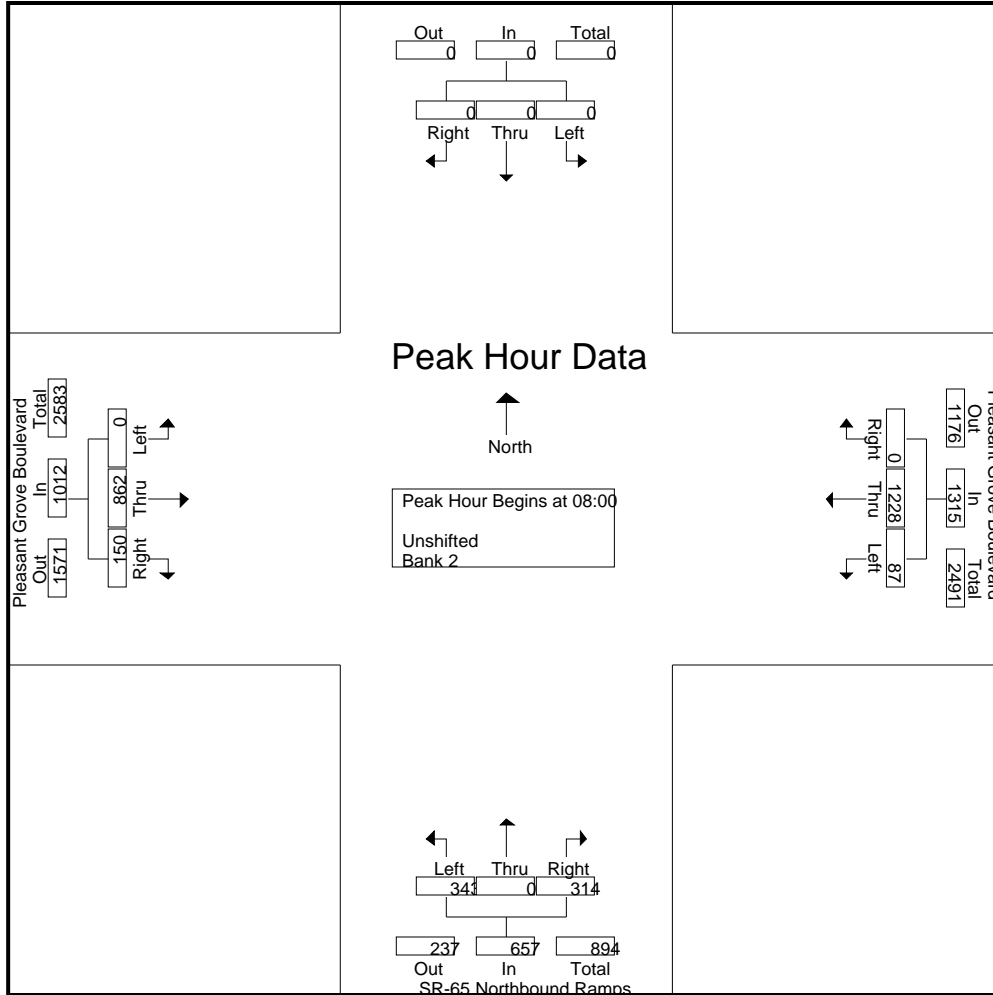
Start Time	Southbound				Pleasant Grove Boulevard Westbound				SR-65 Northbound Ramps Northbound				Pleasant Grove Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	0	0	0	0	18	272	0	290	92	0	62	154	0	195	50	245	689
08:15	0	0	0	0	16	329	0	345	86	0	84	170	0	190	31	221	736
08:30	0	0	0	0	25	282	0	307	74	0	79	153	0	207	30	237	697
08:45	0	0	0	0	28	345	0	373	91	0	89	180	0	270	39	309	862
Total Volume	0	0	0	0	87	1228	0	1315	343	0	314	657	0	862	150	1012	2984
% App. Total	0	0	0	0	6.6	93.4	0		52.2	0	47.8		0	85.2	14.8		
PHF	.000	.000	.000	.000	.777	.890	.000	.881	.932	.000	.882	.913	.000	.798	.750	.819	.865

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-008 SR65 NB-Pleasant Grove
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-008 SR65 NB-Pleasant Grove
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

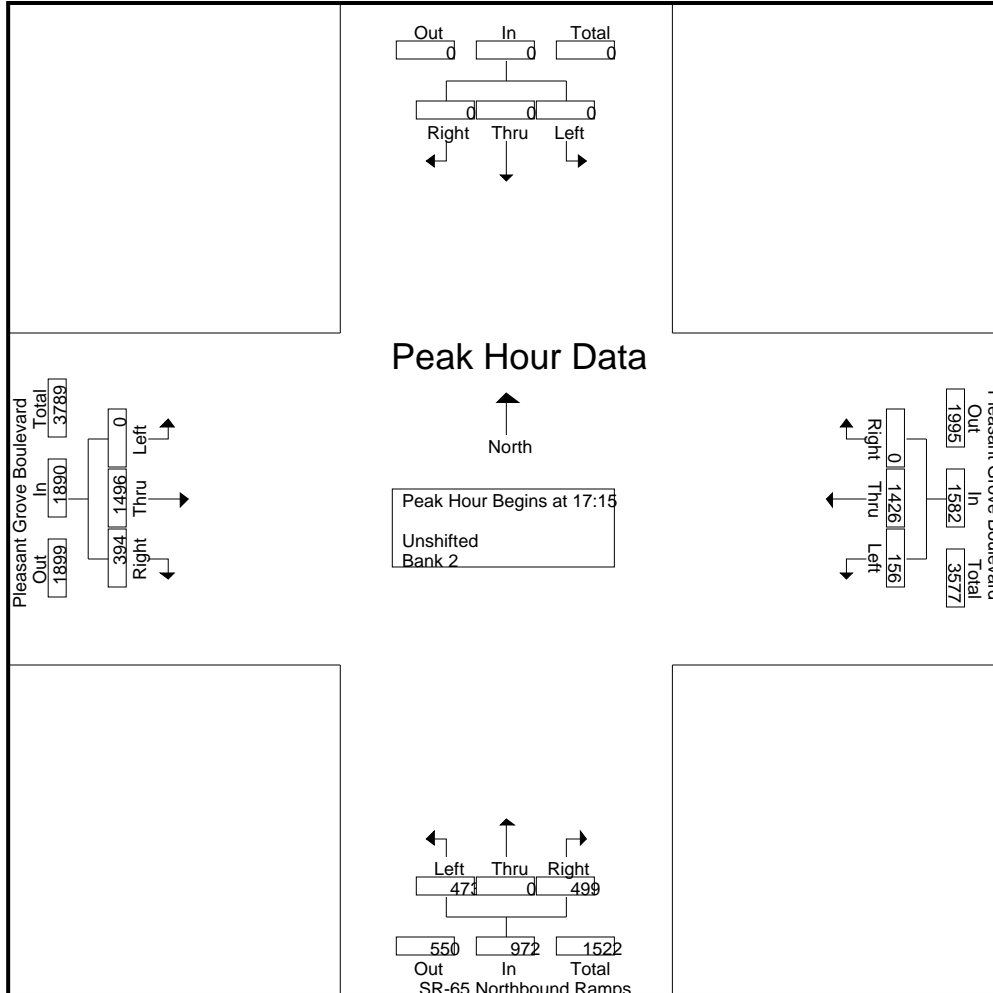
Start Time	Southbound				Pleasant Grove Boulevard Westbound				SR-65 Northbound Ramps Northbound				Pleasant Grove Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:15																	
17:15	0	0	0	0	32	375	0	407	104	0	100	204	0	396	95	491	1102
17:30	0	0	0	0	42	360	0	402	122	0	136	258	0	344	107	451	1111
17:45	0	0	0	0	36	348	0	384	103	0	124	227	0	414	114	528	1139
18:00	0	0	0	0	46	343	0	389	144	0	139	283	0	342	78	420	1092
Total Volume	0	0	0	0	156	1426	0	1582	473	0	499	972	0	1496	394	1890	4444
% App. Total	0	0	0	0	9.9	90.1	0		48.7	0	51.3		0	79.2	20.8		
PHF	.000	.000	.000	.000	.848	.951	.000	.972	.821	.000	.897	.859	.000	.903	.864	.895	.975

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-008 SR65 NB-Pleasant Grove
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-010 Stanford Ranch-Five Star
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Stanford Ranch Road Southbound					Five Star Boulevard Westbound					Stanford Ranch Road Northbound					Five Star Boulevard Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00	1	123	0	1	125	30	4	0	0	34	7	29	5	2	43	1	0	15	0	16	218
06:15	0	159	2	0	161	31	1	2	0	34	16	22	4	3	45	0	1	13	0	14	254
06:30	4	179	2	2	187	32	5	1	0	38	16	49	11	2	78	2	2	17	0	21	324
06:45	2	234	3	1	240	34	6	3	0	43	15	69	14	3	101	1	2	24	0	27	411
Total	7	695	7	4	713	127	16	6	0	149	54	169	34	10	267	4	5	69	0	78	1207
07:00	4	222	1	0	227	58	5	3	0	66	21	72	23	1	117	3	2	29	0	34	444
07:15	0	273	1	0	274	50	8	2	0	60	9	117	31	4	161	2	2	32	0	36	531
07:30	8	276	3	0	287	68	7	3	0	78	21	152	34	3	210	1	2	34	0	37	612
07:45	10	357	4	1	372	58	12	7	0	77	32	191	53	3	279	6	10	48	0	64	792
Total	22	1128	9	1	1160	234	32	15	0	281	83	532	141	11	767	12	16	143	0	171	2379
08:00	21	242	6	1	270	76	15	9	0	100	28	183	55	4	270	2	13	25	0	40	680
08:15	13	285	2	0	300	72	13	6	0	91	34	150	56	5	245	1	11	49	0	61	697
08:30	24	225	5	3	257	77	21	7	0	105	21	128	62	3	214	7	13	56	0	76	652
08:45	20	239	3	2	264	60	21	7	0	88	51	165	78	6	300	2	14	44	0	60	712
Total	78	991	16	6	1091	285	70	29	0	384	134	626	251	18	1029	12	51	174	0	237	2741
09:00	17	191	9	1	218	80	23	15	0	118	42	127	65	8	242	4	17	38	0	59	637
09:15	14	183	3	0	200	53	28	7	0	88	62	154	66	5	287	5	8	40	0	53	628
09:30	8	170	9	2	189	58	28	5	0	91	66	135	62	15	278	2	13	52	0	67	625
09:45	15	206	11	0	232	57	22	17	0	96	89	155	52	27	323	9	11	46	0	66	717
Total	54	750	32	3	839	248	101	44	0	393	259	571	245	55	1130	20	49	176	0	245	2607
15:00	19	289	21	0	329	111	39	20	0	170	113	267	74	32	486	22	35	88	0	145	1130
15:15	11	204	13	0	228	86	23	10	0	119	124	268	78	53	523	16	14	92	0	122	992
15:30	14	237	18	1	270	104	40	7	0	151	95	280	82	39	496	32	17	104	0	153	1070
15:45	22	192	14	1	229	89	25	13	0	127	104	296	63	41	504	24	29	99	0	152	1012
Total	66	922	66	2	1056	390	127	50	0	567	436	1111	297	165	2009	94	95	383	0	572	4204
16:00	16	213	20	0	249	92	24	9	0	125	104	263	66	39	472	22	22	97	0	141	987
16:15	17	226	13	2	258	80	21	19	0	120	105	315	96	44	560	19	23	85	0	127	1065
16:30	8	220	18	0	246	108	29	21	0	158	100	268	89	38	495	20	19	102	0	141	1040
16:45	15	202	13	2	232	79	20	10	0	109	115	306	75	47	543	30	27	74	0	131	1015
Total	56	861	64	4	985	359	94	59	0	512	424	1152	326	168	2070	91	91	358	0	540	4107
17:00	23	249	17	1	290	122	24	25	0	171	105	348	63	31	547	33	24	83	0	140	1148
17:15	14	247	19	2	282	92	41	20	0	153	113	381	97	37	628	23	17	52	0	92	1155
17:30	23	201	11	2	237	101	35	13	0	149	81	294	83	38	496	24	26	89	0	139	1021

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-010 Stanford Ranch-Five Star
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Stanford Ranch Road Southbound					Five Star Boulevard Westbound					Stanford Ranch Road Northbound					Five Star Boulevard Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
17:45	10	246	19	0	275	79	33	14	0	126	101	371	82	47	601	19	33	92	0	144	1146
Total	70	943	66	5	1084	394	133	72	0	599	400	1394	325	153	2272	99	100	316	0	515	4470
18:00	19	206	9	1	235	94	24	16	0	134	76	291	90	36	493	16	22	103	0	141	1003
18:15	20	208	17	0	245	75	19	14	0	108	86	331	88	37	542	16	26	71	0	113	1008
18:30	31	194	12	2	239	72	34	14	0	120	78	246	107	11	442	19	24	80	0	123	924
18:45	35	157	9	1	202	71	26	12	0	109	78	263	131	31	503	21	26	58	0	105	919
Total	105	765	47	4	921	312	103	56	0	471	318	1131	416	115	1980	72	98	312	0	482	3854
Grand Total	458	7055	307	29	7849	2349	676	331	0	3356	2108	6686	2035	695	11524	404	505	1931	0	2840	25569
Apprch %	5.8	89.9	3.9	0.4		70	20.1	9.9	0		18.3	58	17.7	6		14.2	17.8	68	0		
Total %	1.8	27.6	1.2	0.1	30.7	9.2	2.6	1.3	0	13.1	8.2	26.1	8	2.7	45.1	1.6	2	7.6	0	11.1	
Unshifted	450	7008	305	29	7792	2324	666	324	0	3314	2090	6641	2014	695	11440	400	503	1913	0	2816	25362
% Unshifted	98.3	99.3	99.3	100	99.3	98.9	98.5	97.9	0	98.7	99.1	99.3	99	100	99.3	99	99.6	99.1	0	99.2	99.2
Bank 2	8	47	2	0	57	25	10	7	0	42	18	45	21	0	84	4	2	18	0	24	207
% Bank 2	1.7	0.7	0.7	0	0.7	1.1	1.5	2.1	0	1.3	0.9	0.7	1	0	0.7	1	0.4	0.9	0	0.8	0.8

Start Time	Stanford Ranch Road Southbound					Five Star Boulevard Westbound					Stanford Ranch Road Northbound					Five Star Boulevard Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45

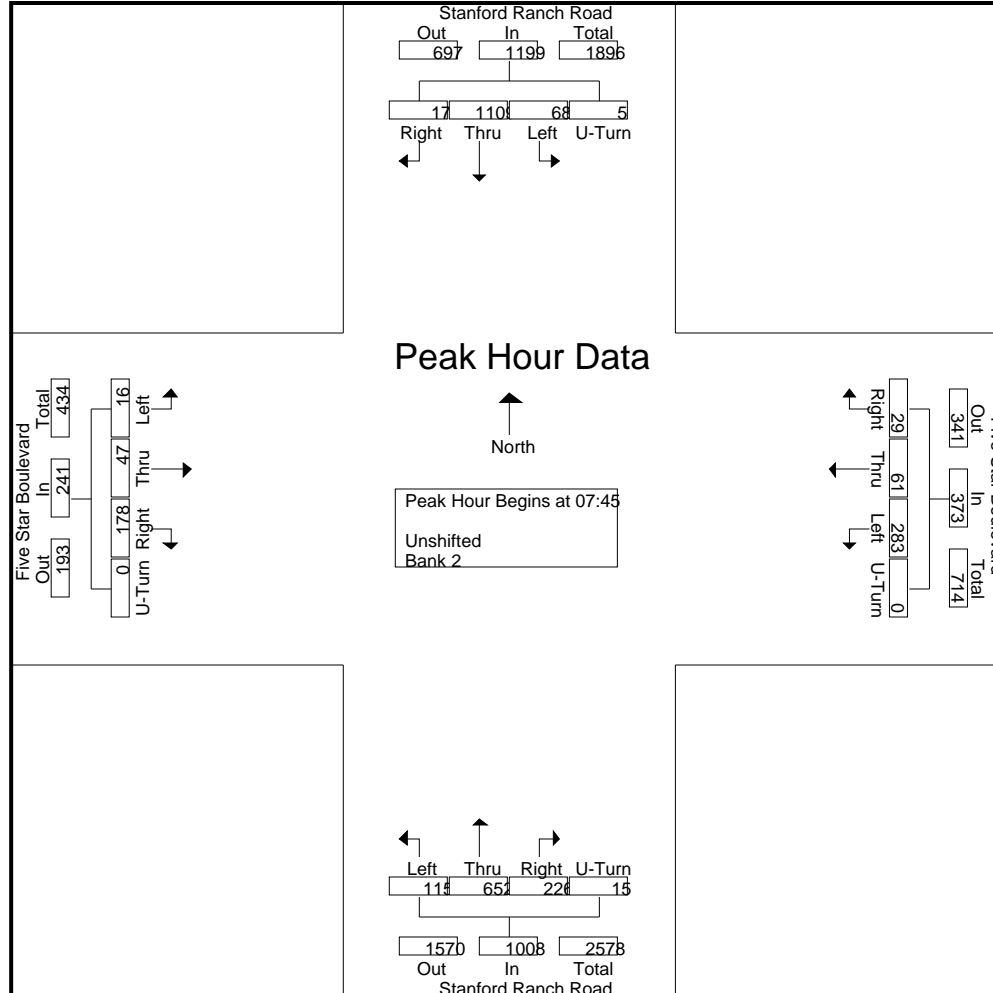
07:45	10	357	4	1	372	58	12	7	0	77	32	191	53	3	279	6	10	48	0	64	792
08:00	21	242	6	1	270	76	15	9	0	100	28	183	55	4	270	2	13	25	0	40	680
08:15	13	285	2	0	300	72	13	6	0	91	34	150	56	5	245	1	11	49	0	61	697
08:30	24	225	5	3	257	77	21	7	0	105	21	128	62	3	214	7	13	56	0	76	652
Total Volume	68	1109	17	5	1199	283	61	29	0	373	115	652	226	15	1008	16	47	178	0	241	2821
% App. Total	5.7	92.5	1.4	0.4		75.9	16.4	7.8	0		11.4	64.7	22.4	1.5		6.6	19.5	73.9	0		
PHF	.708	.777	.708	.417	.806	.919	.726	.806	.000	.888	.846	.853	.911	.750	.903	.571	.904	.795	.000	.793	.890

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-010 Stanford Ranch-Five Star
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-010 Stanford Ranch-Five Star
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

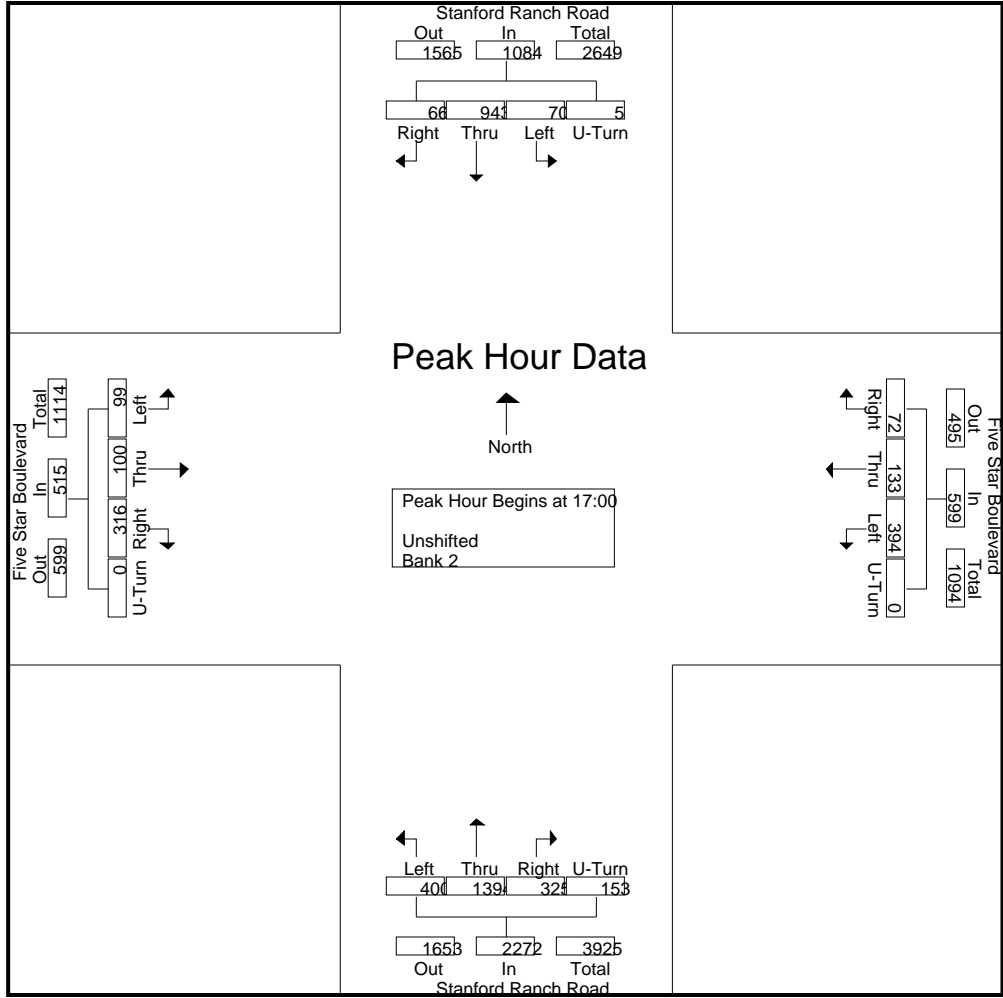
Start Time	Stanford Ranch Road Southbound					Five Star Boulevard Westbound					Stanford Ranch Road Northbound					Five Star Boulevard Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	23	249			290	122		25		171						33					
17:15	14	247	19	2	282	92	41	20	0	153	113	381	97	37	628	23	17	52	0	92	1155
17:30	23	201	11	2	237	101	35	13	0	149	81	294	83	38	496	24	26	89	0	139	1021
17:45	10	246	19	0	275	79	33	14	0	126	101	371	82	47	601	19	33	92	0	144	1146
Total Volume	70	943	66	5	1084	394	133	72	0	599	400	1394	325	153	2272	99	100	316	0	515	4470
% App. Total	6.5	87	6.1	0.5		65.8	22.2	12	0		17.6	61.4	14.3	6.7		19.2	19.4	61.4	0		
PHF	.761	.947	.868	.625	.934	.807	.811	.720	.000	.876	.885	.915	.838	.814	.904	.750	.758	.859	.000	.894	.968

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-010 Stanford Ranch-Five Star
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-011 Stanford Ranch-SR65 NB
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Stanford Ranch Road Southbound				SR-65 Northbound Ramps Westbound				Stanford Ranch Road Northbound				SR-65 Northbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	142	20	162	0	0	27	27	22	18	0	40	0	0	6	6	235
06:15	0	176	20	196	0	0	27	27	34	23	0	57	0	0	22	22	302
06:30	0	222	12	234	0	0	37	37	47	45	0	92	0	0	25	25	388
06:45	0	257	28	285	0	0	53	53	41	50	0	91	0	0	23	23	452
Total	0	797	80	877	0	0	144	144	144	136	0	280	0	0	76	76	1377
07:00	0	267	34	301	0	0	72	72	65	51	0	116	0	0	29	29	518
07:15	0	289	48	337	0	0	78	78	89	88	0	177	0	0	17	17	609
07:30	0	333	34	367	0	0	112	112	102	120	0	222	0	0	31	31	732
07:45	0	415	31	446	0	0	156	156	124	145	0	269	0	0	46	46	917
Total	0	1304	147	1451	0	0	418	418	380	404	0	784	0	0	123	123	2776
08:00	0	290	57	347	0	0	126	126	71	159	0	230	0	0	46	46	749
08:15	0	350	45	395	0	0	123	123	102	120	0	222	0	0	58	58	798
08:30	0	308	36	344	0	0	100	100	80	140	0	220	0	0	46	46	710
08:45	0	308	44	352	0	0	132	132	91	161	0	252	0	0	77	77	813
Total	0	1256	182	1438	0	0	481	481	344	580	0	924	0	0	227	227	3070
09:00	0	262	45	307	0	0	108	108	69	143	0	212	0	0	67	67	694
09:15	0	247	31	278	0	0	138	138	73	167	0	240	0	0	63	63	719
09:30	0	242	36	278	0	0	138	138	73	169	0	242	0	0	81	81	739
09:45	0	274	37	311	0	0	151	151	71	186	0	257	0	0	116	116	835
Total	0	1025	149	1174	0	0	535	535	286	665	0	951	0	0	327	327	2987
15:00	0	418	91	509	0	0	207	207	135	307	0	442	0	0	85	85	1243
15:15	0	394	75	469	0	0	209	209	146	307	0	453	0	0	107	107	1238
15:30	0	388	70	458	0	0	188	188	170	333	0	503	0	0	124	124	1273
15:45	0	393	81	474	0	0	178	178	163	350	0	513	0	0	147	147	1312
Total	0	1593	317	1910	0	0	782	782	614	1297	0	1911	0	0	463	463	5066
16:00	0	370	49	419	0	0	216	216	164	332	0	496	0	0	89	89	1220
16:15	0	358	65	423	0	0	196	196	139	371	0	510	0	0	129	129	1258
16:30	0	400	68	468	0	0	202	202	181	332	0	513	0	0	114	114	1297

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-011 Stanford Ranch-SR65 NB
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Stanford Ranch Road Southbound				SR-65 Northbound Ramps Westbound				Stanford Ranch Road Northbound				SR-65 Northbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	362	75	437	0	0	199	199	170	346	0	516	0	0	99	99	1251
Total	0	1490	257	1747	0	0	813	813	654	1381	0	2035	0	0	431	431	5026
17:00	0	390	77	467	0	0	187	187	181	409	0	590	0	0	75	75	1319
17:15	0	375	60	435	0	0	166	166	174	453	0	627	0	0	70	70	1298
17:30	0	364	54	418	0	0	157	157	159	369	0	528	0	0	110	110	1213
17:45	0	383	83	466	0	0	204	204	150	397	0	547	0	0	79	79	1296
Total	0	1512	274	1786	0	0	714	714	664	1628	0	2292	0	0	334	334	5126
18:00	0	364	70	434	0	0	195	195	130	338	0	468	0	0	95	95	1192
18:15	0	320	86	406	0	0	198	198	165	330	0	495	0	0	97	97	1196
18:30	0	305	56	361	0	0	203	203	143	266	0	409	0	0	94	94	1067
18:45	0	261	76	337	0	0	183	183	128	308	0	436	0	0	85	85	1041
Total	0	1250	288	1538	0	0	779	779	566	1242	0	1808	0	0	371	371	4496
Grand Total	0	10227	1694	11921	0	0	4666	4666	3652	7333	0	10985	0	0	2352	2352	29924
Apprch %	0	85.8	14.2		0	0	100		33.2	66.8	0		0	0	100		
Total %	0	34.2	5.7	39.8	0	0	15.6	15.6	12.2	24.5	0	36.7	0	0	7.9	7.9	
Unshifted	0	10172	1670	11842	0	0	4624	4624	3623	7292	0	10915	0	0	2328	2328	29709
% Unshifted	0	99.5	98.6	99.3	0	0	99.1	99.1	99.2	99.4	0	99.4	0	0	99	99	99.3
Bank 2	0	55	24	79	0	0	42	42	29	41	0	70	0	0	24	24	215
% Bank 2	0	0.5	1.4	0.7	0	0	0.9	0.9	0.8	0.6	0	0.6	0	0	1	1	0.7

Start Time	Stanford Ranch Road Southbound				SR-65 Northbound Ramps Westbound				Stanford Ranch Road Northbound				SR-65 Northbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30	0	333	34	367	0	0	112	112	102	120	0	222	0	0	31	31	732
07:45	0	415	31	446	0	0	156	156	124	145	0	269	0	0	46	46	917
08:00	0	290	57	347	0	0	126	126	71	159	0	230	0	0	46	46	749
08:15	0	350	45	395	0	0	123	123	102	120	0	222	0	0	58	58	798
Total Volume	0	1388	167	1555	0	0	517	517	399	544	0	943	0	0	181	181	3196
% App. Total	0	89.3	10.7		0	0	100		42.3	57.7	0		0	0	100		
PHF	.000	.836	.732	.872	.000	.000	.829	.829	.804	.855	.000	.876	.000	.000	.780	.780	.871

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

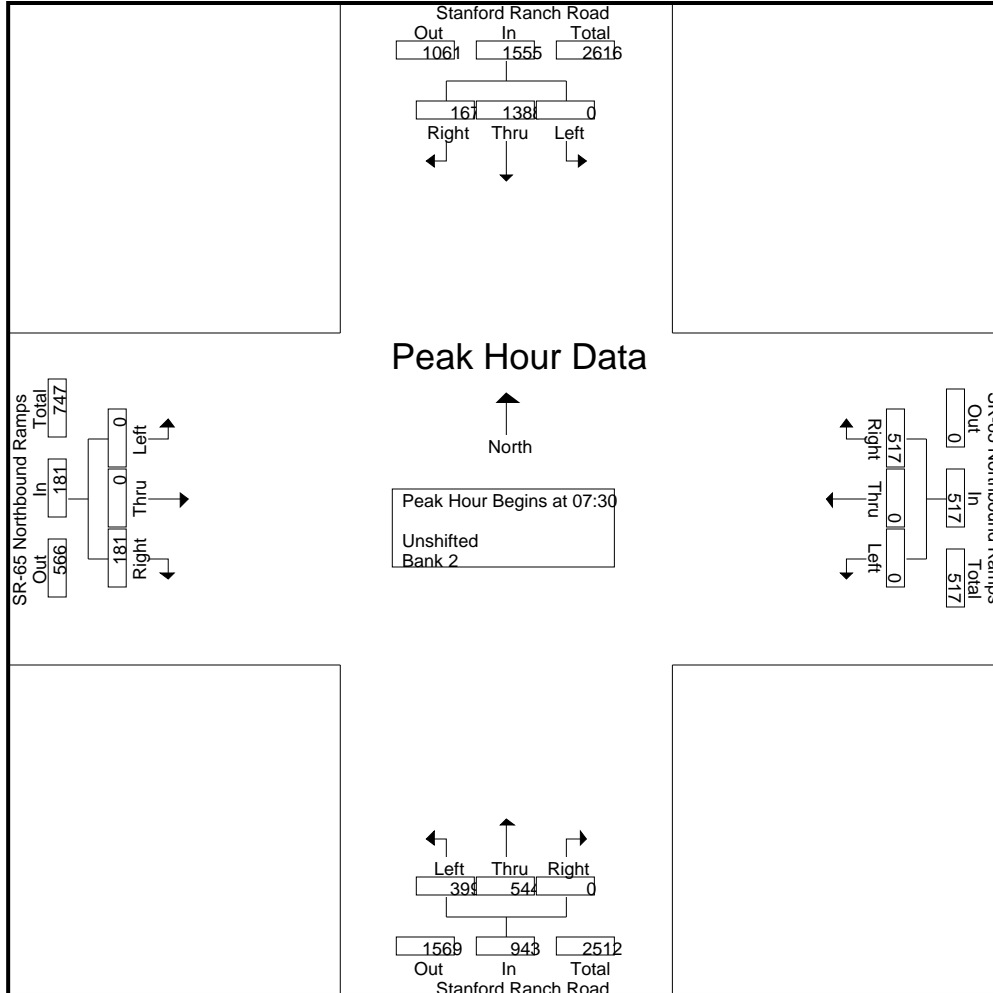
Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-011 Stanford Ranch-SR65 NB
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-011 Stanford Ranch-SR65 NB
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

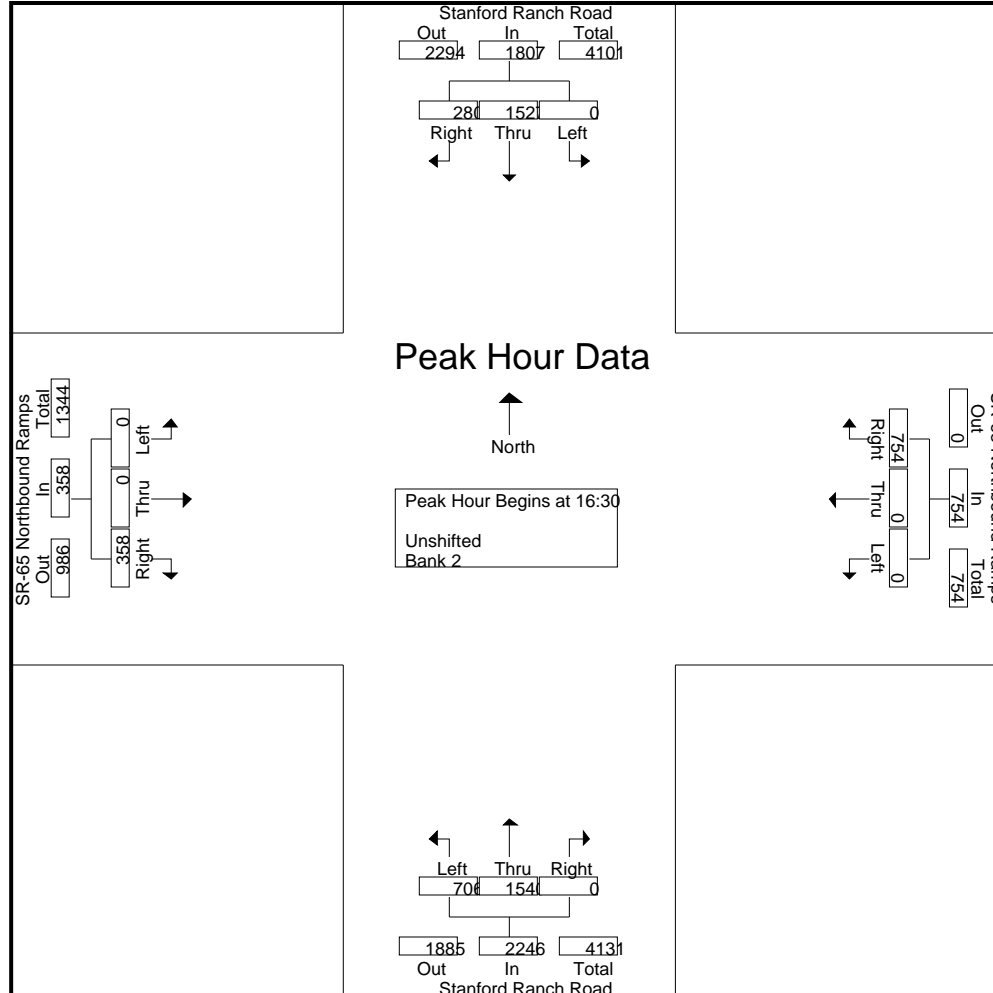
Start Time	Stanford Ranch Road Southbound				SR-65 Northbound Ramps Westbound				Stanford Ranch Road Northbound				SR-65 Northbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	400	68	468	0	0	202	202	181	332	0	513	0	0	114	114	1297
16:45	0	362	75	437	0	0	199	199	170	346	0	516	0	0	99	99	1251
17:00	0	390	77	467	0	0	187	187	181	409	0	590	0	0	75	75	1319
17:15	0	375	60	435	0	0	166	166	174	453	0	627	0	0	70	70	1298
Total Volume	0	1527	280	1807	0	0	754	754	706	1540	0	2246	0	0	358	358	5165
% App. Total	0	84.5	15.5		0	0	100		31.4	68.6	0		0	0	100		
PHF	.000	.954	.909	.965	.000	.000	.933	.933	.975	.850	.000	.896	.000	.000	.785	.785	.979

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-011 Stanford Ranch-SR65 NB
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-012 Galleria-SR65 SB
Site Code : 00000000
Start Date : 2/8/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Galleria Boulevard Southbound				SR-65 Southbound Ramps Westbound				Galleria Boulevard Northbound				SR-65 Southbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	90	61	0	151	0	0	9	9	0	33	9	42	0	0	57	57	259
06:15	103	94	0	197	0	0	6	6	0	57	7	64	0	0	77	77	344
06:30	140	98	0	238	0	0	16	16	0	80	17	97	0	0	92	92	443
06:45	155	139	0	294	0	0	15	15	0	72	21	93	0	0	143	143	545
Total	488	392	0	880	0	0	46	46	0	242	54	296	0	0	369	369	1591
07:00	155	149	0	304	0	0	17	17	0	100	30	130	0	0	137	137	588
07:15	132	162	0	294	0	0	15	15	0	172	19	191	0	0	187	187	687
07:30	156	222	0	378	0	0	22	22	0	200	38	238	0	0	145	145	783
07:45	173	280	0	453	0	0	32	32	0	227	39	266	0	0	163	163	914
Total	616	813	0	1429	0	0	86	86	0	699	126	825	0	0	632	632	2972
08:00	141	211	0	352	0	0	52	52	0	188	29	217	0	0	179	179	800
08:15	147	257	0	404	0	0	38	38	0	177	26	203	0	0	166	166	811
08:30	128	230	0	358	0	0	40	40	0	181	23	204	0	0	172	172	774
08:45	128	270	0	398	0	0	54	54	0	180	27	207	0	0	180	180	839
Total	544	968	0	1512	0	0	184	184	0	726	105	831	0	0	697	697	3224
09:00	126	199	0	325	0	0	40	40	0	148	33	181	0	0	147	147	693
09:15	106	208	0	314	0	0	42	42	0	210	29	239	0	0	132	132	727
09:30	109	218	0	327	0	0	46	46	0	191	43	234	0	0	136	136	743
09:45	114	270	0	384	0	0	50	50	0	201	35	236	0	0	137	137	807
Total	455	895	0	1350	0	0	178	178	0	750	140	890	0	0	552	552	2970
15:00	140	353	0	493	0	0	61	61	0	396	127	523	0	0	158	158	1235
15:15	162	344	0	506	0	0	42	42	0	385	101	486	0	0	154	154	1188
15:30	148	367	0	515	0	0	50	50	0	476	125	601	0	0	164	164	1330
15:45	162	395	0	557	0	0	50	50	0	422	122	544	0	0	133	133	1284
Total	612	1459	0	2071	0	0	203	203	0	1679	475	2154	0	0	609	609	5037
16:00	120	319	0	439	0	0	61	61	0	468	137	605	0	0	168	168	1273
16:15	148	346	0	494	0	0	56	56	0	415	107	522	0	0	145	145	1217
16:30	145	357	0	502	0	0	64	64	0	492	124	616	0	0	169	169	1351

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-012 Galleria-SR65 SB
Site Code : 00000000
Start Date : 2/8/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Galleria Boulevard Southbound				SR-65 Southbound Ramps Westbound				Galleria Boulevard Northbound				SR-65 Southbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	144	336	0	480	0	0	57	57	0	431	110	541	0	0	161	161	1239
Total	557	1358	0	1915	0	0	238	238	0	1806	478	2284	0	0	643	643	5080
17:00	144	331	0	475	0	0	45	45	0	577	109	686	0	0	148	148	1354
17:15	135	334	0	469	0	0	31	31	0	570	96	666	0	0	105	105	1271
17:30	110	315	0	425	0	0	38	38	0	517	113	630	0	0	136	136	1229
17:45	139	349	0	488	0	0	56	56	0	448	83	531	0	0	134	134	1209
Total	528	1329	0	1857	0	0	170	170	0	2112	401	2513	0	0	523	523	5063
18:00	140	310	0	450	0	0	74	74	0	403	77	480	0	0	163	163	1167
18:15	126	317	0	443	0	0	61	61	0	389	90	479	0	0	106	106	1089
18:30	117	280	0	397	0	0	69	69	0	386	104	490	0	0	151	151	1107
18:45	107	250	0	357	0	0	91	91	0	297	61	358	0	0	97	97	903
Total	490	1157	0	1647	0	0	295	295	0	1475	332	1807	0	0	517	517	4266
Grand Total	4290	8371	0	12661	0	0	1400	1400	0	9489	2111	11600	0	0	4542	4542	30203
Apprch %	33.9	66.1	0		0	0	100		0	81.8	18.2		0	0	100		
Total %	14.2	27.7	0	41.9	0	0	4.6	4.6	0	31.4	7	38.4	0	0	15	15	
Unshifted	4244	8326	0	12570	0	0	1379	1379	0	9441	2079	11520	0	0	4488	4488	29957
% Unshifted	98.9	99.5	0	99.3	0	0	98.5	98.5	0	99.5	98.5	99.3	0	0	98.8	98.8	99.2
Bank 2	46	45	0	91	0	0	21	21	0	48	32	80	0	0	54	54	246
% Bank 2	1.1	0.5	0	0.7	0	0	1.5	1.5	0	0.5	1.5	0.7	0	0	1.2	1.2	0.8

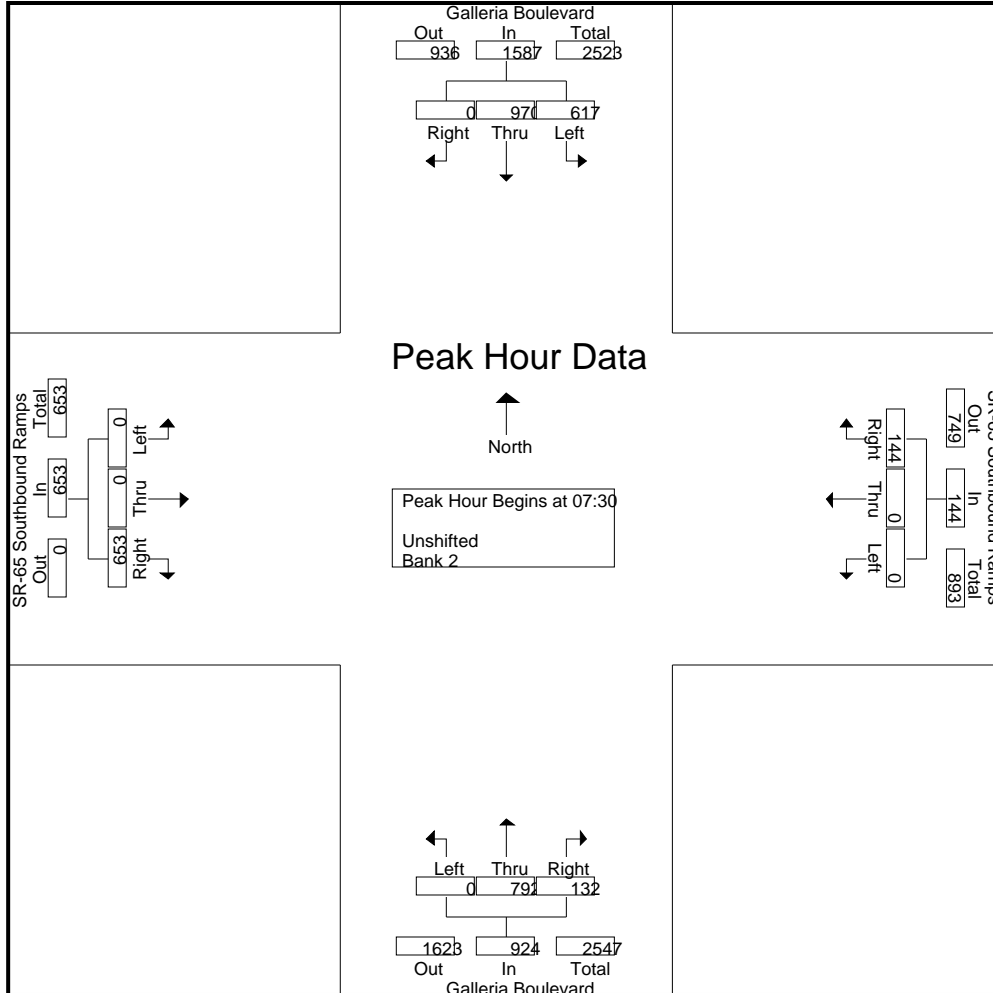
Start Time	Galleria Boulevard Southbound				SR-65 Southbound Ramps Westbound				Galleria Boulevard Northbound				SR-65 Southbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	156	222	0	378	0	0	22	22	0	200	38	238	0	0	145	145	783
07:45	173	280	0	453	0	0	32	32	0	227	39	266	0	0	163	163	914
08:00	141	211	0	352	0	0	52	52	0	188	29	217	0	0	179	179	800
08:15	147	257	0	404	0	0	38	38	0	177	26	203	0	0	166	166	811
Total Volume	617	970	0	1587	0	0	144	144	0	792	132	924	0	0	653	653	3308
% App. Total	38.9	61.1	0		0	0	100		0	85.7	14.3		0	0	100		
PHF	.892	.866	.000	.876	.000	.000	.692	.692	.000	.872	.846	.868	.000	.000	.912	.912	.905

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-012 Galleria-SR65 SB
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-012 Galleria-SR65 SB
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 4

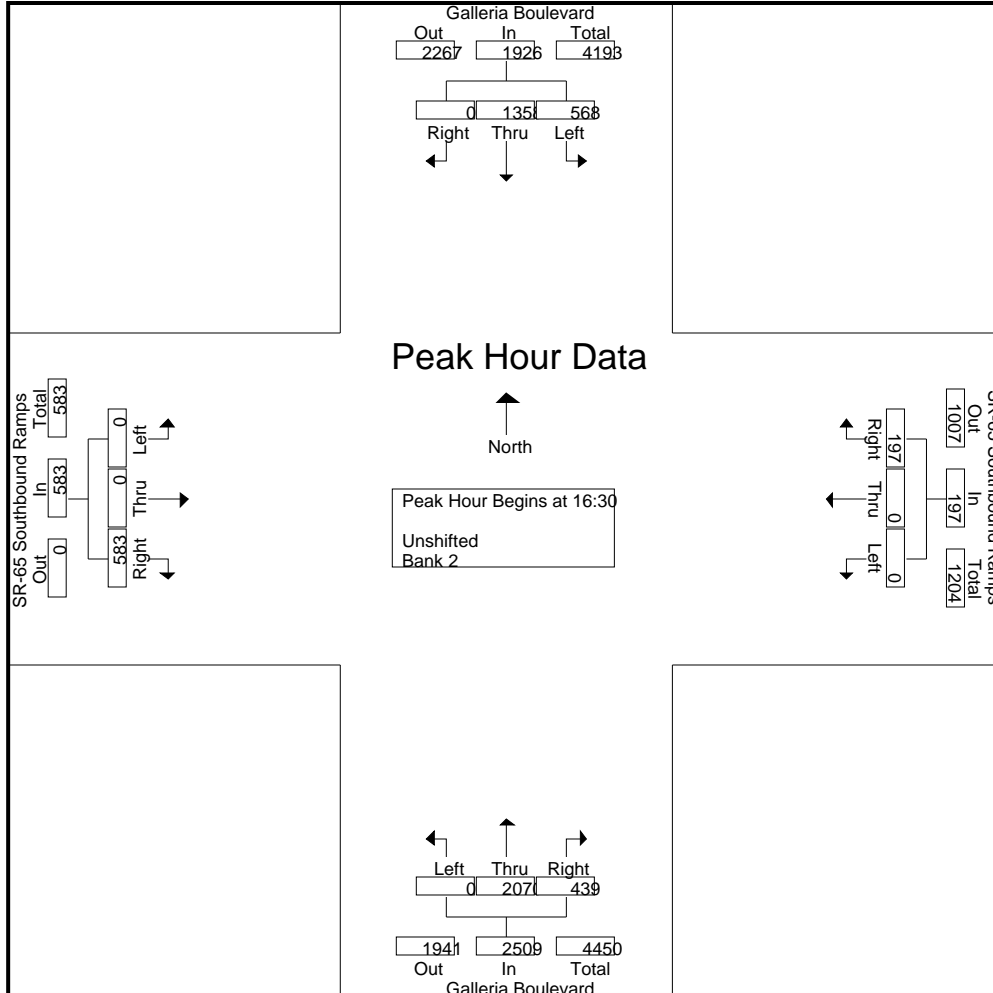
Start Time	Galleria Boulevard Southbound				SR-65 Southbound Ramps Westbound				Galleria Boulevard Northbound				SR-65 Southbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	145	357	0	502	0	0	64	64	0	492	124	616	0	0	169	169	1351
16:45	144	336	0	480	0	0	57	57	0	431	110	541	0	0	161	161	1239
17:00	144	331	0	475	0	0	45	45	0	577	109	686	0	0	148	148	1354
17:15	135	334	0	469	0	0	31	31	0	570	96	666	0	0	105	105	1271
Total Volume	568	1358	0	1926	0	0	197	197	0	2070	439	2509	0	0	583	583	5215
% App. Total	29.5	70.5	0		0	0	100		0	82.5	17.5		0	0	100		
PHF	.979	.951	.000	.959	.000	.000	.770	.770	.000	.897	.885	.914	.000	.000	.862	.862	.963

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-012 Galleria-SR65 SB
 Site Code : 00000000
 Start Date : 2/8/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-013 Galleria-Antelope Creek
Site Code : 00000000
Start Date : 2/9/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Galleria Boulevard Southbound				Antelope Creek Drive Westbound				Galleria Boulevard Northbound				Antelope Creek Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	2	92	1	95	2	0	10	12	0	36	1	37	0	0	0	0	144
06:15	7	151	3	161	7	2	6	15	1	48	1	50	0	0	0	0	226
06:30	9	150	5	164	3	1	10	14	2	69	4	75	3	0	1	4	257
06:45	17	233	13	263	7	4	21	32	3	88	9	100	3	1	0	4	399
Total	35	626	22	683	19	7	47	73	6	241	15	262	6	1	1	8	1026
07:00	15	262	9	286	3	0	14	17	0	117	4	121	3	0	1	4	428
07:15	18	291	6	315	14	0	13	27	3	169	3	175	3	3	1	7	524
07:30	26	321	5	352	7	5	14	26	1	200	13	214	4	0	2	6	598
07:45	46	384	17	447	12	1	9	22	3	234	13	250	3	1	0	4	723
Total	105	1258	37	1400	36	6	50	92	7	720	33	760	13	4	4	21	2273
08:00	29	351	11	391	8	4	13	25	0	215	15	230	13	1	3	17	663
08:15	29	327	17	373	13	3	12	28	6	157	7	170	4	1	1	6	577
08:30	24	311	13	348	11	2	16	29	3	181	13	197	8	0	0	8	582
08:45	32	307	28	367	19	5	20	44	7	192	15	214	11	1	5	17	642
Total	114	1296	69	1479	51	14	61	126	16	745	50	811	36	3	9	48	2464
09:00	22	228	15	265	8	7	18	33	1	193	21	215	8	2	6	16	529
09:15	29	224	18	271	19	5	22	46	16	195	21	232	12	8	1	21	570
09:30	38	238	19	295	20	10	24	54	20	180	19	219	14	13	5	32	600
09:45	26	213	28	267	26	13	19	58	30	219	31	280	14	3	4	21	626
Total	115	903	80	1098	73	35	83	191	67	787	92	946	48	26	16	90	2325
15:00	39	332	24	395	52	21	47	120	21	306	51	378	83	17	30	130	1023
15:15	49	256	41	346	54	20	42	116	32	325	43	400	95	18	25	138	1000
15:30	40	318	26	384	66	13	50	129	27	370	42	439	101	14	36	151	1103
15:45	45	289	41	375	68	20	52	140	18	383	40	441	96	23	20	139	1095
Total	173	1195	132	1500	240	74	191	505	98	1384	176	1658	375	72	111	558	4221
16:00	56	296	39	391	50	18	51	119	21	360	53	434	73	21	31	125	1069
16:15	54	277	36	367	74	18	43	135	26	352	42	420	82	17	36	135	1057
16:30	53	283	42	378	56	16	68	140	26	404	37	467	76	13	31	120	1105

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-013 Galleria-Antelope Creek
Site Code : 00000000
Start Date : 2/9/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Galleria Boulevard Southbound				Antelope Creek Drive Westbound				Galleria Boulevard Northbound				Antelope Creek Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	48	275	31	354	64	19	75	158	23	383	50	456	88	9	26	123	1091
Total	211	1131	148	1490	244	71	237	552	96	1499	182	1777	319	60	124	503	4322
17:00	48	286	41	375	61	17	89	167	21	451	46	518	99	20	35	154	1214
17:15	45	271	48	364	62	22	95	179	23	371	51	445	110	23	36	169	1157
17:30	43	264	36	343	53	15	94	162	26	423	54	503	91	16	27	134	1142
17:45	49	274	43	366	77	16	78	171	30	363	43	436	95	17	35	147	1120
Total	185	1095	168	1448	253	70	356	679	100	1608	194	1902	395	76	133	604	4633
18:00	54	243	36	333	61	23	60	144	24	383	49	456	71	9	39	119	1052
18:15	46	227	37	310	70	20	49	139	27	343	48	418	88	14	38	140	1007
18:30	34	244	34	312	42	12	46	100	17	325	41	383	74	20	25	119	914
18:45	36	228	35	299	60	25	29	114	21	251	37	309	84	12	35	131	853
Total	170	942	142	1254	233	80	184	497	89	1302	175	1566	317	55	137	509	3826
Grand Total	1108	8446	798	10352	1149	357	1209	2715	479	8286	917	9682	1509	297	535	2341	25090
Apprch %	10.7	81.6	7.7		42.3	13.1	44.5		4.9	85.6	9.5		64.5	12.7	22.9		
Total %	4.4	33.7	3.2	41.3	4.6	1.4	4.8	10.8	1.9	33	3.7	38.6	6	1.2	2.1	9.3	
Unshifted	1098	8393	787	10278	1144	352	1203	2699	477	8234	915	9626	1498	296	532	2326	24929
% Unshifted	99.1	99.4	98.6	99.3	99.6	98.6	99.5	99.4	99.6	99.4	99.8	99.4	99.3	99.7	99.4	99.4	99.4
Bank 2	10	53	11	74	5	5	6	16	2	52	2	56	11	1	3	15	161
% Bank 2	0.9	0.6	1.4	0.7	0.4	1.4	0.5	0.6	0.4	0.6	0.2	0.6	0.7	0.3	0.6	0.6	0.6

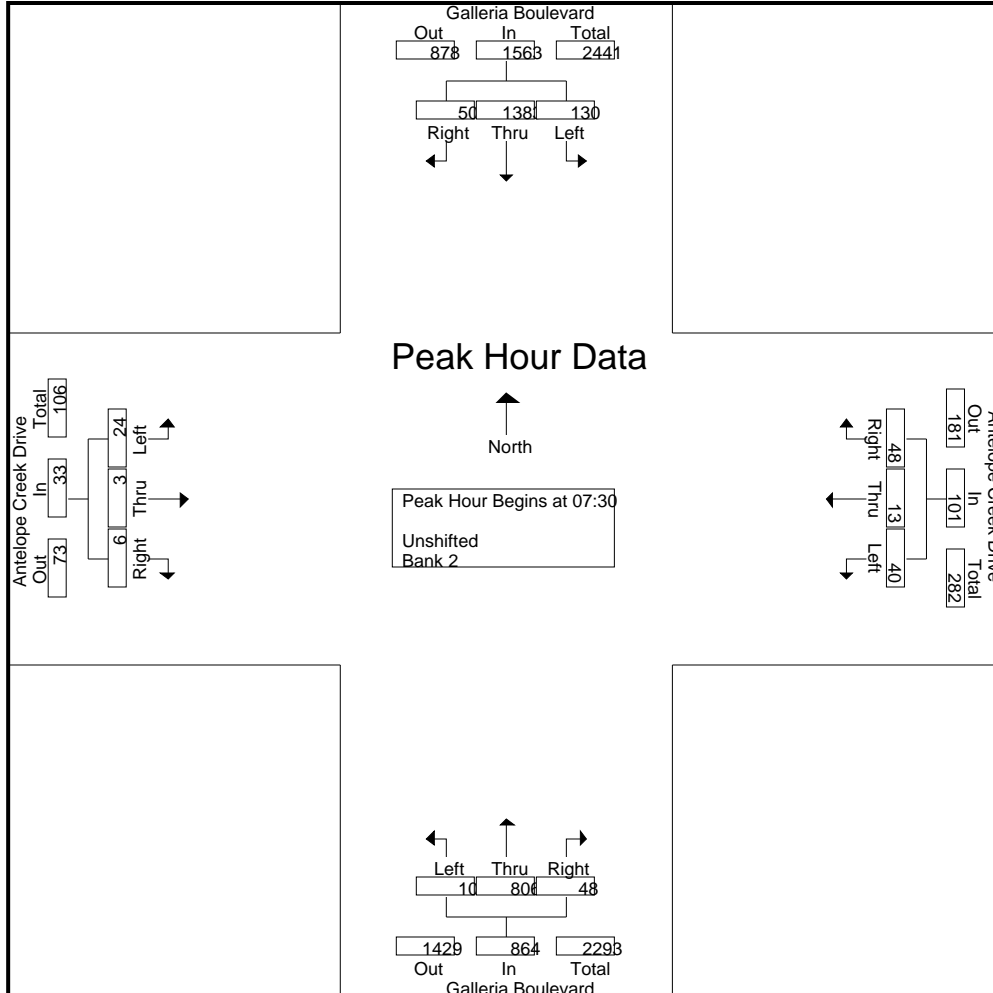
Start Time	Galleria Boulevard Southbound				Antelope Creek Drive Westbound				Galleria Boulevard Northbound				Antelope Creek Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	26	321	5	352	7	5	14	26	1	200	13	214	4	0	2	6	598
07:45	46	384	17	447	12	1	9	22	3	234	13	250	3	1	0	4	723
08:00	29	351	11	391	8	4	13	25	0	215	15	230	13	1	3	17	663
08:15	29	327	17	373	13	3	12	28	6	157	7	170	4	1	1	6	577
Total Volume	130	1383	50	1563	40	13	48	101	10	806	48	864	24	3	6	33	2561
% App. Total	8.3	88.5	3.2		39.6	12.9	47.5		1.2	93.3	5.6		72.7	9.1	18.2		
PHF	.707	.900	.735	.874	.769	.650	.857	.902	.417	.861	.800	.864	.462	.750	.500	.485	.886

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-013 Galleria-Antelope Creek
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-013 Galleria-Antelope Creek
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 4

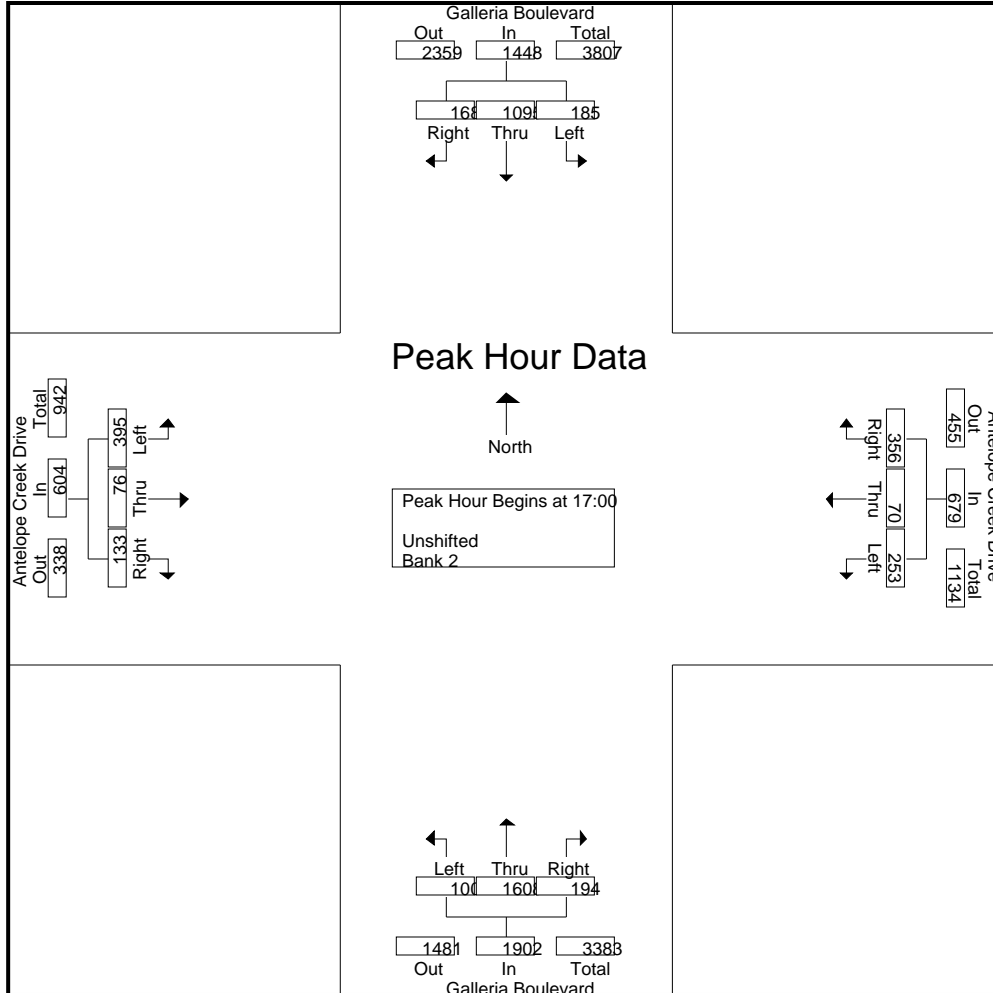
Start Time	Galleria Boulevard Southbound				Antelope Creek Drive Westbound				Galleria Boulevard Northbound				Antelope Creek Drive Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	48	286	41	375	61	17	89	167	21	451	46	518	99	20	35	154	1214
17:15	45	271	48	364	62	22	95	179	23	371	51	445	110	23	36	169	1157
17:30	43	264	36	343	53	15	94	162	26	423	54	503	91	16	27	134	1142
17:45	49	274	43	366	77	16	78	171	30	363	43	436	95	17	35	147	1120
Total Volume	185	1095	168	1448	253	70	356	679	100	1608	194	1902	395	76	133	604	4633
% App. Total	12.8	75.6	11.6		37.3	10.3	52.4		5.3	84.5	10.2		65.4	12.6	22		
PHF	.944	.957	.875	.965	.821	.795	.937	.948	.833	.891	.898	.918	.898	.826	.924	.893	.954

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-013 Galleria-Antelope Creek
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-014 Galleria-Roseville
Site Code : 00000000
Start Date : 2/9/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Galleria Boulevard Southbound					Roseville Parkway Westbound					Galleria Boulevard Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00	62	29	3	0	94	5	25	22	0	52	4	14	2	0	20	7	67	22	0	96	262
06:15	89	47	20	0	156	5	38	32	0	75	12	8	1	0	21	11	94	43	0	148	400
06:30	84	60	12	0	156	6	49	38	0	93	18	16	3	0	37	20	118	55	0	193	479
06:45	135	86	16	0	237	7	93	55	0	155	22	29	12	0	63	22	158	93	0	273	728
Total	370	222	51	0	643	23	205	147	0	375	56	67	18	0	141	60	437	213	0	710	1869
07:00	136	121	17	0	274	3	72	78	0	153	18	29	4	0	51	21	149	100	0	270	748
07:15	113	161	28	0	302	18	124	98	1	241	26	51	6	0	83	35	270	178	0	483	1109
07:30	148	179	21	0	348	22	152	97	0	271	31	90	17	0	138	28	274	162	1	465	1222
07:45	186	155	39	1	381	20	225	152	2	399	47	72	18	0	137	46	376	196	0	618	1535
Total	583	616	105	1	1305	63	573	425	3	1064	122	242	45	0	409	130	1069	636	1	1836	4614
08:00	178	161	41	0	380	20	158	117	1	296	45	68	16	0	129	37	256	138	0	431	1236
08:15	164	123	49	1	337	25	199	110	1	335	34	49	7	0	90	32	249	127	0	408	1170
08:30	154	142	44	1	341	25	173	92	1	291	35	56	11	0	102	41	218	128	1	388	1122
08:45	135	146	48	1	330	29	204	128	0	361	58	61	9	0	128	49	226	102	2	379	1198
Total	631	572	182	3	1388	99	734	447	3	1283	172	234	43	0	449	159	949	495	3	1606	4726
09:00	120	109	34	0	263	20	106	99	0	225	37	66	9	0	112	48	171	70	4	293	893
09:15	110	88	34	2	234	32	133	122	0	287	44	67	8	1	120	47	148	69	2	266	907
09:30	119	109	36	3	267	27	127	107	0	261	36	75	19	0	130	46	124	75	7	252	910
09:45	79	115	45	0	239	42	185	137	0	364	55	99	7	1	162	67	153	82	2	304	1069
Total	428	421	149	5	1003	121	551	465	0	1137	172	307	43	2	524	208	596	296	15	1115	3779
15:00	180	184	72	3	439	43	219	138	1	401	94	137	12	1	244	89	195	107	4	395	1479
15:15	117	144	77	3	341	55	278	149	0	482	92	156	15	0	263	107	246	113	3	469	1555
15:30	185	160	81	1	427	43	245	130	4	422	103	160	17	0	280	73	186	115	0	374	1503
15:45	144	157	78	3	382	44	308	173	1	526	87	183	17	0	287	102	268	111	4	485	1680
Total	626	645	308	10	1589	185	1050	590	6	1831	376	636	61	1	1074	371	895	446	11	1723	6217
16:00	180	163	83	1	427	44	247	133	5	429	84	163	13	1	261	99	227	133	0	459	1576
16:15	148	156	79	3	386	47	316	166	2	531	112	157	13	0	282	114	196	116	5	431	1630
16:30	156	161	86	3	406	63	297	135	1	496	92	179	14	1	286	105	201	120	3	429	1617
16:45	115	162	73	6	356	50	296	182	3	531	97	195	17	1	310	120	256	109	3	488	1685
Total	599	642	321	13	1575	204	1156	616	11	1987	385	694	57	3	1139	438	880	478	11	1807	6508
17:00	179	167	69	5	420	58	340	165	1	564	129	207	13	1	350	102	223	114	6	445	1779
17:15	146	139	80	4	369	52	355	171	4	582	139	180	16	0	335	111	368	169	2	650	1936
17:30	151	155	65	3	374	53	354	167	3	577	110	170	13	0	293	104	254	145	9	512	1756

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-014 Galleria-Roseville
Site Code : 00000000
Start Date : 2/9/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Galleria Boulevard Southbound					Roseville Parkway Westbound					Galleria Boulevard Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
17:45	135	144	79	5	363	43	365	173	6	587	113	176	12	2	303	131	289	110	1	531	1784
Total	611	605	293	17	1526	206	1414	676	14	2310	491	733	54	3	1281	448	1134	538	18	2138	7255
18:00	138	129	74	8	349	45	296	160	0	501	88	132	11	1	232	107	197	121	6	431	1513
18:15	131	94	79	7	311	32	219	177	1	429	81	126	4	0	211	129	291	128	7	555	1506
18:30	121	134	81	1	337	42	221	152	3	418	75	96	14	3	188	88	159	77	8	332	1275
18:45	130	99	72	2	303	38	208	129	4	379	64	107	7	1	179	107	178	86	4	375	1236
Total	520	456	306	18	1300	157	944	618	8	1727	308	461	36	5	810	431	825	412	25	1693	5530
Grand Total	4368	4179	1715	67	10329	1058	6627	3984	45	11714	2082	3374	357	14	5827	2245	6785	3514	84	12628	40498
Apprch %	42.3	40.5	16.6	0.6		9	56.6	34	0.4		35.7	57.9	6.1	0.2		17.8	53.7	27.8	0.7		
Total %	10.8	10.3	4.2	0.2	25.5	2.6	16.4	9.8	0.1	28.9	5.1	8.3	0.9	0	14.4	5.5	16.8	8.7	0.2	31.2	
Unshifted	4350	4159	1701	67	10277	1048	6602	3971	45	11666	2074	3346	357	14	5791	2234	6754	3505	84	12577	40311
% Unshifted	99.6	99.5	99.2	100	99.5	99.1	99.6	99.7	100	99.6	99.6	99.2	100	100	99.4	99.5	99.5	99.7	100	99.6	99.5
Bank 2	18	20	14	0	52	10	25	13	0	48	8	28	0	0	36	11	31	9	0	51	187
% Bank 2	0.4	0.5	0.8	0	0.5	0.9	0.4	0.3	0	0.4	0.4	0.8	0	0	0.6	0.5	0.5	0.3	0	0.4	0.5

Start Time	Galleria Boulevard Southbound					Roseville Parkway Westbound					Galleria Boulevard Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

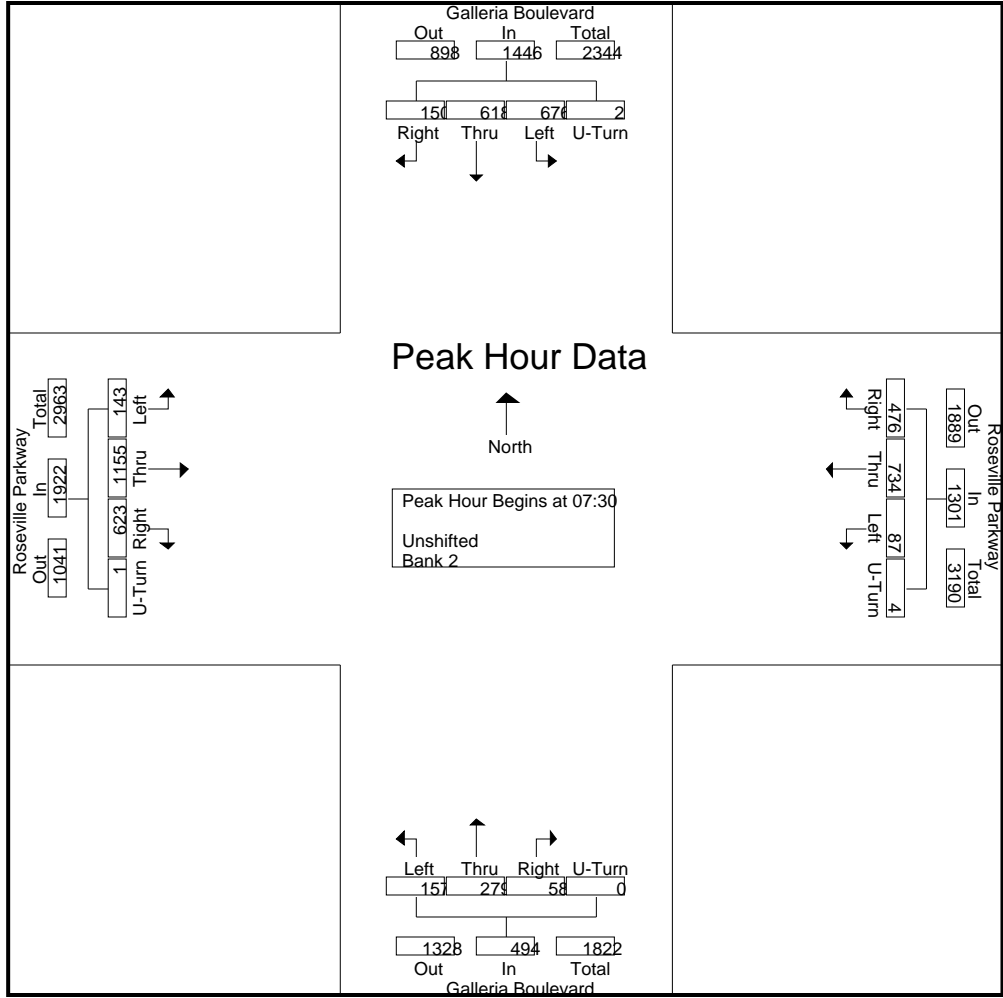
07:30	148	179	21	0	348	22	152	97	0	271	31	90	17	0	138	28	274	162	1	465	1222
07:45	186	155	39	1	381	20	225	152	2	399	47	72	18	0	137	46	376	196	0	618	1535
08:00	178	161	41	0	380	20	158	117	1	296	45	68	16	0	129	37	256	138	0	431	1236
08:15	164	123	49	1	337	25	199	110	1	335	34	49	7	0	90	32	249	127	0	408	1170
Total Volume	676	618	150	2	1446	87	734	476	4	1301	157	279	58	0	494	143	1155	623	1	1922	5163
% App. Total	46.7	42.7	10.4	0.1		6.7	56.4	36.6	0.3		31.8	56.5	11.7	0		7.4	60.1	32.4	0.1		
PHF	.909	.863	.765	.500	.949	.870	.816	.783	.500	.815	.835	.775	.806	.000	.895	.777	.768	.795	.250	.778	.841

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-014 Galleria-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-014 Galleria-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 4

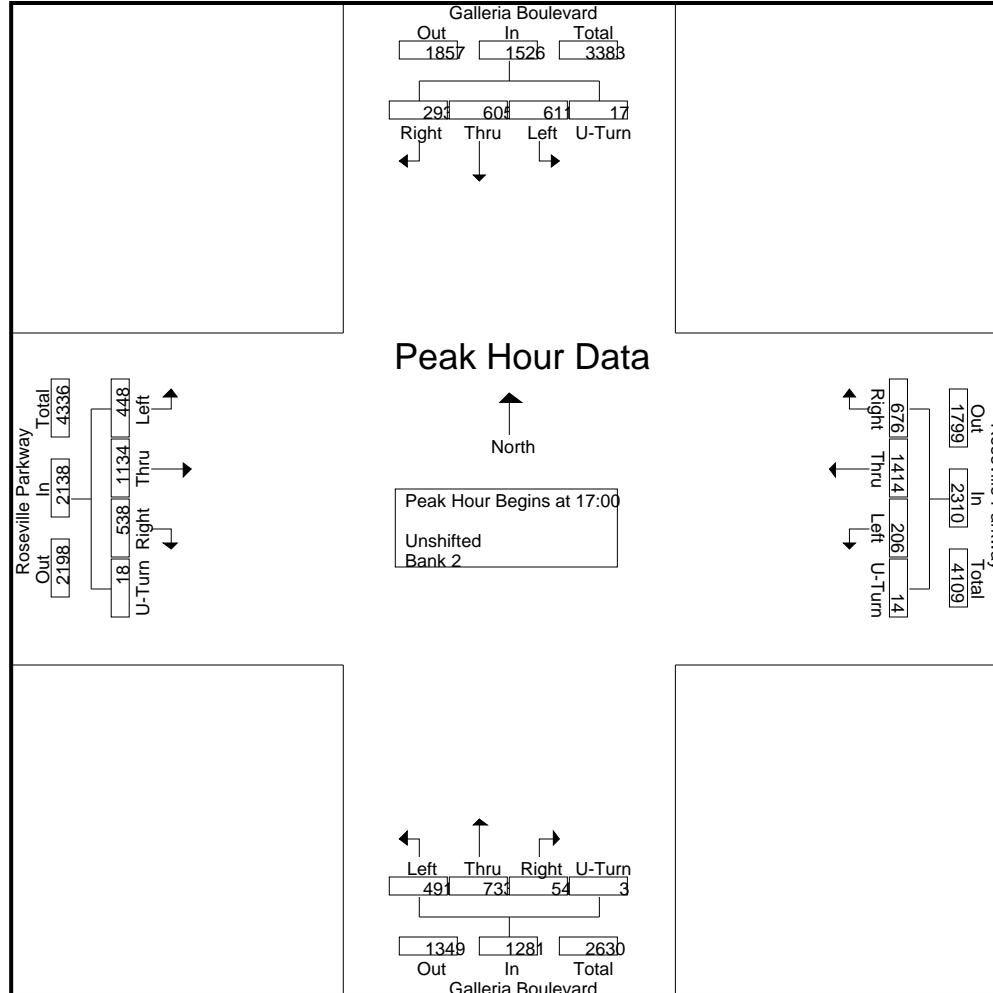
Start Time	Galleria Boulevard Southbound					Roseville Parkway Westbound					Galleria Boulevard Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	179	167		5	420	58						207		350							
17:15	146	139	80	4	369	52	355	171	4	582	139	180	16	0	335	111	368	169	2	650	1936
17:30	151	155	65	3	374	53	354	167	3	577	110	170	13	0	293	104	254	145	9	512	1756
17:45	135	144	79	5	363	43	365	173	6	587	113	176	12	2	303	131	289	110	1	531	1784
Total Volume	611	605	293	17	1526	206	1414	676	14	2310	491	733	54	3	1281	448	1134	538	18	2138	7255
% App. Total	40	39.6	19.2	1.1		8.9	61.2	29.3	0.6		38.3	57.2	4.2	0.2		21	53	25.2	0.8		
PHF	.853	.906	.916	.850	.908	.888	.968	.977	.583	.984	.883	.885	.844	.375	.915	.855	.770	.796	.500	.822	.937

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-014 Galleria-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-015 Creekside Ridge-Roseville
Site Code : 00000000
Start Date : 2/9/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Creekside Ridge Drive Southbound					Roseville Parkway Westbound					Driveway Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00	4	0	1	0	5	1	55	11	1	68	0	0	0	0	0	1	131	0	0	132	205
06:15	5	0	0	0	5	0	74	13	1	88	1	0	0	0	1	2	175	0	0	177	271
06:30	4	0	1	0	5	2	99	18	0	119	0	0	0	0	0	2	205	0	0	207	331
06:45	7	0	3	0	10	1	146	44	0	191	0	0	0	0	0	10	280	0	0	290	491
Total	20	0	5	0	25	4	374	86	2	466	1	0	0	0	1	15	791	0	0	806	1298
07:00	9	0	2	0	11	2	166	28	1	197	0	0	1	0	1	4	289	0	1	294	503
07:15	10	1	9	0	20	0	227	44	0	271	0	1	0	0	1	12	381	0	0	393	685
07:30	9	0	17	0	26	0	272	43	0	315	1	2	1	0	4	15	410	1	1	427	772
07:45	24	0	9	0	33	4	372	71	0	447	0	3	3	0	6	23	553	1	2	579	1065
Total	52	1	37	0	90	6	1037	186	1	1230	1	6	5	0	12	54	1633	2	4	1693	3025
08:00	11	0	5	0	16	3	303	69	2	377	0	0	0	0	0	10	427	1	0	438	831
08:15	17	0	4	0	21	5	324	48	1	378	0	2	0	0	2	15	413	0	0	428	829
08:30	18	0	3	0	21	2	302	71	3	378	0	0	3	0	3	9	354	1	1	365	767
08:45	20	0	6	0	26	3	354	51	1	409	1	0	0	0	1	16	349	1	1	367	803
Total	66	0	18	0	84	13	1283	239	7	1542	1	2	3	0	6	50	1543	3	2	1598	3230
09:00	17	0	6	0	23	3	234	48	1	286	0	1	0	0	1	8	279	1	2	290	600
09:15	20	0	4	0	24	7	281	40	4	332	5	1	0	0	6	5	252	0	4	261	623
09:30	24	1	7	0	32	2	278	27	2	309	0	2	4	0	6	10	236	0	2	248	595
09:45	9	3	4	0	16	2	347	30	1	380	2	2	2	0	6	13	237	1	2	253	655
Total	70	4	21	0	95	14	1140	145	8	1307	7	6	6	0	19	36	1004	2	10	1052	2473
15:00	66	1	9	0	76	8	401	50	2	461	10	1	6	0	17	9	357	2	8	376	930
15:15	45	1	12	0	58	7	437	53	4	501	5	2	3	0	10	9	348	3	6	366	935
15:30	61	0	11	0	72	9	475	56	1	541	4	3	2	0	9	6	365	2	5	378	1000
15:45	47	2	12	0	61	6	489	59	1	555	12	1	6	0	19	11	381	5	4	401	1036
Total	219	4	44	0	267	30	1802	218	8	2058	31	7	17	0	55	35	1451	12	23	1521	3901
16:00	68	2	13	0	83	6	426	44	4	480	7	1	5	0	13	14	395	2	7	418	994
16:15	49	4	15	0	68	5	556	56	3	620	3	2	6	0	11	11	326	4	8	349	1048
16:30	111	3	38	0	152	4	483	49	2	538	4	5	4	0	13	9	341	4	4	358	1061
16:45	56	1	17	0	74	10	530	64	2	606	6	1	3	0	10	18	342	4	1	365	1055
Total	284	10	83	0	377	25	1995	213	11	2244	20	9	18	0	47	52	1404	14	20	1490	4158
17:00	91	2	20	0	113	8	535	52	2	597	4	0	6	0	10	12	386	0	6	404	1124
17:15	69	0	32	0	101	14	528	101	4	647	11	0	7	0	18	24	443	5	5	477	1243
17:30	57	4	19	0	80	9	570	77	3	659	6	2	8	0	16	11	388	7	9	415	1170

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-015 Creekside Ridge-Roseville
Site Code : 00000000
Start Date : 2/9/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Creekside Ridge Drive Southbound					Roseville Parkway Westbound					Driveway Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
17:45	54	2	21	0	77	11	558	78	5	652	6	1	2	0	9	12	391	0	8	411	1149
Total	271	8	92	0	371	42	2191	308	14	2555	27	3	23	0	53	59	1608	12	28	1707	4686
18:00	76	2	15	0	93	7	491	46	2	546	11	1	4	0	16	11	305	2	6	324	979
18:15	50	1	16	0	67	7	414	57	2	480	8	2	6	0	16	13	399	5	3	420	983
18:30	47	2	11	0	60	7	399	35	1	442	8	1	6	0	15	9	277	3	4	293	810
18:45	29	1	12	0	42	5	339	27	5	376	9	2	6	0	17	6	288	1	5	300	735
Total	202	6	54	0	262	26	1643	165	10	1844	36	6	22	0	64	39	1269	11	18	1337	3507
Grand Total	1184	33	354	0	1571	160	11465	1560	61	13246	124	39	94	0	257	340	10703	56	105	11204	26278
Apprch %	75.4	2.1	22.5	0		1.2	86.6	11.8	0.5		48.2	15.2	36.6	0		3	95.5	0.5	0.9		
Total %	4.5	0.1	1.3	0	6	0.6	43.6	5.9	0.2	50.4	0.5	0.1	0.4	0	1	1.3	40.7	0.2	0.4	42.6	
Unshifted	1177	29	351	0	1557	156	11422	1552	61	13191	119	36	91	0	246	338	10658	54	105	11155	26149
% Unshifted	99.4	87.9	99.2	0	99.1	97.5	99.6	99.5	100	99.6	96	92.3	96.8	0	95.7	99.4	99.6	96.4	100	99.6	99.5
Bank 2	7	4	3	0	14	4	43	8	0	55	5	3	3	0	11	2	45	2	0	49	129
% Bank 2	0.6	12.1	0.8	0	0.9	2.5	0.4	0.5	0	0.4	4	7.7	3.2	0	4.3	0.6	0.4	3.6	0	0.4	0.5

Start Time	Creekside Ridge Drive Southbound					Roseville Parkway Westbound					Driveway Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

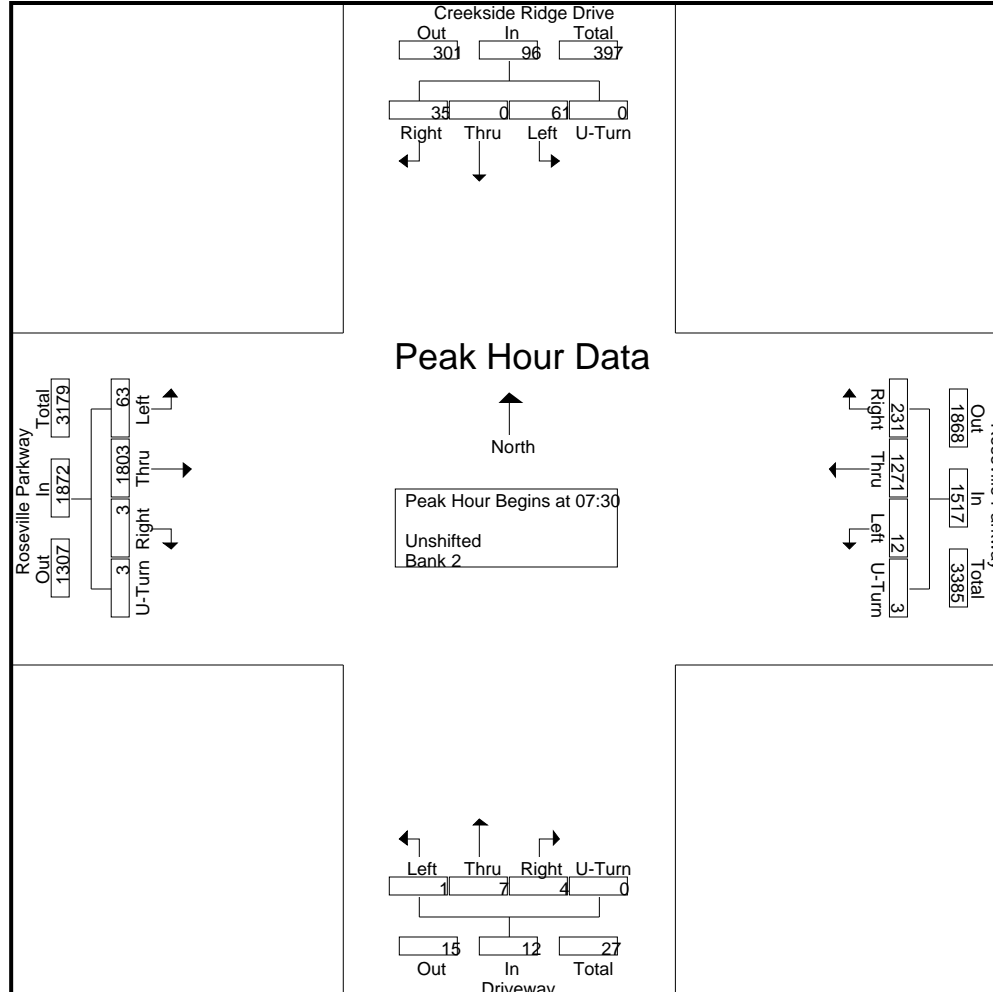
07:30	9	0	17	0	26	0	272	43	0	315	1	2	1	0	4	15	410	1	1	427	772
07:45	24	0	9	0	33	4	372	71	0	447	0	3	3	0	6	23	553	1	2	579	1065
08:00	11	0	5	0	16	3	303	69	2	377	0	0	0	0	0	10	427	1	0	438	831
08:15	17	0	4	0	21	5	324	48	1	378	0	2	0	0	2	15	413	0	0	428	829
Total Volume	61	0	35	0	96	12	1271	231	3	1517	1	7	4	0	12	63	1803	3	3	1872	3497
% App. Total	63.5	0	36.5	0		0.8	83.8	15.2	0.2		8.3	58.3	33.3	0		3.4	96.3	0.2	0.2		
PHF	.635	.000	.515	.000	.727	.600	.854	.813	.375	.848	.250	.583	.333	.000	.500	.685	.815	.750	.375	.808	.821

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-015 Creekside Ridge-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-015 Creekside Ridge-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 4

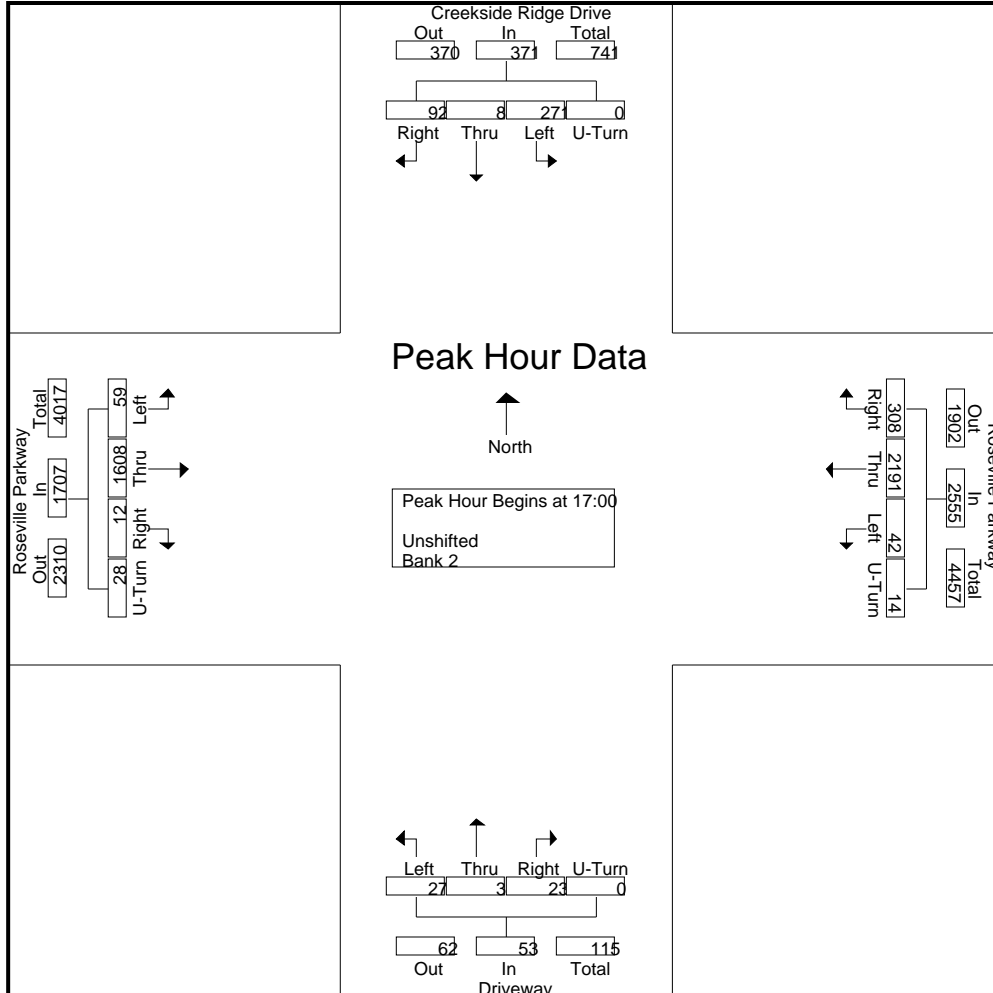
Start Time	Creekside Ridge Drive Southbound					Roseville Parkway Westbound					Driveway Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	91				113																
17:15	69	0	32	0	101	14	528	101	4	647	11	0	7	0	18	24	443	5	5	477	1243
17:30	57	4	19	0	80	9	570	77	3	659	6	2	8	0	16	11	388	7	9	415	1170
17:45	54	2	21	0	77	11	558	78	5	652	6	1	2	0	9	12	391	0	8	411	1149
Total Volume	271	8	92	0	371	42	2191	308	14	2555	27	3	23	0	53	59	1608	12	28	1707	4686
% App. Total	73	2.2	24.8	0		1.6	85.8	12.1	0.5		50.9	5.7	43.4	0		3.5	94.2	0.7	1.6		
PHF	.745	.500	.719	.000	.821	.750	.961	.762	.700	.969	.614	.375	.719	.000	.736	.615	.907	.429	.778	.895	.942

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-015 Creekside Ridge-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-016 Taylor-Roseville
Site Code : 00000000
Start Date : 2/9/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Taylor Road Southbound					Roseville Parkway Westbound					Taylor Road Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00	33	19	2	0	54	33	52	12	3	100	16	7	12	0	35	7	96	29	0	132	321
06:15	44	11	1	0	56	61	60	10	1	132	24	11	16	0	51	9	142	29	0	180	419
06:30	80	20	3	0	103	49	82	18	2	151	28	17	30	0	75	5	182	27	0	214	543
06:45	63	21	4	1	89	61	149	8	5	223	56	18	44	0	118	16	246	26	1	289	719
Total	220	71	10	1	302	204	343	48	11	606	124	53	102	0	279	37	666	111	1	815	2002
07:00	85	20	11	1	117	66	142	19	4	231	35	11	19	0	65	11	246	38	0	295	708
07:15	112	26	15	1	154	57	194	27	6	284	59	31	25	0	115	21	318	32	1	372	925
07:30	112	25	11	4	152	55	268	37	6	366	58	25	39	0	122	27	386	21	1	435	1075
07:45	134	35	12	1	182	63	298	44	7	412	108	33	85	0	226	26	482	41	3	552	1372
Total	443	106	49	7	605	241	902	127	23	1293	260	100	168	0	528	85	1432	132	5	1654	4080
08:00	104	26	16	0	146	55	310	49	5	419	69	24	42	0	135	10	441	33	3	487	1187
08:15	111	30	16	0	157	41	256	36	3	336	89	21	59	0	169	15	365	24	0	404	1066
08:30	103	25	17	2	147	53	280	55	9	397	96	17	51	0	164	17	360	25	2	404	1112
08:45	87	22	9	1	119	44	275	52	6	377	95	37	46	0	178	27	304	22	1	354	1028
Total	405	103	58	3	569	193	1121	192	23	1529	349	99	198	0	646	69	1470	104	6	1649	4393
09:00	61	14	25	1	101	37	223	50	7	317	58	36	28	0	122	15	270	26	0	311	851
09:15	57	17	19	2	95	51	213	36	8	308	54	26	33	0	113	11	233	29	0	273	789
09:30	59	25	26	1	111	48	264	53	3	368	55	27	37	0	119	16	220	26	2	264	862
09:45	73	22	28	1	124	51	251	41	9	352	83	38	35	0	156	18	214	20	2	254	886
Total	250	78	98	5	431	187	951	180	27	1345	250	127	133	0	510	60	937	101	4	1102	3388
15:00	60	18	32	1	111	59	365	88	10	522	72	40	40	0	152	25	351	50	1	427	1212
15:15	69	27	27	4	127	57	363	94	6	520	100	45	35	1	181	23	327	52	3	405	1233
15:30	67	35	35	3	140	59	430	108	4	601	90	48	48	0	186	17	342	64	1	424	1351
15:45	73	32	33	1	139	45	382	99	9	535	116	47	57	0	220	29	360	57	7	453	1347
Total	269	112	127	9	517	220	1540	389	29	2178	378	180	180	1	739	94	1380	223	12	1709	5143
16:00	71	17	28	4	120	53	407	130	6	596	80	55	29	0	164	35	372	65	2	474	1354
16:15	74	44	31	6	155	56	448	108	5	617	121	71	38	0	230	23	292	50	2	367	1369
16:30	54	38	32	2	126	60	446	142	5	653	99	52	44	1	196	36	332	77	1	446	1421
16:45	76	31	37	3	147	43	414	118	10	585	116	63	39	1	219	30	305	40	1	376	1327
Total	275	130	128	15	548	212	1715	498	26	2451	416	241	150	2	809	124	1301	232	6	1663	5471
17:00	66	20	41	0	127	77	523	151	9	760	112	64	41	0	217	27	402	69	6	504	1608
17:15	84	31	35	7	157	57	490	136	5	688	139	87	41	0	267	35	427	69	2	533	1645
17:30	63	30	46	3	142	53	474	133	8	668	126	62	50	1	239	27	360	66	3	456	1505

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-016 Taylor-Roseville
Site Code : 00000000
Start Date : 2/9/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Taylor Road Southbound					Roseville Parkway Westbound					Taylor Road Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
17:45	82	31	46	4	163	36	433	126	6	601	135	65	36	2	238	30	359	66	3	458	1460
Total	295	112	168	14	589	223	1920	546	28	2717	512	278	168	3	961	119	1548	270	14	1951	6218
18:00	62	30	29	2	123	57	427	124	6	614	103	36	43	2	184	27	296	57	2	382	1303
18:15	59	22	34	3	118	39	347	84	7	477	92	41	30	2	165	28	344	71	6	449	1209
18:30	40	26	19	6	91	45	337	78	3	463	85	28	36	2	151	28	245	48	6	327	1032
18:45	39	14	30	2	85	47	247	52	4	350	84	38	41	1	164	22	267	43	0	332	931
Total	200	92	112	13	417	188	1358	338	20	1904	364	143	150	7	664	105	1152	219	14	1490	4475
Grand Total	2357	804	750	67	3978	1668	9850	2318	187	14023	2653	1221	1249	13	5136	693	9886	1392	62	12033	35170
Apprch %	59.3	20.2	18.9	1.7		11.9	70.2	16.5	1.3		51.7	23.8	24.3	0.3		5.8	82.2	11.6	0.5		
Total %	6.7	2.3	2.1	0.2	11.3	4.7	28	6.6	0.5	39.9	7.5	3.5	3.6	0	14.6	2	28.1	4	0.2	34.2	
Unshifted	2351	804	745	67	3967	1656	9820	2313	187	13976	2643	1210	1235	13	5101	689	9853	1384	62	11988	35032
% Unshifted	99.7	100	99.3	100	99.7	99.3	99.7	99.8	100	99.7	99.6	99.1	98.9	100	99.3	99.4	99.7	99.4	100	99.6	99.6
Bank 2	6	0	5	0	11	12	30	5	0	47	10	11	14	0	35	4	33	8	0	45	138
% Bank 2	0.3	0	0.7	0	0.3	0.7	0.3	0.2	0	0.3	0.4	0.9	1.1	0	0.7	0.6	0.3	0.6	0	0.4	0.4

Start Time	Taylor Road Southbound					Roseville Parkway Westbound					Taylor Road Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45

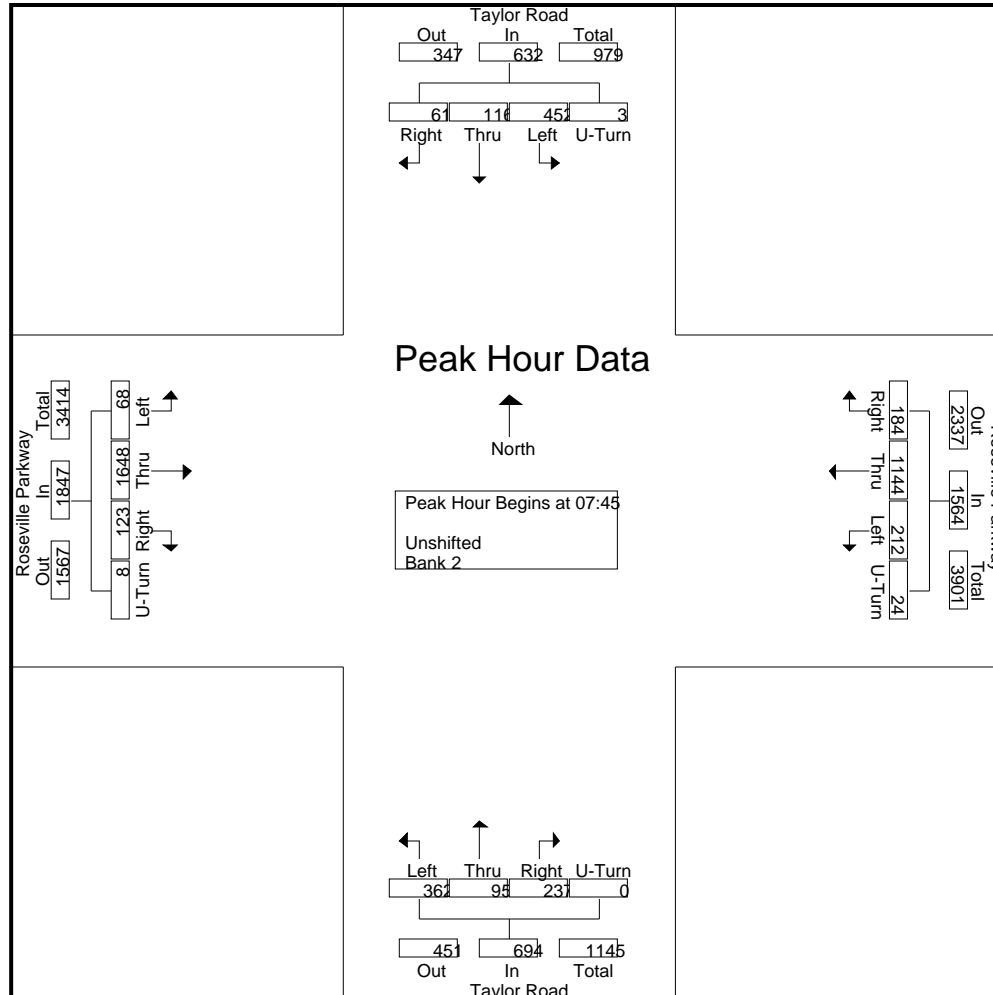
07:45	134	35	12	1	182	63	298	44	7	412	108	33	85	0	226	26	482	41	3	552	1372
08:00	104	26	16	0	146	55	310	49	5	419	69	24	42	0	135	10	441	33	3	487	1187
08:15	111	30	16	0	157	41	256	36	3	336	89	21	59	0	169	15	365	24	0	404	1066
08:30	103	25	17	2	147	53	280	55	9	397	96	17	51	0	164	17	360	25	2	404	1112
Total Volume	452	116	61	3	632	212	1144	184	24	1564	362	95	237	0	694	68	1648	123	8	1847	4737
% App. Total	71.5	18.4	9.7	0.5		13.6	73.1	11.8	1.5		52.2	13.7	34.1	0		3.7	89.2	6.7	0.4		
PHF	.843	.829	.897	.375	.868	.841	.923	.836	.667	.933	.838	.720	.697	.000	.768	.654	.855	.750	.667	.837	.863

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-016 Taylor-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-016 Taylor-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 4

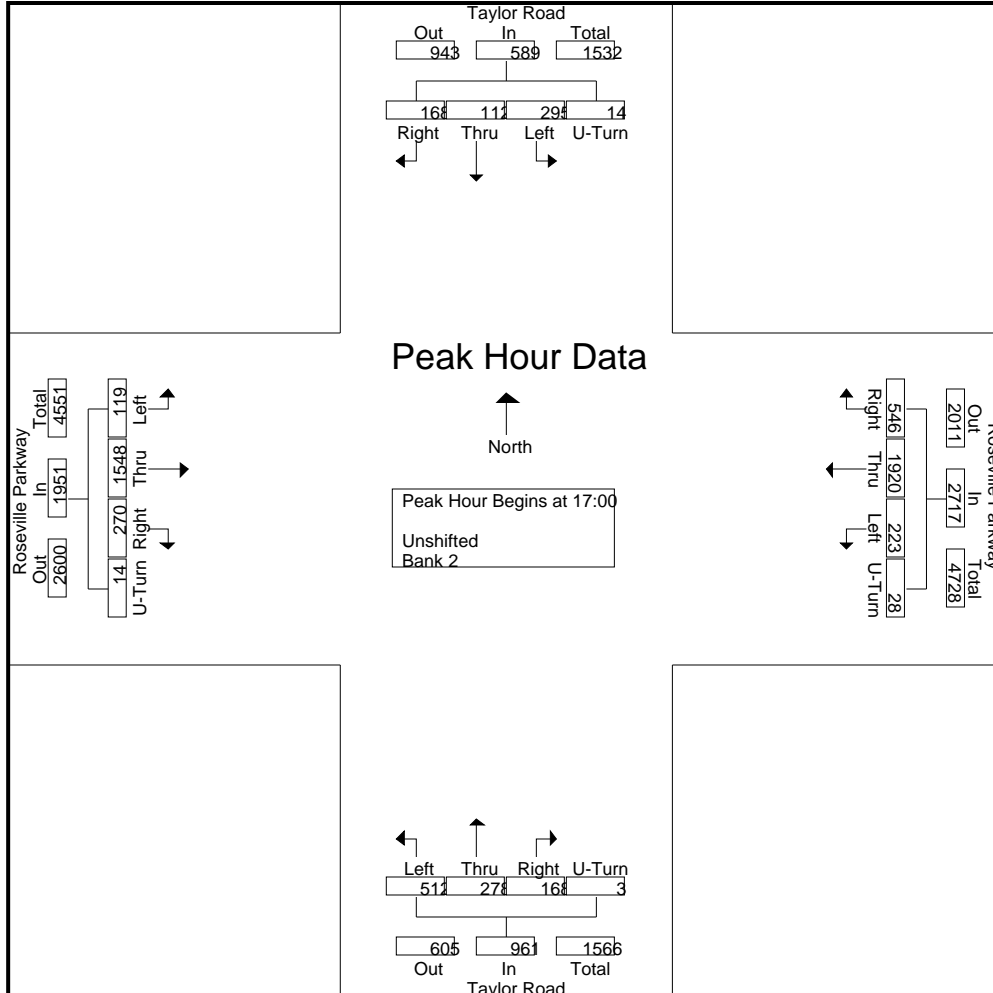
Start Time	Taylor Road Southbound					Roseville Parkway Westbound					Taylor Road Northbound					Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	66	20	41	0	127	77	523	151	9	760	139	87	41	0	267	35	427	69	6	533	1645
17:15	84	31	35	7	157	57	490	136	5	688	126	62	50	1	239	27	360	66	3	456	1505
17:30	63	30	46	3	142	53	474	133	8	668	126	62	50	1	239	27	360	66	3	456	1505
17:45	82	31	46	4	163	36	433	126	6	601	135	65	36	2	238	30	359	66	3	458	1460
Total Volume	295	112	168	14	589	223	1920	546	28	2717	512	278	168	3	961	119	1548	270	14	1951	6218
% App. Total	50.1	19	28.5	2.4		8.2	70.7	20.1	1		53.3	28.9	17.5	0.3		6.1	79.3	13.8	0.7		
PHF	.878	.903	.913	.500	.903	.724	.918	.904	.778	.894	.921	.799	.840	.375	.900	.850	.906	.978	.583	.915	.945

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-016 Taylor-Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-017 North Sunrise-East Roseville
Site Code : 00000000
Start Date : 2/9/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	North Sunrise Avenue Southbound					East Roseville Parkway Westbound					North Sunrise Avenue Northbound					East Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00	2	3	3	0	8	20	84	2	0	106	11	18	9	0	38	22	103	15	1	141	293
06:15	1	5	4	0	10	19	114	4	0	137	11	27	7	6	51	35	157	16	3	211	409
06:30	1	6	14	0	21	17	132	2	0	151	17	28	8	8	61	52	197	32	0	281	514
06:45	1	8	15	0	24	23	181	8	0	212	18	40	10	5	73	92	220	32	0	344	653
Total	5	22	36	0	63	79	511	16	0	606	57	113	34	19	223	201	677	95	4	977	1869
07:00	2	2	16	0	20	33	190	6	0	229	11	33	20	5	69	35	289	37	0	361	679
07:15	4	10	15	0	29	48	244	9	1	302	29	31	14	3	77	45	360	39	0	444	852
07:30	6	23	50	0	79	55	282	5	0	342	23	41	25	7	96	43	406	74	2	525	1042
07:45	5	10	37	0	52	68	347	14	0	429	34	73	30	5	142	105	493	96	1	695	1318
Total	17	45	118	0	180	204	1063	34	1	1302	97	178	89	20	384	228	1548	246	3	2025	3891
08:00	7	16	22	0	45	47	320	6	0	373	39	56	33	6	134	66	437	82	1	586	1138
08:15	7	18	20	0	45	38	292	7	0	337	30	49	26	5	110	73	393	63	1	530	1022
08:30	8	10	20	0	38	53	312	13	0	378	35	35	23	6	99	62	375	77	0	514	1029
08:45	9	13	32	0	54	55	311	9	0	375	49	62	27	11	149	75	294	76	1	446	1024
Total	31	57	94	0	182	193	1235	35	0	1463	153	202	109	28	492	276	1499	298	3	2076	4213
09:00	10	31	24	0	65	32	221	8	0	261	44	33	16	13	106	42	252	57	1	352	784
09:15	3	16	34	0	53	36	226	10	1	273	53	46	27	5	131	56	235	46	1	338	795
09:30	12	23	35	0	70	38	224	13	0	275	74	43	28	5	150	47	217	54	1	319	814
09:45	10	23	48	0	81	33	262	9	0	304	52	50	34	13	149	60	202	59	3	324	858
Total	35	93	141	0	269	139	933	40	1	1113	223	172	105	36	536	205	906	216	6	1333	3251
15:00	16	41	74	0	131	35	321	7	0	363	96	34	38	1	169	38	353	52	0	443	1106
15:15	15	44	63	0	122	50	370	10	1	431	103	49	51	11	214	43	330	65	2	440	1207
15:30	15	58	114	0	187	35	355	7	2	399	94	30	46	4	174	32	326	94	1	453	1213
15:45	12	36	74	0	122	41	390	9	0	440	119	27	65	6	217	43	366	77	0	486	1265
Total	58	179	325	0	562	161	1436	33	3	1633	412	140	200	22	774	156	1375	288	3	1822	4791
16:00	19	51	72	0	142	40	394	7	1	442	102	19	47	7	175	23	362	76	2	463	1222
16:15	11	39	67	0	117	35	391	7	1	434	136	27	46	6	215	25	317	70	4	416	1182
16:30	12	39	79	0	130	43	420	6	0	469	121	22	52	10	205	18	321	85	4	428	1232
16:45	13	35	59	0	107	49	413	3	1	466	104	25	56	3	188	19	365	65	3	452	1213
Total	55	164	277	0	496	167	1618	23	3	1811	463	93	201	26	783	85	1365	296	13	1759	4849
17:00	13	53	90	0	156	32	491	4	0	527	152	16	60	7	235	13	416	69	1	499	1417
17:15	11	28	48	0	87	51	495	3	0	549	155	12	45	3	215	22	422	76	2	522	1373
17:30	12	31	44	0	87	35	447	1	1	484	133	14	60	4	211	14	401	78	3	496	1278

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-017 North Sunrise-East Roseville
Site Code : 00000000
Start Date : 2/9/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	North Sunrise Avenue Southbound					East Roseville Parkway Westbound					North Sunrise Avenue Northbound					East Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
17:45	4	17	34	0	55	42	482	4	0	528	91	12	55	9	167	15	376	84	7	482	1232
Total	40	129	216	0	385	160	1915	12	1	2088	531	54	220	23	828	64	1615	307	13	1999	5300
18:00	4	19	33	0	56	26	423	2	0	451	111	18	47	9	185	12	345	52	2	411	1103
18:15	1	13	33	0	47	32	365	10	2	409	96	16	44	7	163	19	345	59	3	426	1045
18:30	10	13	20	0	43	22	312	4	1	339	79	18	44	3	144	17	285	43	2	347	873
18:45	4	17	23	0	44	19	263	6	0	288	63	18	33	7	121	40	265	34	3	342	795
Total	19	62	109	0	190	99	1363	22	3	1487	349	70	168	26	613	88	1240	188	10	1526	3816
Grand Total	260	751	1316	0	2327	1202	10074	215	12	11503	2285	1022	1126	200	4633	1303	10225	1934	55	13517	31980
Apprch %	11.2	32.3	56.6	0		10.4	87.6	1.9	0.1		49.3	22.1	24.3	4.3		9.6	75.6	14.3	0.4		
Total %	0.8	2.3	4.1	0	7.3	3.8	31.5	0.7	0	36	7.1	3.2	3.5	0.6	14.5	4.1	32	6	0.2	42.3	
Unshifted	257	742	1305	0	2304	1191	10047	214	12	11464	2270	1008	1106	200	4584	1291	10180	1926	55	13452	31804
% Unshifted	98.8	98.8	99.2	0	99	99.1	99.7	99.5	100	99.7	99.3	98.6	98.2	100	98.9	99.1	99.6	99.6	100	99.5	99.4
Bank 2	3	9	11	0	23	11	27	1	0	39	15	14	20	0	49	12	45	8	0	65	176
% Bank 2	1.2	1.2	0.8	0	1	0.9	0.3	0.5	0	0.3	0.7	1.4	1.8	0	1.1	0.9	0.4	0.4	0	0.5	0.6

Start Time	North Sunrise Avenue Southbound					East Roseville Parkway Westbound					North Sunrise Avenue Northbound					East Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:30

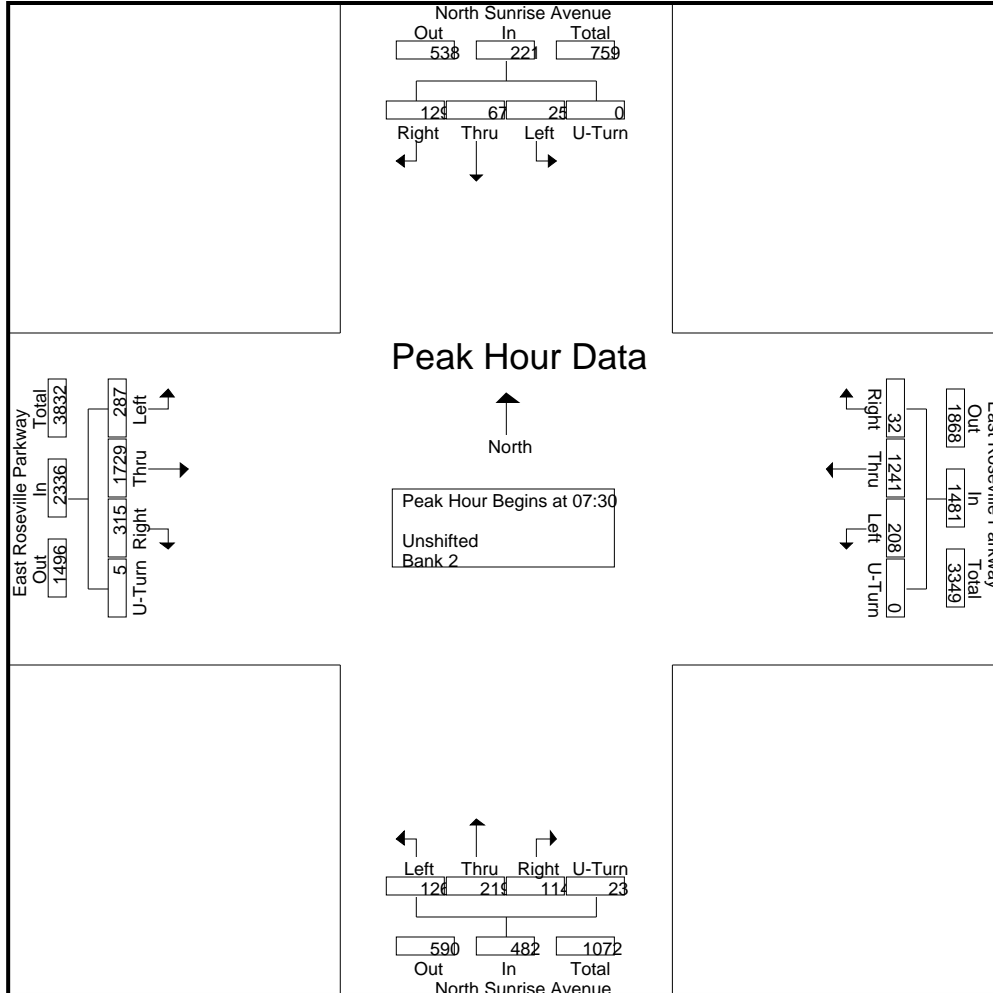
07:30	6	23	50	0	79	55	282	5	0	342	23	41	25	7	96	43	406	74	2	525	1042
07:45	5	10	37	0	52	68	347	14	0	429	34	73	30	5	142	105	493	96	1	695	1318
08:00	7	16	22	0	45	47	320	6	0	373	39	56	33	6	134	66	437	82	1	586	1138
08:15	7	18	20	0	45	38	292	7	0	337	30	49	26	5	110	73	393	63	1	530	1022
Total Volume	25	67	129	0	221	208	1241	32	0	1481	126	219	114	23	482	287	1729	315	5	2336	4520
% App. Total	11.3	30.3	58.4	0		14	83.8	2.2	0		26.1	45.4	23.7	4.8		12.3	74	13.5	0.2		
PHF	.893	.728	.645	.000	.699	.765	.894	.571	.000	.863	.808	.750	.864	.821	.849	.683	.877	.820	.625	.840	.857

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-017 North Sunrise-East Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-017 North Sunrise-East Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 4

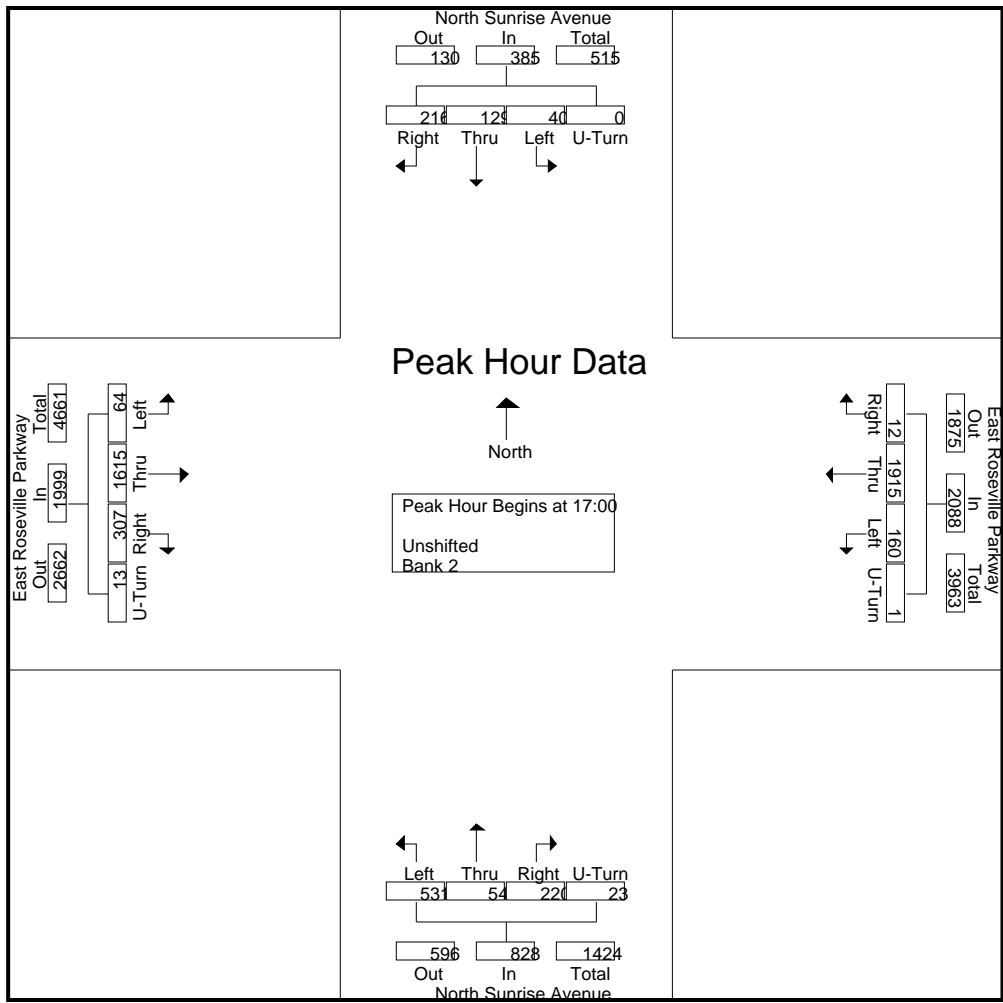
Start Time	North Sunrise Avenue Southbound					East Roseville Parkway Westbound					North Sunrise Avenue Northbound					East Roseville Parkway Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	13	53	90		156			4				16	60		235						1417
17:15	11	28	48	0	87	51	495	3	0	549	155	12	45	3	215	22	422	76	2	522	1373
17:30	12	31	44	0	87	35	447	1	1	484	133	14	60	4	211	14	401	78	3	496	1278
17:45	4	17	34	0	55	42	482	4	0	528	91	12	55	9	167	15	376	84	7	482	1232
Total Volume	40	129	216	0	385	160	1915	12	1	2088	531	54	220	23	828	64	1615	307	13	1999	5300
% App. Total	10.4	33.5	56.1	0		7.7	91.7	0.6	0		64.1	6.5	26.6	2.8		3.2	80.8	15.4	0.7		
PHF	.769	.608	.600	.000	.617	.784	.967	.750	.250	.951	.856	.844	.917	.639	.881	.727	.957	.914	.464	.957	.935

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-017 North Sunrise-East Roseville
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-018 Wills-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Southbound				Atlantic Street Westbound				Wills Road Northbound				Atlantic Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	0	0	0	8	41	0	49	3	0	18	21	0	57	9	66	136
06:15	0	0	0	0	12	54	0	66	2	0	25	27	0	61	15	76	169
06:30	0	0	0	0	16	68	0	84	8	0	35	43	0	100	17	117	244
06:45	0	0	0	0	27	96	0	123	11	0	54	65	0	82	20	102	290
Total	0	0	0	0	63	259	0	322	24	0	132	156	0	300	61	361	839
07:00	0	0	0	0	11	99	0	110	14	0	53	67	0	105	29	134	311
07:15	0	0	0	0	19	105	0	124	26	0	59	85	0	139	39	178	387
07:30	0	0	0	0	37	137	0	174	35	0	80	115	0	199	56	255	544
07:45	0	0	0	0	47	140	0	187	37	0	61	98	0	188	35	223	508
Total	0	0	0	0	114	481	0	595	112	0	253	365	0	631	159	790	1750
08:00	0	0	0	0	49	117	0	166	38	0	60	98	0	171	49	220	484
08:15	0	0	0	0	55	87	0	142	26	0	45	71	0	136	43	179	392
08:30	0	0	0	0	55	97	0	152	27	0	40	67	0	111	33	144	363
08:45	0	0	0	0	53	95	0	148	30	0	49	79	0	124	59	183	410
Total	0	0	0	0	212	396	0	608	121	0	194	315	0	542	184	726	1649
09:00	0	0	0	0	47	96	0	143	31	0	42	73	0	131	49	180	396
09:15	0	0	0	0	38	81	0	119	32	0	48	80	0	84	42	126	325
09:30	0	0	0	0	36	82	0	118	34	0	39	73	0	99	46	145	336
09:45	0	0	0	0	38	93	0	131	31	0	31	62	0	108	47	155	348
Total	0	0	0	0	159	352	0	511	128	0	160	288	0	422	184	606	1405
15:00	0	0	0	0	44	142	0	186	70	0	55	125	0	142	79	221	532
15:15	0	0	0	0	35	128	0	163	63	0	54	117	0	127	55	182	462
15:30	0	0	0	0	47	149	0	196	63	0	60	123	0	152	45	197	516
15:45	0	0	0	0	56	149	0	205	63	0	74	137	0	116	60	176	518
Total	0	0	0	0	182	568	0	750	259	0	243	502	0	537	239	776	2028
16:00	0	0	0	0	42	189	0	231	62	0	67	129	0	132	46	178	538
16:15	0	0	0	0	46	165	0	211	53	0	60	113	0	137	59	196	520
16:30	0	0	0	0	57	204	0	261	65	0	69	134	0	154	61	215	610

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-018 Wills-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Southbound				Atlantic Street Westbound				Wills Road Northbound				Atlantic Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	0	0	0	43	193	0	236	74	0	70	144	0	141	62	203	583
Total	0	0	0	0	188	751	0	939	254	0	266	520	0	564	228	792	2251
17:00	0	0	0	0	32	219	0	251	83	0	88	171	0	156	69	225	647
17:15	0	0	0	0	58	255	0	313	58	0	60	118	0	150	59	209	640
17:30	0	0	0	0	51	185	0	236	66	0	58	124	0	118	62	180	540
17:45	0	0	0	0	44	162	0	206	52	0	60	112	0	122	46	168	486
Total	0	0	0	0	185	821	0	1006	259	0	266	525	0	546	236	782	2313
18:00	0	0	0	0	37	140	0	177	57	0	56	113	0	116	44	160	450
18:15	0	0	0	0	40	134	0	174	57	0	47	104	0	99	48	147	425
18:30	0	0	0	0	36	113	0	149	48	0	40	88	0	78	39	117	354
18:45	0	0	0	0	23	106	0	129	30	0	38	68	0	64	41	105	302
Total	0	0	0	0	136	493	0	629	192	0	181	373	0	357	172	529	1531
Grand Total	0	0	0	0	1239	4121	0	5360	1349	0	1695	3044	0	3899	1463	5362	13766
Apprch %	0	0	0		23.1	76.9	0		44.3	0	55.7		0	72.7	27.3		
Total %	0	0	0		9	29.9	0	38.9	9.8	0	12.3	22.1	0	28.3	10.6	39	
Unshifted	0	0	0	0	1228	4083	0	5311	1336	0	1674	3010	0	3875	1460	5335	13656
% Unshifted	0	0	0	0	99.1	99.1	0	99.1	99	0	98.8	98.9	0	99.4	99.8	99.5	99.2
Bank 2	0	0	0	0	11	38	0	49	13	0	21	34	0	24	3	27	110
% Bank 2	0	0	0	0	0.9	0.9	0	0.9	1	0	1.2	1.1	0	0.6	0.2	0.5	0.8

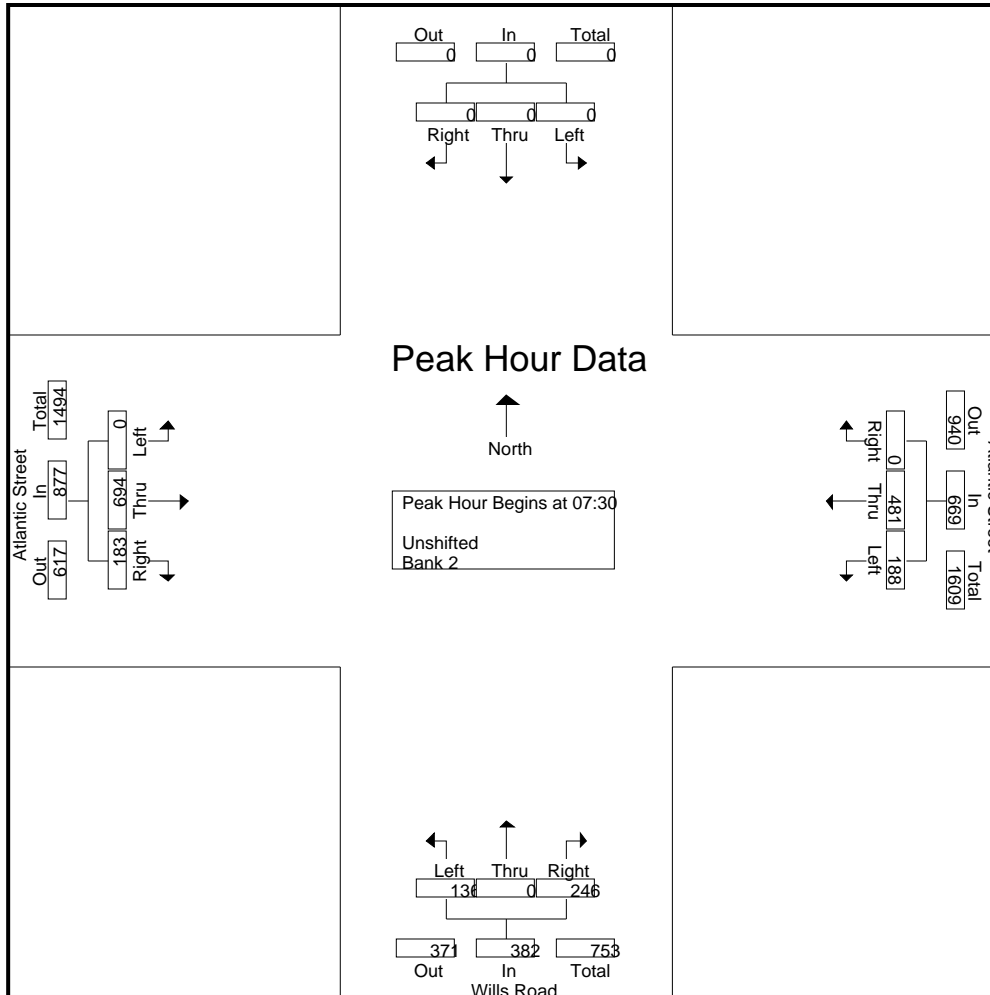
Start Time	Southbound				Atlantic Street Westbound				Wills Road Northbound				Atlantic Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	0	0	0	0	37	137	0	174	35	0	80	115	0	199	56	255	544
07:45	0	0	0	0	47	140	0	187	37	0	61	98	0	188	35	223	508
08:00	0	0	0	0	49	117	0	166	38	0	60	98	0	171	49	220	484
08:15	0	0	0	0	55	87	0	142	26	0	45	71	0	136	43	179	392
Total Volume	0	0	0	0	188	481	0	669	136	0	246	382	0	694	183	877	1928
% App. Total	0	0	0	0	28.1	71.9	0		35.6	0	64.4		0	79.1	20.9		
PHF	.000	.000	.000	.000	.855	.859	.000	.894	.895	.000	.769	.830	.000	.872	.817	.860	.886

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-018 Wills-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-018 Wills-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

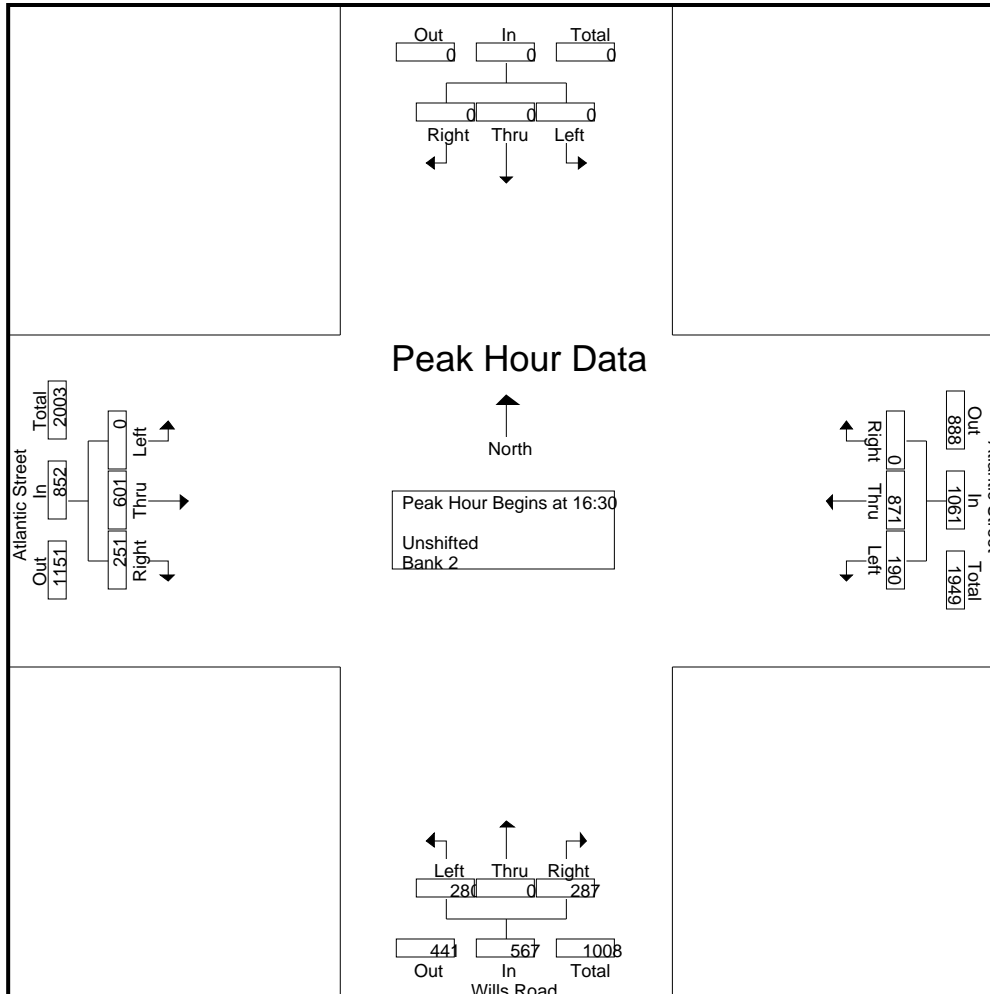
Start Time	Southbound				Atlantic Street Westbound				Wills Road Northbound				Atlantic Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	0	0	0	57	204	0	261	65	0	69	134	0	154	61	215	610
16:45	0	0	0	0	43	193	0	236	74	0	70	144	0	141	62	203	583
17:00	0	0	0	0	32	219	0	251	83	0	88	171	0	156	69	225	647
17:15	0	0	0	0	58	255	0	313	58	0	60	118	0	150	59	209	640
Total Volume	0	0	0	0	190	871	0	1061	280	0	287	567	0	601	251	852	2480
% App. Total	0	0	0	0	17.9	82.1	0		49.4	0	50.6		0	70.5	29.5		
PHF	.000	.000	.000	.000	.819	.854	.000	.847	.843	.000	.815	.829	.000	.963	.909	.947	.958

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-018 Wills-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-019 I80 WB-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Westbound Ramps Southbound				Atlantic Street Westbound				I-80 Westbound Ramps Northbound				Atlantic Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	0	27	27	65	24	0	89	0	0	79	79	0	57	30	87	282
06:15	0	0	37	37	88	29	0	117	0	0	117	117	0	49	35	84	355
06:30	0	0	44	44	93	39	0	132	0	0	84	84	0	75	54	129	389
06:45	0	0	66	66	93	56	0	149	0	0	99	99	0	80	57	137	451
Total	0	0	174	174	339	148	0	487	0	0	379	379	0	261	176	437	1477
07:00	0	0	54	54	119	54	0	173	0	0	129	129	0	88	64	152	508
07:15	0	0	65	65	104	67	0	171	0	0	170	170	0	122	82	204	610
07:30	0	0	87	87	113	99	0	212	0	0	157	157	0	211	62	273	729
07:45	0	0	100	100	96	86	0	182	0	0	231	231	0	195	54	249	762
Total	0	0	306	306	432	306	0	738	0	0	687	687	0	616	262	878	2609
08:00	0	0	82	82	100	83	0	183	0	0	237	237	0	160	63	223	725
08:15	0	0	79	79	106	64	0	170	0	0	235	235	0	129	57	186	670
08:30	0	0	76	76	97	70	0	167	0	0	244	244	0	117	39	156	643
08:45	0	0	75	75	111	78	0	189	0	0	248	248	0	126	40	166	678
Total	0	0	312	312	414	295	0	709	0	0	964	964	0	532	199	731	2716
09:00	0	0	74	74	72	69	0	141	0	0	193	193	0	128	39	167	575
09:15	0	0	54	54	126	67	0	193	0	0	197	197	0	101	36	137	581
09:30	0	0	55	55	128	64	0	192	0	0	185	185	0	101	33	134	566
09:45	0	0	64	64	94	68	0	162	0	0	209	209	0	103	32	135	570
Total	0	0	247	247	420	268	0	688	0	0	784	784	0	433	140	573	2292
15:00	0	0	79	79	152	105	0	257	0	0	142	142	0	141	48	189	667
15:15	0	0	69	69	130	100	0	230	0	0	174	174	0	149	38	187	660
15:30	0	0	82	82	178	113	0	291	0	0	174	174	0	161	47	208	755
15:45	0	0	82	82	150	131	0	281	0	0	172	172	0	134	48	182	717
Total	0	0	312	312	610	449	0	1059	0	0	662	662	0	585	181	766	2799
16:00	0	0	85	85	177	142	0	319	0	0	155	155	0	143	47	190	749
16:15	0	0	87	87	178	139	0	317	0	0	172	172	0	141	53	194	770
16:30	0	0	102	102	228	155	0	383	0	0	160	160	0	171	50	221	866

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-019 I80 WB-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Westbound Ramps Southbound				Atlantic Street Westbound				I-80 Westbound Ramps Northbound				Atlantic Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	0	93	93	156	142	0	298	0	0	183	183	0	143	64	207	781
Total	0	0	367	367	739	578	0	1317	0	0	670	670	0	598	214	812	3166
17:00	0	0	102	102	229	152	0	381	0	0	189	189	0	179	80	259	931
17:15	0	0	108	108	246	210	0	456	0	0	175	175	0	147	57	204	943
17:30	0	0	97	97	159	145	0	304	0	0	142	142	0	125	53	178	721
17:45	0	0	71	71	141	127	0	268	0	0	148	148	0	139	47	186	673
Total	0	0	378	378	775	634	0	1409	0	0	654	654	0	590	237	827	3268
18:00	0	0	65	65	133	112	0	245	0	0	131	131	0	119	49	168	609
18:15	0	0	64	64	134	113	0	247	0	0	149	149	0	108	41	149	609
18:30	0	0	52	52	99	92	0	191	0	0	137	137	0	90	22	112	492
18:45	0	0	44	44	86	90	0	176	0	0	122	122	0	69	36	105	447
Total	0	0	225	225	452	407	0	859	0	0	539	539	0	386	148	534	2157
Grand Total	0	0	2321	2321	4181	3085	0	7266	0	0	5339	5339	0	4001	1557	5558	20484
Apprch %	0	0	100		57.5	42.5	0		0	0	100		0	72	28		
Total %	0	0	11.3	11.3	20.4	15.1	0	35.5	0	0	26.1	26.1	0	19.5	7.6	27.1	
Unshifted	0	0	2305	2305	4140	3056	0	7196	0	0	5291	5291	0	3973	1535	5508	20300
% Unshifted	0	0	99.3	99.3	99	99.1	0	99	0	0	99.1	99.1	0	99.3	98.6	99.1	99.1
Bank 2	0	0	16	16	41	29	0	70	0	0	48	48	0	28	22	50	184
% Bank 2	0	0	0.7	0.7	1	0.9	0	1	0	0	0.9	0.9	0	0.7	1.4	0.9	0.9

Start Time	I-80 Westbound Ramps Southbound				Atlantic Street Westbound				I-80 Westbound Ramps Northbound				Atlantic Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30	0	0	87	87	113	99	0	212	0	0	157	157	0	211	62	273	729
07:45	0	0	100	100	96	86	0	182	0	0	231	231	0	195	54	249	762
08:00	0	0	82	82	100	83	0	183	0	0	237	237	0	160	63	223	725
08:15	0	0	79	79	106	64	0	170	0	0	235	235	0	129	57	186	670
Total Volume	0	0	348	348	415	332	0	747	0	0	860	860	0	695	236	931	2886
% App. Total	0	0	100		55.6	44.4	0		0	0	100		0	74.7	25.3		
PHF	.000	.000	.870	.870	.918	.838	.000	.881	.000	.000	.907	.907	.000	.823	.937	.853	.947

Peak Hour Analysis From 06:00 to 08:45 - Peak 1 of 1

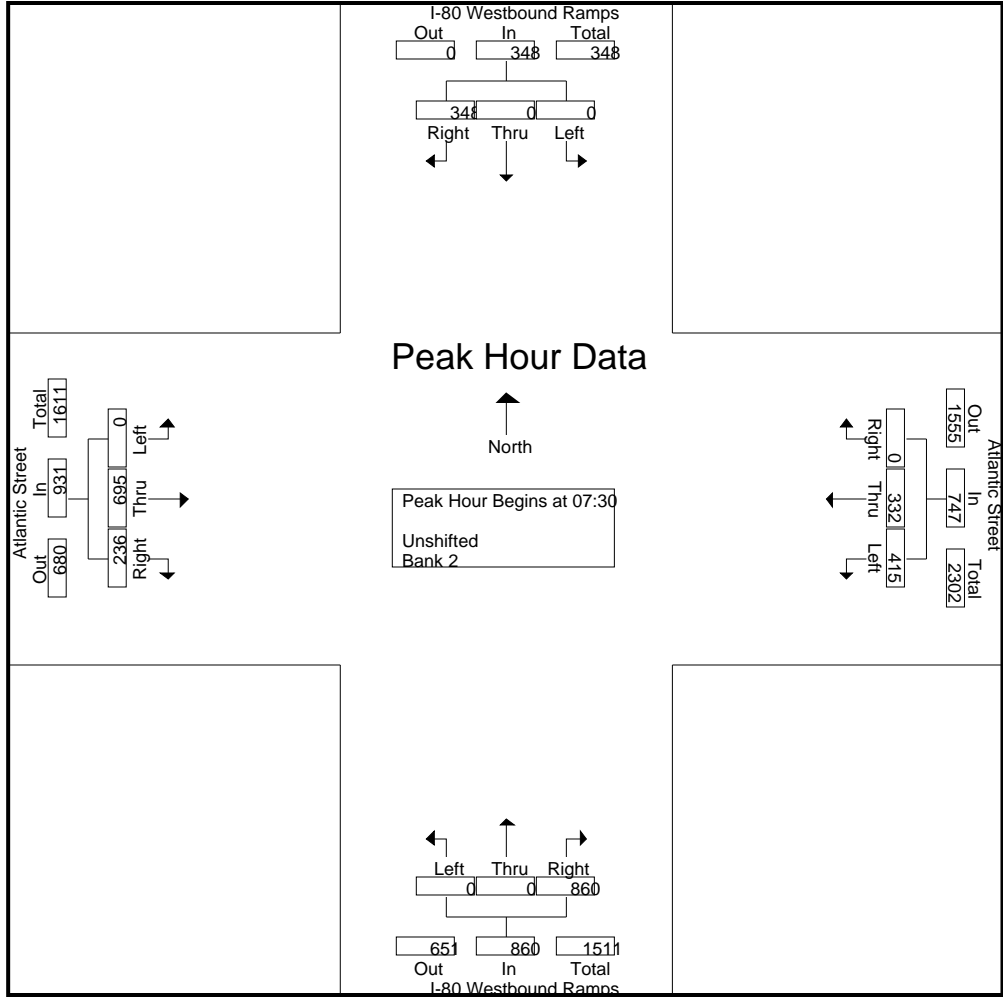
Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-019 I80 WB-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-019 I80 WB-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

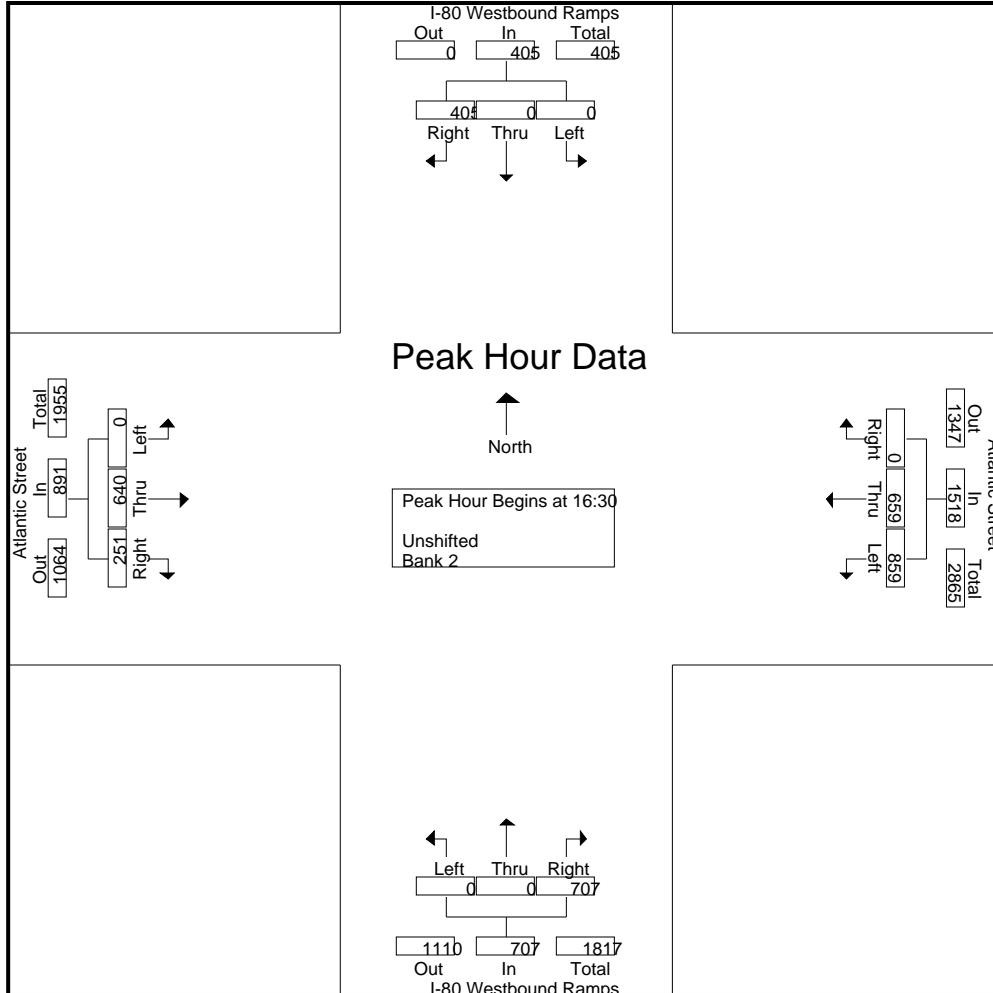
Start Time	I-80 Westbound Ramps Southbound				Atlantic Street Westbound				I-80 Westbound Ramps Northbound				Atlantic Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	0	102	102	228	155	0	383	0	0	160	160	0	171	50	221	866
16:45	0	0	93	93	156	142	0	298	0	0	183	183	0	143	64	207	781
17:00	0	0	102	102	229	152	0	381	0	0	189	189	0	179	80	259	931
17:15	0	0	108	108	246	210	0	456	0	0	175	175	0	147	57	204	943
Total Volume	0	0	405	405	859	659	0	1518	0	0	707	707	0	640	251	891	3521
% App. Total	0	0	100		56.6	43.4	0		0	0	100		0	71.8	28.2		
PHF	.000	.000	.938	.938	.873	.785	.000	.832	.000	.000	.935	.935	.000	.894	.784	.860	.933

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-019 I80 WB-Atlantic
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-020 I80 EB-Eureka
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Taylor Road Southbound					Eureka Road Westbound					I-80 Eastbound Ramps Northbound					Eureka Road Eastbound					I-80 Eastbound Ramps Southeastbound					Int. Total
	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	
06:00	7	0	40	6	53	0	47	29	15	91	9	0	32	30	71	0	35	83	10	128	0	0	0	0	0	343
06:15	18	0	51	5	74	0	40	38	9	87	16	0	47	27	90	0	28	130	13	171	0	0	0	0	0	422
06:30	24	0	52	7	83	0	77	44	16	137	12	0	59	52	123	0	35	127	19	181	0	0	0	0	0	524
06:45	26	0	58	9	93	0	61	68	34	163	24	0	97	81	202	0	30	138	29	197	0	0	0	0	0	655
Total	75	0	201	27	303	0	225	179	74	478	61	0	235	190	486	0	128	478	71	677	0	0	0	0	0	1944
07:00	18	0	57	7	82	0	84	74	17	175	22	0	43	89	154	0	24	146	28	198	0	0	0	0	0	609
07:15	30	0	63	8	101	0	81	79	18	178	36	0	85	97	218	0	19	221	37	277	0	0	0	0	0	774
07:30	24	0	66	13	103	0	91	116	20	227	39	0	118	120	277	0	34	262	77	373	0	0	0	0	0	980
07:45	53	0	64	7	124	0	91	89	15	195	34	0	138	203	375	0	36	333	36	405	0	0	0	0	0	1099
Total	125	0	250	35	410	0	347	358	70	775	131	0	384	509	1024	0	113	962	178	1253	0	0	0	0	0	3462
08:00	23	0	60	17	100	0	86	125	17	228	28	0	109	166	303	0	22	331	50	403	0	0	0	0	0	1034
08:15	38	0	52	6	96	0	95	84	10	189	29	0	118	169	316	0	25	310	25	360	0	0	0	0	0	961
08:30	37	0	50	11	98	0	115	102	22	239	19	0	101	131	251	0	16	319	37	372	0	0	0	0	0	960
08:45	37	0	62	8	107	0	81	106	31	218	28	0	108	158	294	0	18	321	33	372	0	0	0	0	0	991
Total	135	0	224	42	401	0	377	417	80	874	104	0	436	624	1164	0	81	1281	145	1507	0	0	0	0	0	3946
09:00	27	0	41	11	79	0	73	91	28	192	32	0	78	93	203	0	30	272	29	331	0	0	0	0	0	805
09:15	30	0	63	7	100	0	92	88	28	208	37	0	75	102	214	0	36	221	22	279	0	0	0	0	0	801
09:30	41	0	50	19	110	0	98	95	27	220	35	0	80	97	212	0	26	242	25	293	0	0	0	0	0	835
09:45	32	0	49	11	92	0	73	95	24	192	34	0	98	137	269	0	32	243	24	299	0	0	0	0	0	852
Total	130	0	203	48	381	0	336	369	107	812	138	0	331	429	898	0	124	978	100	1202	0	0	0	0	0	3293
15:00	39	0	84	18	141	0	141	195	39	375	32	0	86	86	204	0	41	187	53	281	0	0	0	0	0	1001
15:15	43	0	68	30	141	0	145	219	51	415	36	0	90	118	244	0	35	251	55	341	0	0	0	0	0	1141
15:30	48	0	91	16	155	0	161	150	60	371	33	0	108	89	230	0	37	217	67	321	0	0	0	0	0	1077
15:45	53	0	95	25	173	0	157	194	57	408	39	0	110	130	279	0	33	209	80	322	0	0	0	0	0	1182
Total	183	0	338	89	610	0	604	758	207	1569	140	0	394	423	957	0	146	864	255	1265	0	0	0	0	0	4401
16:00	62	0	85	31	178	0	188	206	83	477	46	0	119	77	242	0	33	196	60	289	0	0	0	0	0	1186
16:15	74	0	98	27	199	0	179	219	70	468	31	0	105	74	210	0	49	244	50	343	0	0	0	0	0	1220

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-020 I80 EB-Eureka
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Taylor Road Southbound					Eureka Road Westbound					I-80 Eastbound Ramps Northbound					Eureka Road Eastbound					I-80 Eastbound Ramps Southeastbound					Int. Total
	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	
16:30	71	0	111	30	212	0	227	191	95	513	36	0	110	88	234	0	48	207	59	314	0	0	0	0	0	1273
16:45	40	0	78	35	153	0	213	217	51	481	28	0	128	106	262	0	41	251	68	360	0	0	0	0	0	1256
Total	247	0	372	123	742	0	807	833	299	1939	141	0	462	345	948	0	171	898	237	1306	0	0	0	0	0	4935
17:00	43	0	96	16	155	0	232	199	49	480	28	0	117	75	220	0	53	221	62	336	0	0	0	0	0	1191
17:15	58	0	102	23	183	0	306	220	57	583	37	0	94	85	216	0	45	233	62	340	0	0	0	0	0	1322
17:30	56	0	79	15	150	0	182	160	44	386	44	0	133	89	266	0	46	171	41	258	0	0	0	0	0	1060
17:45	45	0	77	21	143	0	163	188	57	408	34	0	111	87	232	0	33	195	55	283	0	0	0	0	0	1066
Total	202	0	354	75	631	0	883	767	207	1857	143	0	455	336	934	0	177	820	220	1217	0	0	0	0	0	4639
18:00	55	0	70	17	142	0	124	151	41	316	47	0	133	94	274	0	46	157	34	237	0	0	0	0	0	969
18:15	41	0	54	20	115	0	156	148	39	343	32	0	121	72	225	0	49	170	34	253	0	0	0	0	0	936
18:30	42	0	64	12	118	0	93	135	60	288	40	0	130	96	266	0	28	160	24	212	0	0	0	0	0	884
18:45	29	0	49	19	97	0	95	140	38	273	34	0	90	59	183	0	41	147	21	209	0	0	0	0	0	762
Total	167	0	237	68	472	0	468	574	178	1220	153	0	474	321	948	0	164	634	113	911	0	0	0	0	0	3551
Grand Total	1264	0	2179	507	3950	0	4047	4255	1222	9524	1011	0	3171	3177	7359	0	1104	6915	1319	9338	0	0	0	0	0	30171
Apprch %	32	0	55.2	12.8		0	42.5	44.7	12.8		13.7	0	43.1	43.2		0	11.8	74.1	14.1		0	0	0	0		
Total %	4.2	0	7.2	1.7	13.1	0	13.4	14.1	4.1	31.6	3.4	0	10.5	10.5	24.4	0	3.7	22.9	4.4	31	0	0	0	0	0	
Unshifted	1250	0	2163	500	3913	0	4004	4197	1218	9419	999	0	3145	3120	7264	0	1092	6855	1299	9246	0	0	0	0	0	29842
% Unshifted	98.9	0	99.3	98.6	99.1	0	98.9	98.6	99.7	98.9	98.8	0	99.2	98.2	98.7	0	98.9	99.1	98.5	99	0	0	0	0	0	98.9
Bank 2	14	0	16	7	37	0	43	58	4	105	12	0	26	57	95	0	12	60	20	92	0	0	0	0	0	329
% Bank 2	1.1	0	0.7	1.4	0.9	0	1.1	1.4	0.3	1.1	1.2	0	0.8	1.8	1.3	0	1.1	0.9	1.5	1	0	0	0	0	0	1.1

Start Time	Taylor Road Southbound					Eureka Road Westbound					I-80 Eastbound Ramps Northbound					Eureka Road Eastbound					I-80 Eastbound Ramps Southeastbound					Int. Total
	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	
07:30	24	0	66	13	103	0	91	116	20	227	39	0	118	120	277	0	34	262	77	373	0	0	0	0	0	980
07:45	53	0	64	7	124	0	91	89	15	195	34	0	138	203	375	0	36	333	36	405	0	0	0	0	0	1099
08:00	23	0	60	17	100	0	86	125	17	228	28	0	109	166	303	0	22	331	50	403	0	0	0	0	0	1034
08:15	38	0	52	6	96	0	95	84	10	189	29	0	118	169	316	0	25	310	25	360	0	0	0	0	0	961
Total Volume	138	0	242	43	423	0	363	414	62	839	130	0	483	658	1271	0	117	1236	188	1541	0	0	0	0	0	4074
% App. Total	32.6	0	57.2	10.2		0	43.3	49.3	7.4		10.2	0	38	51.8		0	7.6	80.2	12.2		0	0	0	0		
PHF	.651	.000	.917	.632	.853	.000	.955	.828	.775	.920	.833	.000	.875	.810	.847	.000	.813	.928	.610	.951	.000	.000	.000	.000	.000	.927

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

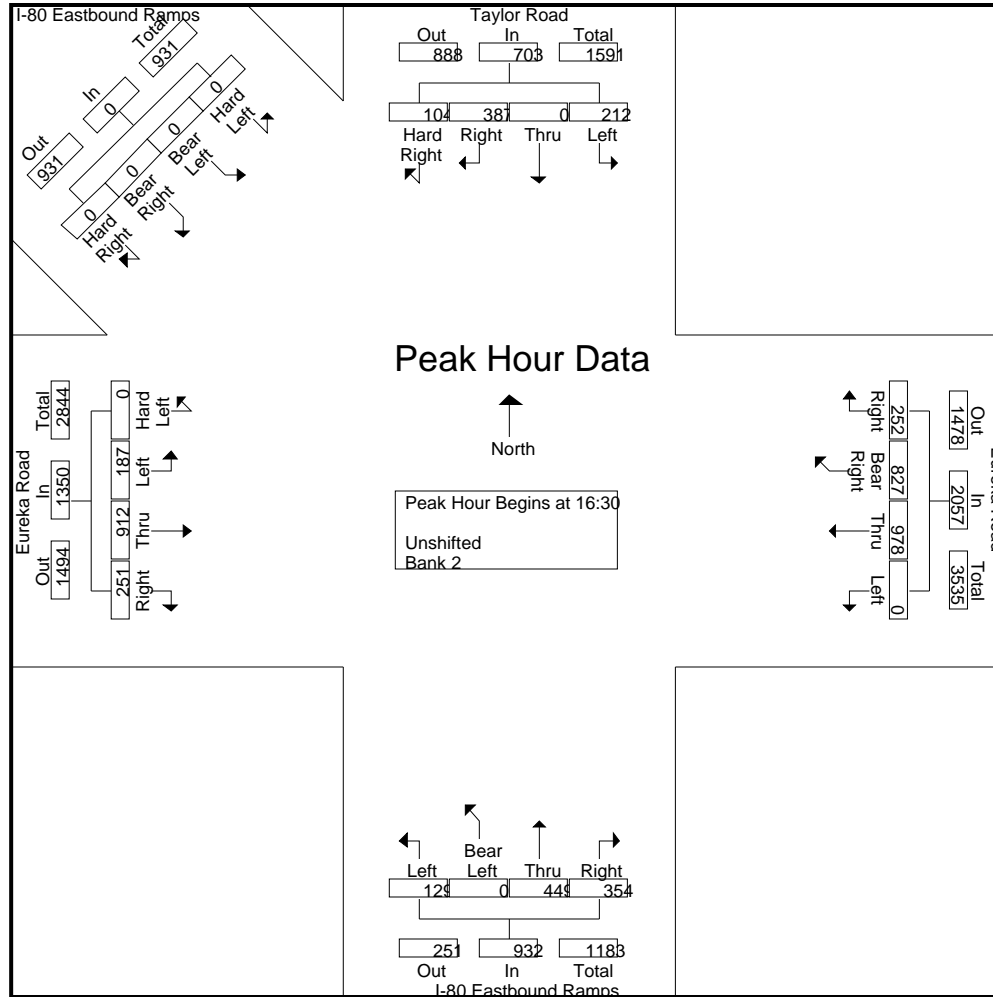
Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-020 I80 EB-Eureka
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-021 Sunrise-Eureka
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Sunrise Avenue Southbound					Eureka Road Westbound					Sunrise Avenue Northbound					Eureka Road Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
06:00	3	12	13	0	28	2	63	3	0	68	6	13	8	0	27	10	80	22	2	114	237
06:15	3	20	20	0	43	9	66	1	0	76	12	10	4	0	26	20	122	28	1	171	316
06:30	8	36	26	0	70	5	84	3	1	93	18	15	5	0	38	28	164	35	0	227	428
06:45	7	27	27	1	62	6	89	10	0	105	12	30	6	0	48	38	177	61	0	276	491
Total	21	95	86	1	203	22	302	17	1	342	48	68	23	0	139	96	543	146	3	788	1472
07:00	6	34	28	0	68	9	120	9	1	139	22	24	7	0	53	21	200	42	1	264	524
07:15	17	41	26	1	85	7	146	9	1	163	16	23	8	0	47	30	259	72	2	363	658
07:30	22	78	41	0	141	10	171	7	0	188	24	31	13	0	68	42	245	61	1	349	746
07:45	27	56	43	2	128	14	170	19	0	203	16	57	13	0	86	78	431	115	0	624	1041
Total	72	209	138	3	422	40	607	44	2	693	78	135	41	0	254	171	1135	290	4	1600	2969
08:00	12	57	30	1	100	22	172	12	0	206	36	48	19	1	104	58	361	72	0	491	901
08:15	9	57	31	0	97	18	138	11	1	168	23	39	19	0	81	66	399	72	2	539	885
08:30	21	85	28	1	135	18	138	10	2	168	43	49	23	1	116	52	308	76	1	437	856
08:45	22	71	27	3	123	19	167	13	3	202	41	63	16	1	121	58	355	114	4	531	977
Total	64	270	116	5	455	77	615	46	6	744	143	199	77	3	422	234	1423	334	7	1998	3619
09:00	17	71	15	3	106	19	128	16	2	165	51	81	20	0	152	45	236	76	5	362	785
09:15	16	77	32	4	129	10	126	13	2	151	52	77	31	1	161	41	229	84	5	359	800
09:30	16	88	42	0	146	21	138	20	1	180	48	80	21	1	150	43	210	85	3	341	817
09:45	21	76	28	0	125	24	128	16	5	173	54	67	20	6	147	54	267	86	9	416	861
Total	70	312	117	7	506	74	520	65	10	669	205	305	92	8	610	183	942	331	22	1478	3263
15:00	31	82	43	2	158	24	232	32	5	293	111	113	38	3	265	38	193	84	3	318	1034
15:15	36	92	40	3	171	21	211	30	0	262	95	102	31	2	230	51	250	95	16	412	1075
15:30	32	113	46	3	194	26	273	24	4	327	90	126	46	1	263	43	206	85	14	348	1132
15:45	35	103	46	4	188	18	242	43	7	310	63	101	38	0	202	62	228	101	10	401	1101
Total	134	390	175	12	711	89	958	129	16	1192	359	442	153	6	960	194	877	365	43	1479	4342
16:00	60	130	64	6	260	30	241	41	4	316	120	113	39	1	273	33	200	80	9	322	1171
16:15	36	107	52	2	197	28	277	38	4	347	96	100	49	2	247	39	249	96	12	396	1187
16:30	46	135	63	6	250	26	342	28	6	402	131	109	35	2	277	37	204	96	22	359	1288
16:45	30	93	46	1	170	22	284	29	1	336	107	114	54	2	277	60	263	71	12	406	1189
Total	172	465	225	15	877	106	1144	136	15	1401	454	436	177	7	1074	169	916	343	55	1483	4835
17:00	38	93	43	0	174	26	424	48	4	502	124	118	38	3	283	36	207	71	7	321	1280
17:15	29	83	49	2	163	22	356	47	2	427	109	112	44	2	267	41	253	80	9	383	1240
17:30	26	78	29	0	133	26	285	34	4	349	79	116	39	1	235	36	193	62	14	305	1022

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-021 Sunrise-Eureka
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Sunrise Avenue Southbound					Eureka Road Westbound					Sunrise Avenue Northbound					Eureka Road Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
17:45	29	64	23	1	117	19	267	28	7	321	80	111	34	2	227	43	211	68	12	334	999
Total	122	318	144	3	587	93	1332	157	17	1599	392	457	155	8	1012	156	864	281	42	1343	4541
18:00	22	61	23	5	111	25	219	29	4	277	83	100	35	0	218	40	181	55	16	292	898
18:15	31	57	25	0	113	22	234	18	4	278	77	84	24	0	185	40	193	60	11	304	880
18:30	18	47	27	0	92	15	176	28	7	226	86	72	26	1	185	42	186	55	19	302	805
18:45	16	44	21	1	82	14	182	24	6	226	68	70	13	1	152	28	156	40	13	237	697
Total	87	209	96	6	398	76	811	99	21	1007	314	326	98	2	740	150	716	210	59	1135	3280
Grand Total	742	2268	1097	52	4159	577	6289	693	88	7647	1993	2368	816	34	5211	1353	7416	2300	235	11304	28321
Apprch %	17.8	54.5	26.4	1.3		7.5	82.2	9.1	1.2		38.2	45.4	15.7	0.7		12	65.6	20.3	2.1		
Total %	2.6	8	3.9	0.2	14.7	2	22.2	2.4	0.3	27	7	8.4	2.9	0.1	18.4	4.8	26.2	8.1	0.8	39.9	
Unshifted	740	2257	1094	52	4143	569	6227	690	88	7574	1951	2352	816	34	5153	1342	7324	2266	235	11167	28037
% Unshifted	99.7	99.5	99.7	100	99.6	98.6	99	99.6	100	99	97.9	99.3	100	100	98.9	99.2	98.8	98.5	100	98.8	99
Bank 2	2	11	3	0	16	8	62	3	0	73	42	16	0	0	58	11	92	34	0	137	284
% Bank 2	0.3	0.5	0.3	0	0.4	1.4	1	0.4	0	1	2.1	0.7	0	0	1.1	0.8	1.2	1.5	0	1.2	1

Start Time	Sunrise Avenue Southbound					Eureka Road Westbound					Sunrise Avenue Northbound					Eureka Road Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:45

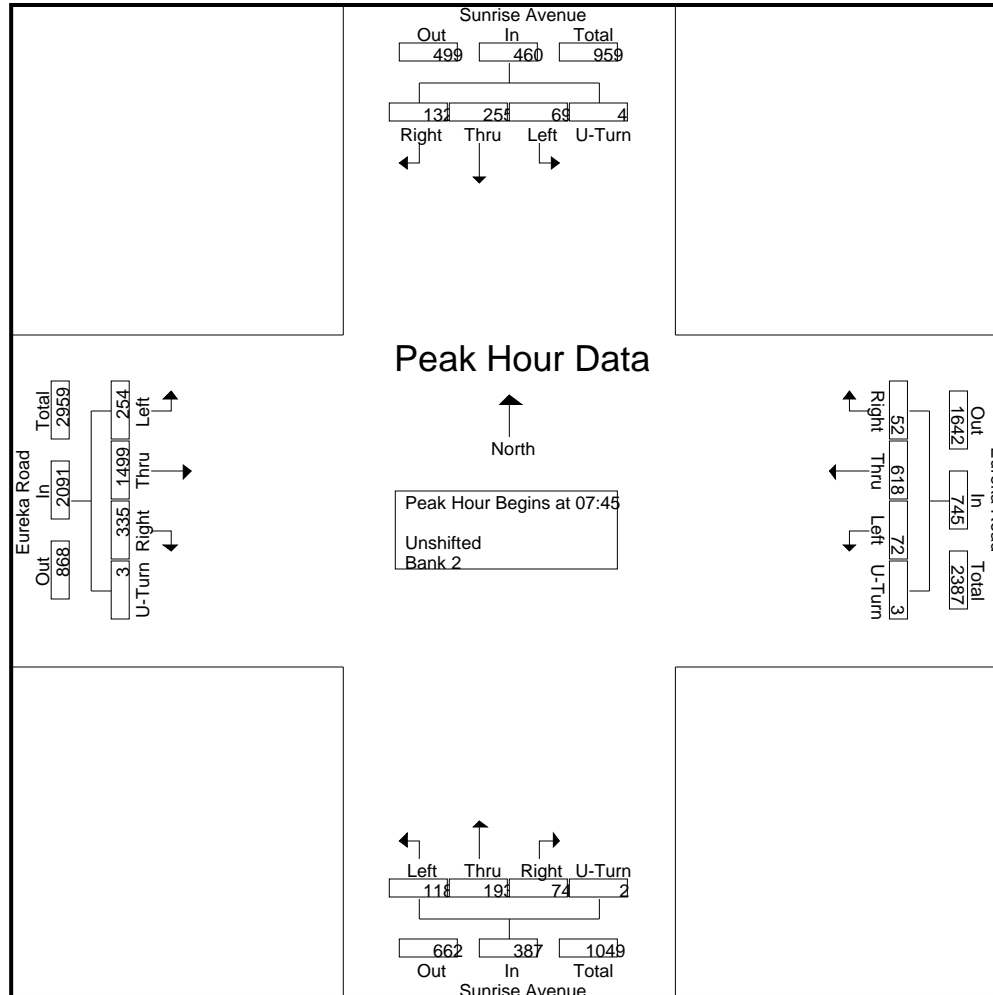
07:45	27	56	43	2	128	14	170	19	0	203	16	57	13	0	86	78	431	115	0	624	1041
08:00	12	57	30	1	100	22	172	12	0	206	36	48	19	1	104	58	361	72	0	491	901
08:15	9	57	31	0	97	18	138	11	1	168	23	39	19	0	81	66	399	72	2	539	885
08:30	21	85	28	1	135	18	138	10	2	168	43	49	23	1	116	52	308	76	1	437	856
Total Volume	69	255	132	4	460	72	618	52	3	745	118	193	74	2	387	254	1499	335	3	2091	3683
% App. Total	15	55.4	28.7	0.9		9.7	83	7	0.4		30.5	49.9	19.1	0.5		12.1	71.7	16	0.1		
PHF	.639	.750	.767	.500	.852	.818	.898	.684	.375	.904	.686	.846	.804	.500	.834	.814	.869	.728	.375	.838	.884

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-021 Sunrise-Eureka
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-021 Sunrise-Eureka
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

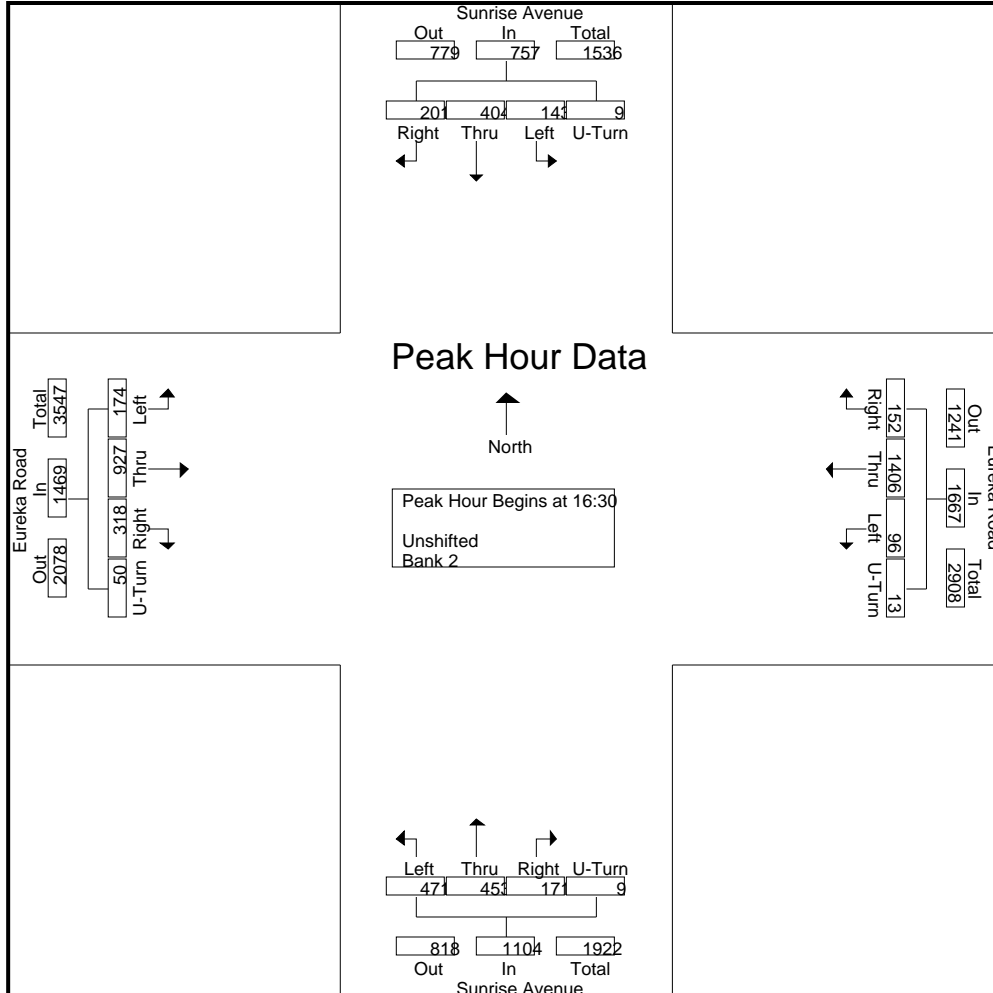
Start Time	Sunrise Avenue Southbound					Eureka Road Westbound					Sunrise Avenue Northbound					Eureka Road Eastbound					Int. Total
	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	46	135	63	6	250	26			6		131							96	22		1288
16:45	30	93	46	1	170	22	284	29	1	336	107	114	54	2	277	60	263	71	12	406	1189
17:00	38	93	43	0	174	26	424	48	4	502	124	118	38	3	283	36	207	71	7	321	1280
17:15	29	83	49	2	163	22	356	47	2	427	109	112	44	2	267	41	253	80	9	383	1240
Total Volume	143	404	201	9	757	96	1406	152	13	1667	471	453	171	9	1104	174	927	318	50	1469	4997
% App. Total	18.9	53.4	26.6	1.2		5.8	84.3	9.1	0.8		42.7	41	15.5	0.8		11.8	63.1	21.6	3.4		
PHF	.777	.748	.798	.375	.757	.923	.829	.792	.542	.830	.899	.960	.792	.750	.975	.725	.881	.828	.568	.905	.970

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-021 Sunrise-Eureka
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-022 Harding-Wills
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Galleria Boulevard Southbound				Wills Road Westbound				Harding Boulevard Northbound				Wills Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	47	18	65	0	0	0	0	4	17	0	21	6	0	12	18	104
06:15	0	72	18	90	0	0	0	0	7	21	1	29	10	1	18	29	148
06:30	0	102	34	136	0	0	0	0	9	38	0	47	16	0	19	35	218
06:45	0	135	58	193	0	0	0	0	5	41	0	46	25	0	19	44	283
Total	0	356	128	484	0	0	0	0	25	117	1	143	57	1	68	126	753
07:00	1	142	58	201	0	0	0	0	10	45	0	55	12	2	23	37	293
07:15	0	231	63	294	0	2	0	2	26	76	1	103	26	3	32	61	460
07:30	0	254	74	328	0	1	0	1	35	96	0	131	29	1	63	93	553
07:45	2	286	70	358	1	0	1	2	32	121	1	154	30	2	52	84	598
Total	3	913	265	1181	1	3	1	5	103	338	2	443	97	8	170	275	1904
08:00	2	229	54	285	1	0	1	2	40	111	2	153	26	2	65	93	533
08:15	1	212	47	260	0	0	5	5	20	88	2	110	48	1	53	102	477
08:30	1	212	47	260	2	1	0	3	23	96	0	119	30	5	51	86	468
08:45	1	209	49	259	1	1	3	5	24	103	1	128	49	0	63	112	504
Total	5	862	197	1064	4	2	9	15	107	398	5	510	153	8	232	393	1982
09:00	1	188	39	228	1	1	1	3	30	128	1	159	35	2	51	88	478
09:15	0	157	53	210	2	2	1	5	30	80	3	113	42	0	43	85	413
09:30	0	125	46	171	1	2	0	3	25	128	3	156	30	1	46	77	407
09:45	0	122	33	155	1	2	1	4	26	128	1	155	51	0	39	90	404
Total	1	592	171	764	5	7	3	15	111	464	8	583	158	3	179	340	1702
15:00	0	224	67	291	0	2	3	5	56	235	3	294	38	0	81	119	709
15:15	1	236	51	288	3	1	0	4	61	224	1	286	42	1	47	90	668
15:30	1	189	68	258	0	4	1	5	51	186	1	238	40	2	52	94	595
15:45	4	222	72	298	2	3	2	7	68	255	4	327	67	3	50	120	752
Total	6	871	258	1135	5	10	6	21	236	900	9	1145	187	6	230	423	2724
16:00	2	218	61	281	3	1	3	7	63	230	1	294	51	0	40	91	673
16:15	0	179	61	240	0	2	0	2	48	194	1	243	45	1	48	94	579
16:30	0	198	66	264	1	1	1	3	65	256	1	322	61	5	53	119	708

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-022 Harding-Wills
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Galleria Boulevard Southbound				Wills Road Westbound				Harding Boulevard Northbound				Wills Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	217	75	292	2	2	2	6	75	288	0	363	70	1	42	113	774
Total	2	812	263	1077	6	6	6	18	251	968	3	1222	227	7	183	417	2734
17:00	0	211	88	299	2	0	0	2	81	314	0	395	61	0	41	102	798
17:15	1	229	65	295	0	1	3	4	49	271	1	321	54	2	50	106	726
17:30	1	186	81	268	0	3	1	4	43	255	0	298	72	1	46	119	689
17:45	0	166	66	232	0	0	1	1	52	223	0	275	52	1	40	93	601
Total	2	792	300	1094	2	4	5	11	225	1063	1	1289	239	4	177	420	2814
18:00	1	160	66	227	1	0	0	1	45	225	0	270	47	0	45	92	590
18:15	3	144	64	211	1	1	4	6	44	180	0	224	52	0	32	84	525
18:30	1	109	43	153	0	1	1	2	39	207	3	249	51	0	31	82	486
18:45	0	140	41	181	0	0	0	0	28	112	2	142	41	0	20	61	384
Total	5	553	214	772	2	2	5	9	156	724	5	885	191	0	128	319	1985
Grand Total	24	5751	1796	7571	25	34	35	94	1214	4972	34	6220	1309	37	1367	2713	16598
Apprch %	0.3	76	23.7		26.6	36.2	37.2		19.5	79.9	0.5		48.2	1.4	50.4		
Total %	0.1	34.6	10.8	45.6	0.2	0.2	0.2	0.6	7.3	30	0.2	37.5	7.9	0.2	8.2	16.3	
Unshifted	21	5736	1778	7535	23	29	30	82	1206	4954	29	6189	1301	36	1363	2700	16506
% Unshifted	87.5	99.7	99	99.5	92	85.3	85.7	87.2	99.3	99.6	85.3	99.5	99.4	97.3	99.7	99.5	99.4
Bank 2	3	15	18	36	2	5	5	12	8	18	5	31	8	1	4	13	92
% Bank 2	12.5	0.3	1	0.5	8	14.7	14.3	12.8	0.7	0.4	14.7	0.5	0.6	2.7	0.3	0.5	0.6

Start Time	Galleria Boulevard Southbound				Wills Road Westbound				Harding Boulevard Northbound				Wills Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:30	0	254	74	328	0	1	0	1	35	96	0	131	29	1	63	93	553
07:45	2	286	70	358	1	0	1	2	32	121	1	154	30	2	52	84	598
08:00	2	229	54	285	1	0	1	2	40	111	2	153	26	2	65	93	533
08:15	1	212	47	260	0	0	5	5	20	88	2	110	48	1	53	102	477
Total Volume	5	981	245	1231	2	1	7	10	127	416	5	548	133	6	233	372	2161
% App. Total	0.4	79.7	19.9		20	10	70		23.2	75.9	0.9		35.8	1.6	62.6		
PHF	.625	.858	.828	.860	.500	.250	.350	.500	.794	.860	.625	.890	.693	.750	.896	.912	.903

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

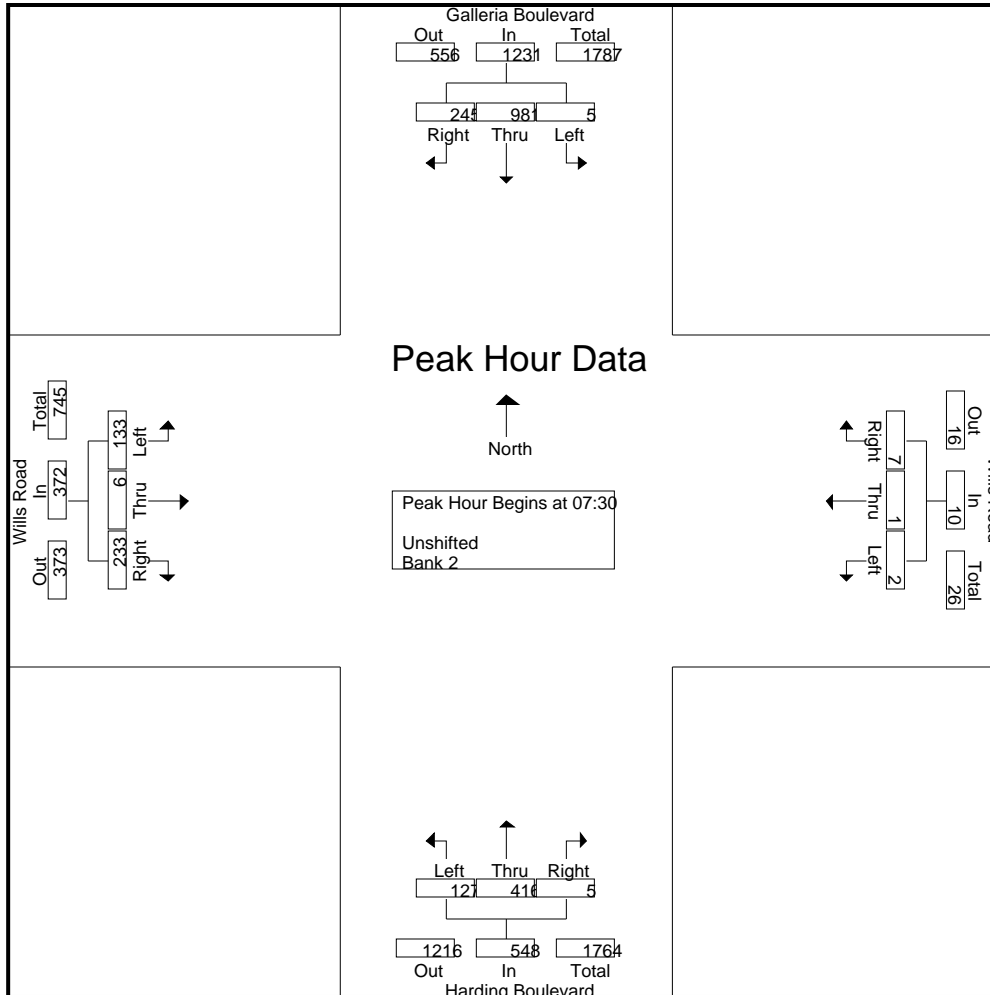
Peak Hour for Entire Intersection Begins at 07:30

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-022 Harding-Wills
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-022 Harding-Wills
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

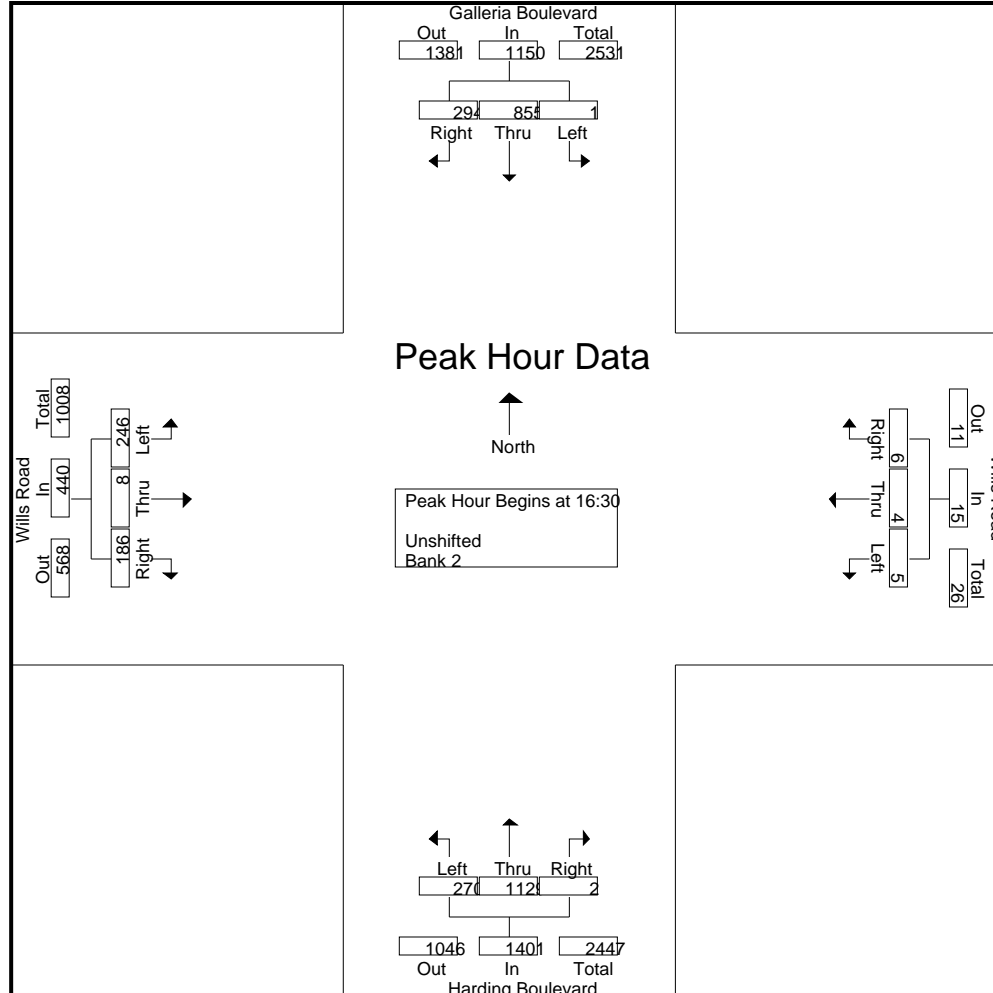
Start Time	Galleria Boulevard Southbound				Wills Road Westbound				Harding Boulevard Northbound				Wills Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	198	66	264	1	1	1	3	65	256	1	322	61	5	53	119	708
16:45	0	217	75	292	2	2	2	6	75	288	0	363	70	1	42	113	774
17:00	0	211	88	299	2	0	0	2	81	314	0	395	61	0	41	102	798
17:15	1	229	65	295	0	1	3	4	49	271	1	321	54	2	50	106	726
Total Volume	1	855	294	1150	5	4	6	15	270	1129	2	1401	246	8	186	440	3006
% App. Total	0.1	74.3	25.6		33.3	26.7	40		19.3	80.6	0.1		55.9	1.8	42.3		
PHF	.250	.933	.835	.962	.625	.500	.500	.625	.833	.899	.500	.887	.879	.400	.877	.924	.942

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-022 Harding-Wills
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-023 Harding-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Harding Boulevard Southbound				Douglas Boulevard Westbound				Harding Boulevard Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	33	0	5	38	3	37	4	44	0	0	1	1	8	58	0	66	149
06:15	54	2	11	67	5	61	24	90	2	1	3	6	7	72	1	80	243
06:30	59	0	12	71	4	84	25	113	2	0	4	6	9	109	3	121	311
06:45	78	1	4	83	6	63	27	96	2	0	2	4	11	122	2	135	318
Total	224	3	32	259	18	245	80	343	6	1	10	17	35	361	6	402	1021
07:00	105	1	14	120	6	88	19	113	0	0	8	8	14	164	2	180	421
07:15	124	0	25	149	15	160	41	216	0	1	9	10	21	151	4	176	551
07:30	118	3	25	146	14	178	58	250	4	1	9	14	25	220	7	252	662
07:45	132	1	43	176	14	205	69	288	3	1	6	10	50	245	5	300	774
Total	479	5	107	591	49	631	187	867	7	3	32	42	110	780	18	908	2408
08:00	118	0	36	154	6	184	70	260	0	1	1	2	37	193	3	233	649
08:15	120	5	23	148	14	154	85	253	1	3	3	7	45	224	4	273	681
08:30	109	4	23	136	15	161	88	264	0	4	9	13	39	218	2	259	672
08:45	126	6	33	165	16	186	92	294	2	1	9	12	47	197	1	245	716
Total	473	15	115	603	51	685	335	1071	3	9	22	34	168	832	10	1010	2718
09:00	112	6	40	158	13	141	88	242	3	2	9	14	35	184	2	221	635
09:15	113	4	18	135	15	173	82	270	4	4	13	21	34	176	2	212	638
09:30	98	6	32	136	10	145	72	227	2	0	14	16	44	155	0	199	578
09:45	93	4	30	127	15	173	91	279	3	4	14	21	40	154	4	198	625
Total	416	20	120	556	53	632	333	1018	12	10	50	72	153	669	8	830	2476
15:00	183	6	48	237	11	249	101	361	3	11	16	30	48	198	5	251	879
15:15	161	9	55	225	22	278	112	412	2	5	17	24	42	204	3	249	910
15:30	156	5	45	206	19	259	103	381	3	6	17	26	44	197	7	248	861
15:45	149	7	63	219	11	249	121	381	4	5	25	34	42	189	3	234	868
Total	649	27	211	887	63	1035	437	1535	12	27	75	114	176	788	18	982	3518
16:00	189	4	58	251	13	248	97	358	7	6	23	36	32	208	6	246	891
16:15	172	4	52	228	12	254	125	391	8	7	13	28	44	199	1	244	891
16:30	162	3	41	206	19	267	109	395	3	5	11	19	51	187	9	247	867

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-023 Harding-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Harding Boulevard Southbound				Douglas Boulevard Westbound				Harding Boulevard Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	163	9	52	224	31	243	128	402	12	7	25	44	43	187	3	233	903
Total	686	20	203	909	75	1012	459	1546	30	25	72	127	170	781	19	970	3552
17:00	201	1	55	257	22	241	95	358	5	10	32	47	44	212	1	257	919
17:15	214	6	56	276	26	274	115	415	5	2	12	19	43	199	1	243	953
17:30	150	6	38	194	17	240	135	392	5	4	19	28	51	174	1	226	840
17:45	157	3	31	191	17	242	110	369	7	7	18	32	31	143	4	178	770
Total	722	16	180	918	82	997	455	1534	22	23	81	126	169	728	7	904	3482
18:00	162	1	36	199	17	198	85	300	5	3	15	23	30	175	12	217	739
18:15	127	4	34	165	20	233	127	380	4	5	14	23	28	150	3	181	749
18:30	110	3	33	146	13	170	109	292	11	7	21	39	28	127	1	156	633
18:45	105	4	43	152	5	192	82	279	6	3	12	21	22	124	5	151	603
Total	504	12	146	662	55	793	403	1251	26	18	62	106	108	576	21	705	2724
Grand Total	4153	118	1114	5385	446	6030	2689	9165	118	116	404	638	1089	5515	107	6711	21899
Apprch %	77.1	2.2	20.7		4.9	65.8	29.3		18.5	18.2	63.3		16.2	82.2	1.6		
Total %	19	0.5	5.1	24.6	2	27.5	12.3	41.9	0.5	0.5	1.8	2.9	5	25.2	0.5	30.6	
Unshifted	4139	117	1113	5369	445	6001	2676	9122	118	116	400	634	1084	5483	106	6673	21798
% Unshifted	99.7	99.2	99.9	99.7	99.8	99.5	99.5	99.5	100	100	99	99.4	99.5	99.4	99.1	99.4	99.5
Bank 2	14	1	1	16	1	29	13	43	0	0	4	4	5	32	1	38	101
% Bank 2	0.3	0.8	0.1	0.3	0.2	0.5	0.5	0.5	0	0	1	0.6	0.5	0.6	0.9	0.6	0.5

Start Time	Harding Boulevard Southbound				Douglas Boulevard Westbound				Harding Boulevard Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45	132	1	43	176	14	205	69	288	3	1	6	10	50	245	5	300	774
08:00	118	0	36	154	6	184	70	260	0	1	1	2	37	193	3	233	649
08:15	120	5	23	148	14	154	85	253	1	3	3	7	45	224	4	273	681
08:30	109	4	23	136	15	161	88	264	0	4	9	13	39	218	2	259	672
Total Volume	479	10	125	614	49	704	312	1065	4	9	19	32	171	880	14	1065	2776
% App. Total	78	1.6	20.4		4.6	66.1	29.3		12.5	28.1	59.4		16.1	82.6	1.3		
PHF	.907	.500	.727	.872	.817	.859	.886	.924	.333	.563	.528	.615	.855	.898	.700	.888	.897

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

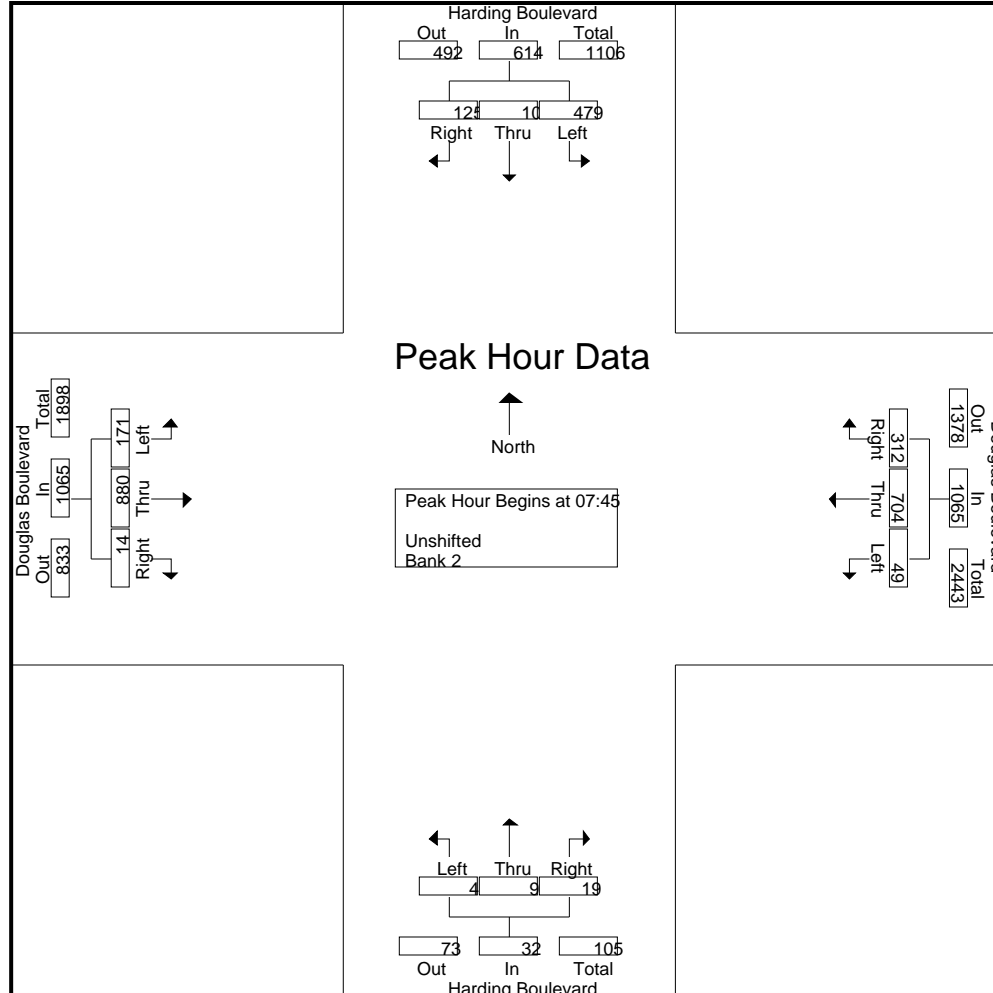
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-023 Harding-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-023 Harding-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

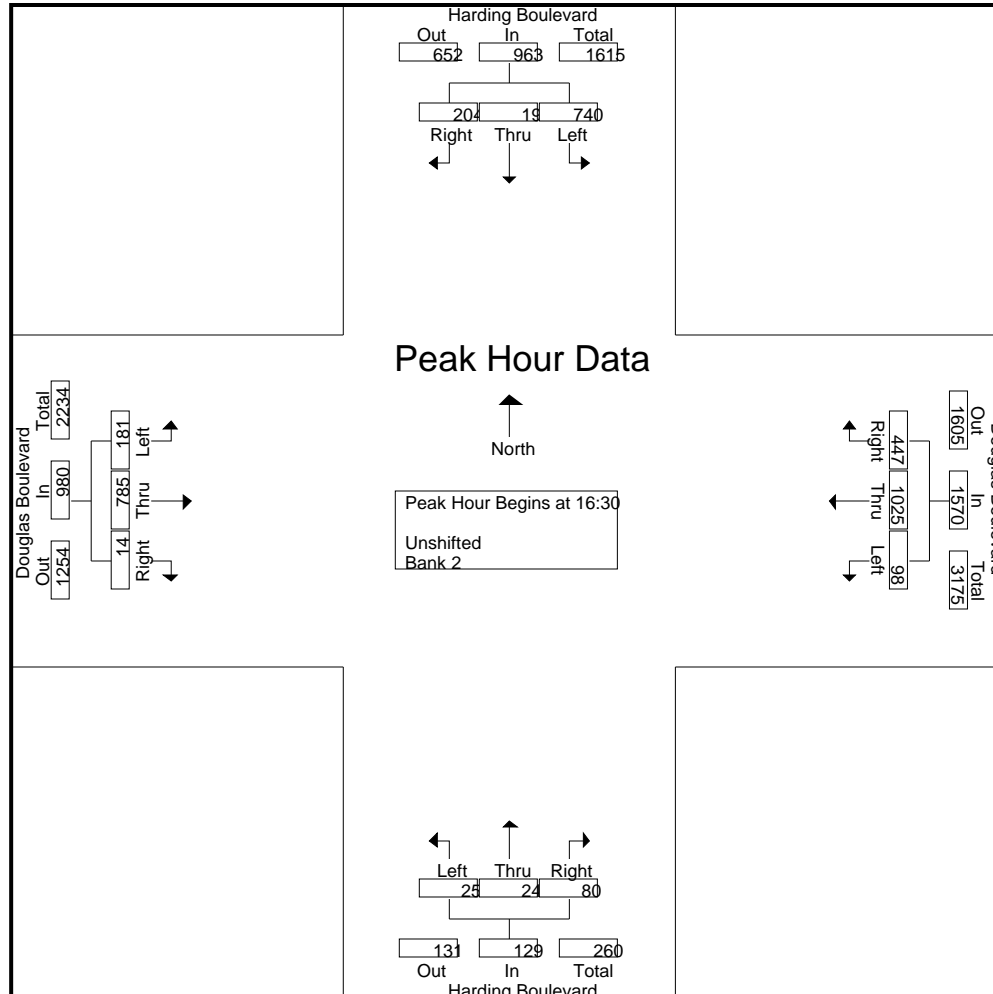
Start Time	Harding Boulevard Southbound				Douglas Boulevard Westbound				Harding Boulevard Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	162	3	41	206	19	267	109	395	3	5	11	19	51	187	9	247	867
16:45	163	9	52	224	31	243	128	402	12	7	25	44	43	187	3	233	903
17:00	201	1	55	257	22	241	95	358	5	10	32	47	44	212	1	257	919
17:15	214	6	56	276	26	274	115	415	5	2	12	19	43	199	1	243	953
Total Volume	740	19	204	963	98	1025	447	1570	25	24	80	129	181	785	14	980	3642
% App. Total	76.8	2	21.2		6.2	65.3	28.5		19.4	18.6	62		18.5	80.1	1.4		
PHF	.864	.528	.911	.872	.790	.935	.873	.946	.521	.600	.625	.686	.887	.926	.389	.953	.955

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-023 Harding-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-024 I80 WB-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Westbound Ramps Southbound					Douglas Blvd Westbound					Sunrise Blvd Flyover Ramp Northwestbound					I-80 Westbound Ramps Northbound					Douglas Blvd Eastbound					Int. Total
	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	
06:00	26	59	0	14	99	0	0	25	71	96	0	0	0	0	0	0	0	0	0	0	0	22	28	46	96	291
06:15	30	70	0	13	113	0	0	54	112	166	0	0	0	0	0	0	0	0	0	0	0	42	28	49	119	398
06:30	41	95	0	19	155	0	0	79	136	215	0	0	0	0	0	0	0	0	0	0	0	70	34	66	170	540
06:45	21	111	0	13	145	0	0	99	176	275	0	0	0	0	0	0	0	0	0	0	0	85	39	87	211	631
Total	118	335	0	59	512	0	0	257	495	752	0	0	0	0	0	0	0	0	0	0	0	219	129	248	596	1860
07:00	25	127	0	12	164	0	0	99	177	276	0	0	0	0	0	0	0	0	0	0	0	99	67	104	270	710
07:15	36	137	0	49	222	0	0	111	218	329	0	0	0	0	0	0	0	0	0	0	0	98	85	112	295	846
07:30	36	139	0	33	208	0	0	195	198	393	0	0	0	0	0	0	0	0	0	0	0	160	92	103	355	956
07:45	60	120	0	46	226	0	0	250	165	415	0	0	0	0	0	0	0	0	0	0	0	187	75	98	360	1001
Total	157	523	0	140	820	0	0	655	758	1413	0	0	0	0	0	0	0	0	0	0	0	544	319	417	1280	3513
08:00	47	125	0	36	208	0	0	182	193	375	0	0	0	0	0	0	0	0	0	0	0	139	80	105	324	907
08:15	74	133	0	45	252	0	0	202	202	404	0	0	0	0	0	0	0	0	0	0	0	187	78	96	361	1017
08:30	63	129	0	54	246	0	0	238	195	433	0	0	0	0	0	0	0	0	0	0	0	167	79	73	319	998
08:45	67	126	0	43	236	0	0	295	186	481	0	0	0	0	0	0	0	0	0	0	0	205	62	69	336	1053
Total	251	513	0	178	942	0	0	917	776	1693	0	0	0	0	0	0	0	0	0	0	0	698	299	343	1340	3975
09:00	50	114	0	40	204	0	0	193	176	369	0	0	0	0	0	0	0	0	0	0	0	145	75	78	298	871
09:15	73	135	0	39	247	0	0	202	156	358	0	0	0	0	0	0	0	0	0	0	0	166	67	73	306	911
09:30	57	137	0	40	234	0	0	186	182	368	0	0	0	0	0	0	0	0	0	0	0	127	48	67	242	844
09:45	81	116	0	47	244	0	0	232	150	382	0	0	0	0	0	0	0	0	0	0	0	163	46	56	265	891
Total	261	502	0	166	929	0	0	813	664	1477	0	0	0	0	0	0	0	0	0	0	0	601	236	274	1111	3517
15:00	71	123	0	50	244	0	0	332	237	569	0	0	0	0	0	0	0	0	0	0	0	239	80	101	420	1233
15:15	66	127	0	46	239	0	0	350	231	581	0	0	0	0	0	0	0	0	0	0	0	225	83	87	395	1215
15:30	69	110	0	45	224	0	0	329	266	595	0	0	0	0	0	0	0	0	0	0	0	196	58	96	350	1169
15:45	80	113	0	48	241	0	0	344	226	570	0	0	0	0	0	0	0	0	0	0	0	207	85	91	383	1194
Total	286	473	0	189	948	0	0	1355	960	2315	0	0	0	0	0	0	0	0	0	0	0	867	306	375	1548	4811
16:00	61	138	0	42	241	0	0	335	276	611	0	0	0	0	0	0	0	0	0	0	0	211	85	113	409	1261
16:15	71	120	0	57	248	0	0	323	261	584	0	0	0	0	0	0	0	0	0	0	0	190	86	103	379	1211

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

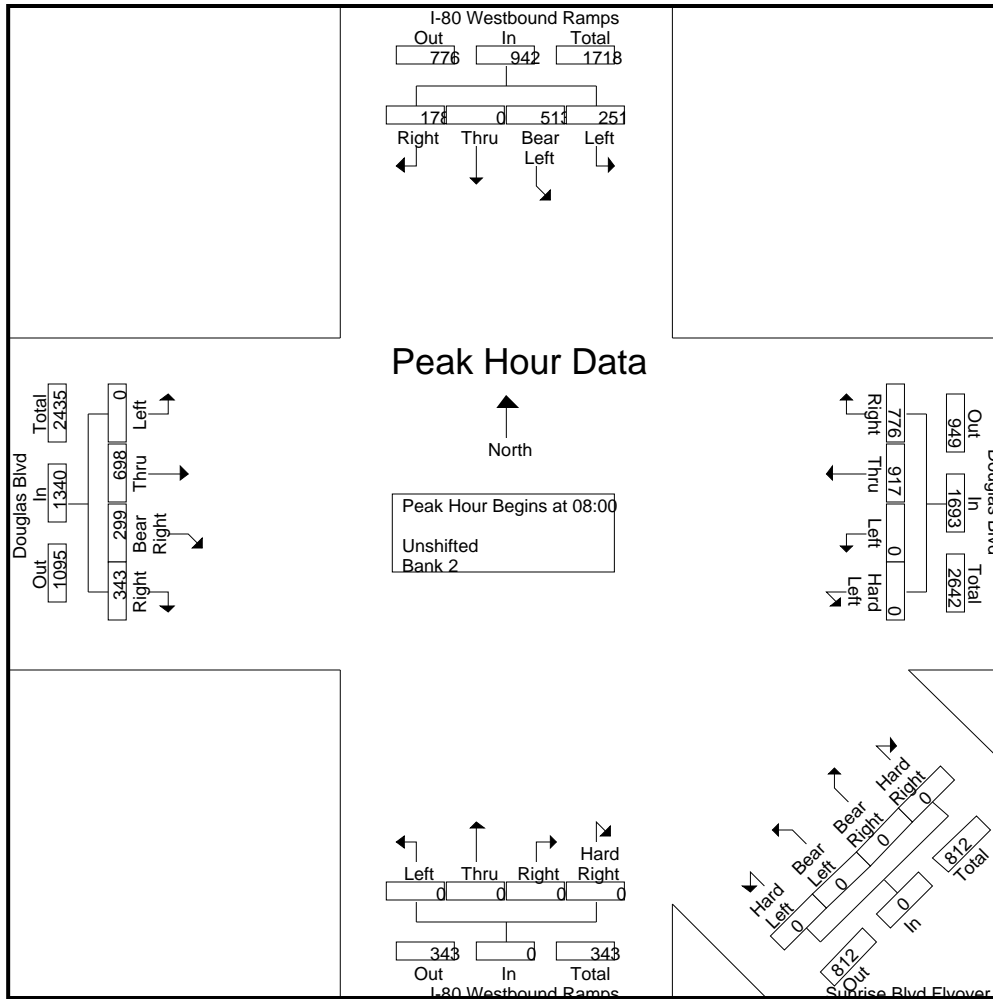
File Name : 12-7003-024 I80 WB-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Westbound Ramps Southbound					Douglas Blvd Westbound					Sunrise Blvd Flyover Ramp Northwestbound					I-80 Westbound Ramps Northbound					Douglas Blvd Eastbound					Int. Total
	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	
16:30	65	116	0	37	218	0	0	337	302	639	0	0	0	0	0	0	0	0	0	0	0	176	72	105	353	1210
16:45	53	113	0	42	208	0	0	372	269	641	0	0	0	0	0	0	0	0	0	0	0	195	84	108	387	1236
Total	250	487	0	178	915	0	0	1367	1108	2475	0	0	0	0	0	0	0	0	0	0	0	772	327	429	1528	4918
17:00	55	118	0	36	209	0	0	344	318	662	0	0	0	0	0	0	0	0	0	0	0	221	87	154	462	1333
17:15	76	129	0	42	247	0	0	354	294	648	0	0	0	0	0	0	0	0	0	0	0	178	92	147	417	1312
17:30	46	107	0	50	203	0	0	386	329	715	0	0	0	0	0	0	0	0	0	0	0	162	73	101	336	1254
17:45	60	109	0	43	212	0	0	277	250	527	0	0	0	0	0	0	0	0	0	0	0	174	54	91	319	1058
Total	237	463	0	171	871	0	0	1361	1191	2552	0	0	0	0	0	0	0	0	0	0	0	735	306	493	1534	4957
18:00	63	106	0	35	204	0	0	291	250	541	0	0	0	0	0	0	0	0	0	0	0	176	77	109	362	1107
18:15	56	123	0	33	212	0	0	335	202	537	0	0	0	0	0	0	0	0	0	0	0	144	67	74	285	1034
18:30	33	74	0	37	144	0	0	275	202	477	0	0	0	0	0	0	0	0	0	0	0	124	57	67	248	869
18:45	36	75	0	35	146	0	0	226	153	379	0	0	0	0	0	0	0	0	0	0	0	120	50	71	241	766
Total	188	378	0	140	706	0	0	1127	807	1934	0	0	0	0	0	0	0	0	0	0	0	564	251	321	1136	3776
Grand Total	1748	3674	0	1221	6643	0	0	7852	6759	14611	0	0	0	0	0	0	0	0	0	0	0	5000	2173	2900	10073	31327
Apprch %	26.3	55.3	0	18.4		0	0	53.7	46.3		0	0	0	0		0	0	0	0		0	49.6	21.6	28.8		
Total %	5.6	11.7	0	3.9	21.2	0	0	25.1	21.6	46.6	0	0	0	0	0	0	0	0	0	0	0	16	6.9	9.3	32.2	
Unshifted	1729	3647	0	1207	6583	0	0	7823	6713	14536	0	0	0	0	0	0	0	0	0	0	0	4975	2163	2883	10021	31140
% Unshifted	98.9	99.3	0	98.9	99.1	0	0	99.6	99.3	99.5	0	0	0	0	0	0	0	0	0	0	0	99.5	99.5	99.4	99.5	99.4
Bank 2	19	27	0	14	60	0	0	29	46	75	0	0	0	0	0	0	0	0	0	0	0	25	10	17	52	187
% Bank 2	1.1	0.7	0	1.1	0.9	0	0	0.4	0.7	0.5	0	0	0	0	0	0	0	0	0	0	0	0.5	0.5	0.6	0.5	0.6

Start Time	I-80 Westbound Ramps Southbound					Douglas Blvd Westbound					Sunrise Blvd Flyover Ramp Northwestbound					I-80 Westbound Ramps Northbound					Douglas Blvd Eastbound					Int. Total
	Left	Bear Left	Thru	Right	App. Total	Hard Left	Left	Thru	Right	App. Total	Hard Left	Bear Left	Bear Right	Hard Right	App. Total	Left	Thru	Right	Hard Right	App. Total	Left	Thru	Bear Right	Right	App. Total	
08:00	47	125	0	36	208	0	0	182	193	375	0	0	0	0	0	0	0	0	0	0	0	139	80	105	324	907
08:15	74	133	0	45	252	0	0	202	202	404	0	0	0	0	0	0	0	0	0	0	0	187	78	96	361	1017
08:30	63	129	0	54	246	0	0	238	195	433	0	0	0	0	0	0	0	0	0	0	0	167	79	73	319	998
08:45	67	126	0	43	236	0	0	295	186	481	0	0	0	0	0	0	0	0	0	0	0	205	62	69	336	1053
Total Volume	251	513	0	178	942	0	0	917	776	1693	0	0	0	0	0	0	0	0	0	0	0	698	299	343	1340	3975
% App. Total	26.6	54.5	0	18.9		0	0	54.2	45.8		0	0	0	0		0	0	0	0		0	52.1	22.3	25.6		
PHF	.848	.964	.000	.824	.935	.000	.000	.777	.960	.880	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.851	.934	.817	.928	.944

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 08:00



Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 16:45

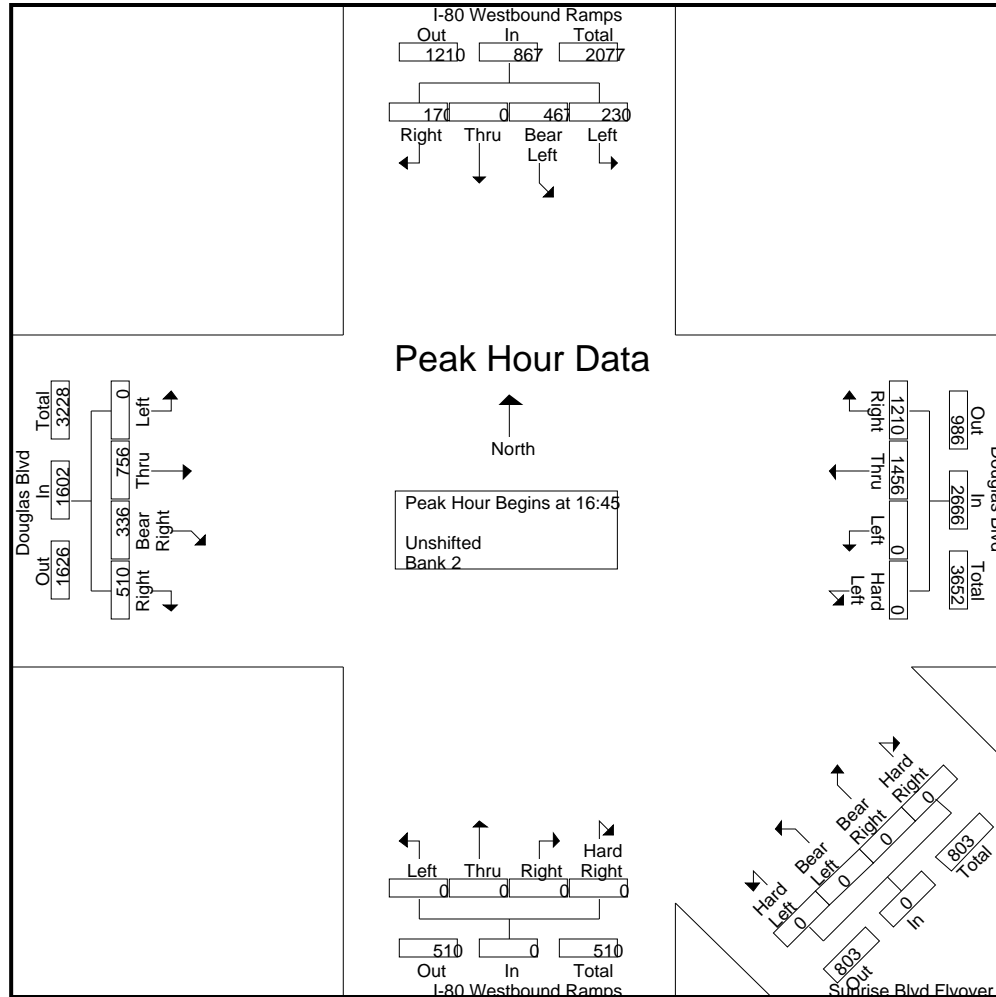
16:45	53	113	0	42	208	0	0	372	269	641	0	0	0	0	0	0	0	0	0	0	195	84	108	387	1236
17:00	55	118	0	36	209	0	0	344	318	662	0	0	0	0	0	0	0	0	0	0	221	87	154	462	1333
17:15	76	129	0	42	247	0	0	354	294	648	0	0	0	0	0	0	0	0	0	0	178	92	147	417	1312
17:30	46	107	0	50	203	0	0	386	329	715	0	0	0	0	0	0	0	0	0	0	162	73	101	336	1254
Total Volume	230	467	0	170	867	0	0	1456	1210	2666	0	0	0	0	0	0	0	0	0	0	756	336	510	1602	5135
% App. Total	26.5	53.9	0	19.6		0	0	54.6	45.4		0	0	0	0	0	0	0	0	0	0	47.2	21	31.8		
PHF	.757	.905	.000	.850	.878	.000	.000	.943	.919	.932	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.855	.913	.828	.867	.963

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-024 I80 WB-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-025 I80 EB-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Eastbound Ramps Southbound				Douglas Boulevard Westbound				I-80 Eastbound Ramps Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	0	11	11	0	95	11	106	0	0	67	67	13	32	0	45	229
06:15	0	0	18	18	0	172	7	179	0	0	111	111	11	43	0	54	362
06:30	0	0	30	30	0	193	16	209	0	0	149	149	16	56	0	72	460
06:45	0	0	31	31	0	217	16	233	0	0	174	174	14	77	0	91	529
Total	0	0	90	90	0	677	50	727	0	0	501	501	54	208	0	262	1580
07:00	0	0	33	33	0	267	20	287	0	0	180	180	19	112	0	131	631
07:15	0	0	44	44	0	282	32	314	0	0	276	276	18	112	0	130	764
07:30	0	0	68	68	0	287	33	320	0	0	273	273	42	158	0	200	861
07:45	0	0	107	107	0	317	40	357	0	0	414	414	54	211	0	265	1143
Total	0	0	252	252	0	1153	125	1278	0	0	1143	1143	133	593	0	726	3399
08:00	0	0	84	84	0	339	35	374	0	0	363	363	41	165	0	206	1027
08:15	0	0	76	76	0	313	46	359	0	0	380	380	31	226	0	257	1072
08:30	0	0	87	87	0	301	54	355	0	0	322	322	30	207	0	237	1001
08:45	0	0	86	86	0	344	50	394	0	0	335	335	35	230	0	265	1080
Total	0	0	333	333	0	1297	185	1482	0	0	1400	1400	137	828	0	965	4180
09:00	0	0	68	68	0	303	61	364	0	0	262	262	35	182	0	217	911
09:15	0	0	64	64	0	345	53	398	0	0	263	263	31	211	0	242	967
09:30	0	0	59	59	0	336	66	402	0	0	219	219	33	171	0	204	884
09:45	0	0	74	74	0	333	58	391	0	0	265	265	35	212	0	247	977
Total	0	0	265	265	0	1317	238	1555	0	0	1009	1009	134	776	0	910	3739
15:00	0	0	91	91	0	507	104	611	0	0	265	265	57	246	0	303	1270
15:15	0	0	80	80	0	494	97	591	0	0	279	279	61	246	0	307	1257
15:30	0	0	101	101	0	530	85	615	0	0	275	275	37	235	0	272	1263
15:45	0	0	95	95	0	466	101	567	0	0	313	313	56	234	1	291	1266
Total	0	0	367	367	0	1997	387	2384	0	0	1132	1132	211	961	1	1173	5056
16:00	0	0	85	85	0	526	94	620	0	0	254	254	53	235	0	288	1247
16:15	0	0	92	92	0	503	81	584	0	0	288	288	46	223	0	269	1233
16:30	0	0	87	87	0	568	100	668	0	0	316	316	42	200	0	242	1313

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-025 I80 EB-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Eastbound Ramps Southbound				Douglas Boulevard Westbound				I-80 Eastbound Ramps Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	0	112	112	0	525	76	601	0	0	309	309	44	184	1	229	1251
Total	0	0	376	376	0	2122	351	2473	0	0	1167	1167	185	842	1	1028	5044
17:00	0	0	104	104	0	569	91	660	0	0	245	245	54	220	0	274	1283
17:15	0	0	101	101	0	563	71	634	0	0	288	288	43	226	0	269	1292
17:30	0	0	104	104	0	593	97	690	0	0	264	264	33	171	0	204	1262
17:45	0	0	87	87	0	435	95	530	0	0	325	325	35	183	0	218	1160
Total	0	0	396	396	0	2160	354	2514	0	0	1122	1122	165	800	0	965	4997
18:00	0	0	77	77	0	462	83	545	0	0	301	301	45	166	1	212	1135
18:15	0	0	141	141	0	380	83	463	0	0	285	285	24	172	0	196	1085
18:30	0	0	109	109	0	361	63	424	0	0	244	244	33	132	0	165	942
18:45	0	0	53	53	0	324	45	369	0	0	199	199	30	105	0	135	756
Total	0	0	380	380	0	1527	274	1801	0	0	1029	1029	132	575	1	708	3918
Grand Total	0	0	2459	2459	0	12250	1964	14214	0	0	8503	8503	1151	5583	3	6737	31913
Apprch %	0	0	100		0	86.2	13.8		0	0	100		17.1	82.9	0		
Total %	0	0	7.7	7.7	0	38.4	6.2	44.5	0	0	26.6	26.6	3.6	17.5	0	21.1	
Unshifted	0	0	2449	2449	0	12192	1943	14135	0	0	8460	8460	1147	5539	0	6686	31730
% Unshifted	0	0	99.6	99.6	0	99.5	98.9	99.4	0	0	99.5	99.5	99.7	99.2	0	99.2	99.4
Bank 2	0	0	10	10	0	58	21	79	0	0	43	43	4	44	3	51	183
% Bank 2	0	0	0.4	0.4	0	0.5	1.1	0.6	0	0	0.5	0.5	0.3	0.8	100	0.8	0.6

Start Time	I-80 Eastbound Ramps Southbound				Douglas Boulevard Westbound				I-80 Eastbound Ramps Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:45	0	0	107	107	0	317	40	357	0	0	414	414	54	211	0	265	1143
08:00	0	0	84	84	0	339	35	374	0	0	363	363	41	165	0	206	1027
08:15	0	0	76	76	0	313	46	359	0	0	380	380	31	226	0	257	1072
08:30	0	0	87	87	0	301	54	355	0	0	322	322	30	207	0	237	1001
Total Volume	0	0	354	354	0	1270	175	1445	0	0	1479	1479	156	809	0	965	4243
% App. Total	0	0	100		0	87.9	12.1		0	0	100		16.2	83.8	0		
PHF	.000	.000	.827	.827	.000	.937	.810	.966	.000	.000	.893	.893	.722	.895	.000	.910	.928

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

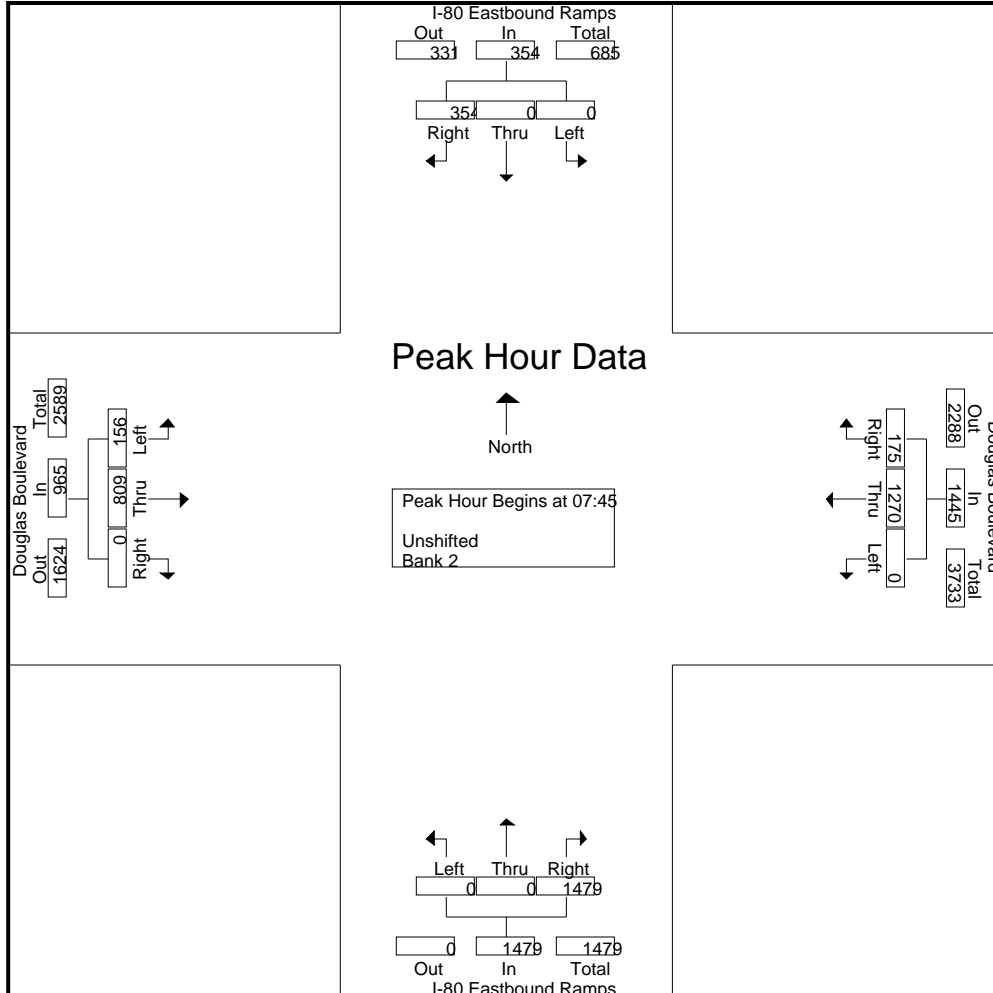
Peak Hour for Entire Intersection Begins at 07:45

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-025 I80 EB-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-025 I80 EB-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

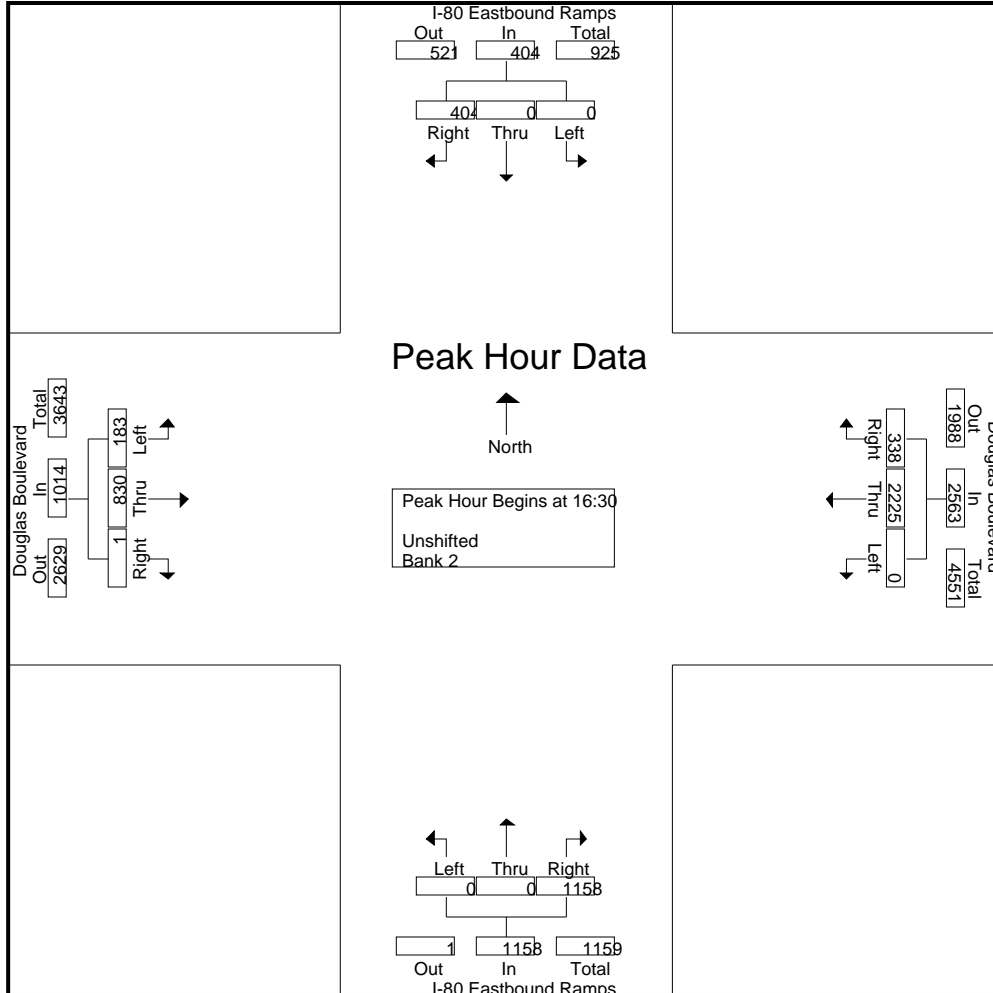
Start Time	I-80 Eastbound Ramps Southbound				Douglas Boulevard Westbound				I-80 Eastbound Ramps Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	0	0	87	87	0	568	100	668	0	0	316	316	42	200	0	242	1313
16:45	0	0	112	112	0	525	76	601	0	0	309	309	44	184	1	229	1251
17:00	0	0	104	104	0	569	91	660	0	0	245	245	54	220	0	274	1283
17:15	0	0	101	101	0	563	71	634	0	0	288	288	43	226	0	269	1292
Total Volume	0	0	404	404	0	2225	338	2563	0	0	1158	1158	183	830	1	1014	5139
% App. Total	0	0	100		0	86.8	13.2		0	0	100		18	81.9	0.1		
PHF	.000	.000	.902	.902	.000	.978	.845	.959	.000	.000	.916	.916	.847	.918	.250	.925	.978

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-025 I80 EB-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-026 Sunrise-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Sunrise Avenue Southbound				Douglas Boulevard Westbound				Sunrise Avenue Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	5	16	7	28	4	90	0	94	6	15	4	25	14	74	9	97	244
06:15	2	10	7	19	8	157	4	169	17	14	1	32	21	121	7	149	369
06:30	2	26	18	46	13	157	6	176	23	32	3	58	40	133	13	186	466
06:45	3	22	19	44	17	192	3	212	21	29	10	60	64	181	12	257	573
Total	12	74	51	137	42	596	13	651	67	90	18	175	139	509	41	689	1652
07:00	6	49	30	85	8	231	7	246	29	39	13	81	57	201	22	280	692
07:15	5	47	27	79	21	256	4	281	38	51	12	101	68	289	38	395	856
07:30	4	70	25	99	22	260	13	295	40	68	24	132	57	321	34	412	938
07:45	8	46	20	74	35	325	12	372	37	79	44	160	96	484	51	631	1237
Total	23	212	102	337	86	1072	36	1194	144	237	93	474	278	1295	145	1718	3723
08:00	13	53	41	107	29	287	16	332	44	88	28	160	105	389	48	542	1141
08:15	16	55	32	103	36	302	14	352	38	60	36	134	75	463	51	589	1178
08:30	21	57	48	126	32	245	19	296	54	75	40	169	85	389	55	529	1120
08:45	14	57	56	127	46	278	24	348	70	81	48	199	94	423	61	578	1252
Total	64	222	177	463	143	1112	73	1328	206	304	152	662	359	1664	215	2238	4691
09:00	21	70	54	145	43	254	28	325	51	86	44	181	72	324	43	439	1090
09:15	25	48	66	139	52	286	33	371	56	74	48	178	76	310	69	455	1143
09:30	21	85	70	176	36	275	28	339	51	80	47	178	82	286	39	407	1100
09:45	13	70	65	148	50	293	32	375	49	91	55	195	87	345	39	471	1189
Total	80	273	255	608	181	1108	121	1410	207	331	194	732	317	1265	190	1772	4522
15:00	25	87	111	223	74	388	27	489	98	122	55	275	87	359	35	481	1468
15:15	25	81	109	215	78	419	28	525	83	101	56	240	94	413	39	546	1526
15:30	26	87	131	244	58	375	37	470	87	133	59	279	84	357	41	482	1475
15:45	27	81	84	192	78	417	33	528	78	98	51	227	109	427	31	567	1514
Total	103	336	435	874	288	1599	125	2012	346	454	221	1021	374	1556	146	2076	5983
16:00	29	121	135	285	66	389	38	493	89	117	50	256	83	345	41	469	1503
16:15	32	100	108	240	64	438	29	531	58	104	39	201	101	399	27	527	1499
16:30	25	141	146	312	49	413	31	493	84	108	42	234	106	348	21	475	1514

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2
7-10am from 2-14-12

File Name : 12-7003-026 Sunrise-Douglas
Site Code : 00000000
Start Date : 1/31/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Sunrise Avenue Southbound				Douglas Boulevard Westbound				Sunrise Avenue Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	28	110	110	248	69	425	20	514	81	113	45	239	111	379	28	518	1519
Total	114	472	499	1085	248	1665	118	2031	312	442	176	930	401	1471	117	1989	6035
17:00	32	115	157	304	76	416	30	522	70	85	49	204	92	320	30	442	1472
17:15	25	117	116	258	70	465	29	564	75	94	39	208	89	395	42	526	1556
17:30	19	109	145	273	66	429	35	530	86	106	51	243	74	306	26	406	1452
17:45	22	96	75	193	63	401	27	491	66	86	45	197	105	381	41	527	1408
Total	98	437	493	1028	275	1711	121	2107	297	371	184	852	360	1402	139	1901	5888
18:00	30	85	110	225	61	335	29	425	86	111	50	247	64	321	42	427	1324
18:15	28	68	91	187	55	330	20	405	53	81	44	178	89	359	40	488	1258
18:30	20	72	79	171	51	277	31	359	62	71	31	164	68	256	24	348	1042
18:45	19	58	50	127	45	261	20	326	59	48	26	133	63	245	26	334	920
Total	97	283	330	710	212	1203	100	1515	260	311	151	722	284	1181	132	1597	4544
Grand Total	591	2309	2342	5242	1475	10066	707	12248	1839	2540	1189	5568	2512	10343	1125	13980	37038
Apprch %	11.3	44	44.7		12	82.2	5.8		33	45.6	21.4		18	74	8		
Total %	1.6	6.2	6.3	14.2	4	27.2	1.9	33.1	5	6.9	3.2	15	6.8	27.9	3	37.7	
Unshifted	586	2289	2319	5194	1469	10024	701	12194	1828	2527	1178	5533	2487	10277	1115	13879	36800
% Unshifted	99.2	99.1	99	99.1	99.6	99.6	99.2	99.6	99.4	99.5	99.1	99.4	99	99.4	99.1	99.3	99.4
Bank 2	5	20	23	48	6	42	6	54	11	13	11	35	25	66	10	101	238
% Bank 2	0.8	0.9	1	0.9	0.4	0.4	0.8	0.4	0.6	0.5	0.9	0.6	1	0.6	0.9	0.7	0.6

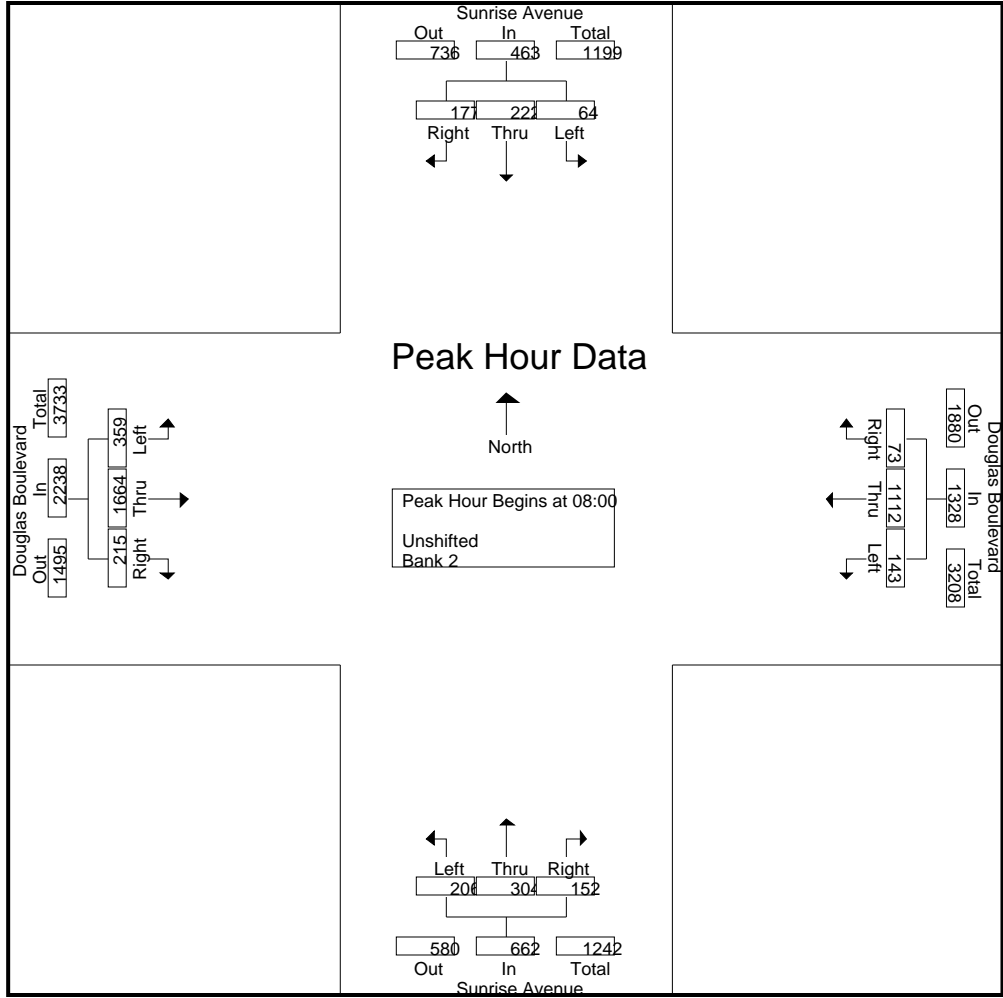
Start Time	Sunrise Avenue Southbound				Douglas Boulevard Westbound				Sunrise Avenue Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00																	
08:00	13	53	41	107	29	287	16	332	44	88	28	160	105	389	48	542	1141
08:15	16	55	32	103	36	302	14	352	38	60	36	134	75	463	51	589	1178
08:30	21	57	48	126	32	245	19	296	54	75	40	169	85	389	55	529	1120
08:45	14	57	56	127	46	278	24	348	70	81	48	199	94	423	61	578	1252
Total Volume	64	222	177	463	143	1112	73	1328	206	304	152	662	359	1664	215	2238	4691
% App. Total	13.8	47.9	38.2		10.8	83.7	5.5		31.1	45.9	23		16	74.4	9.6		
PHF	.762	.974	.790	.911	.777	.921	.760	.943	.736	.864	.792	.832	.855	.898	.881	.950	.937

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-026 Sunrise-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-026 Sunrise-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
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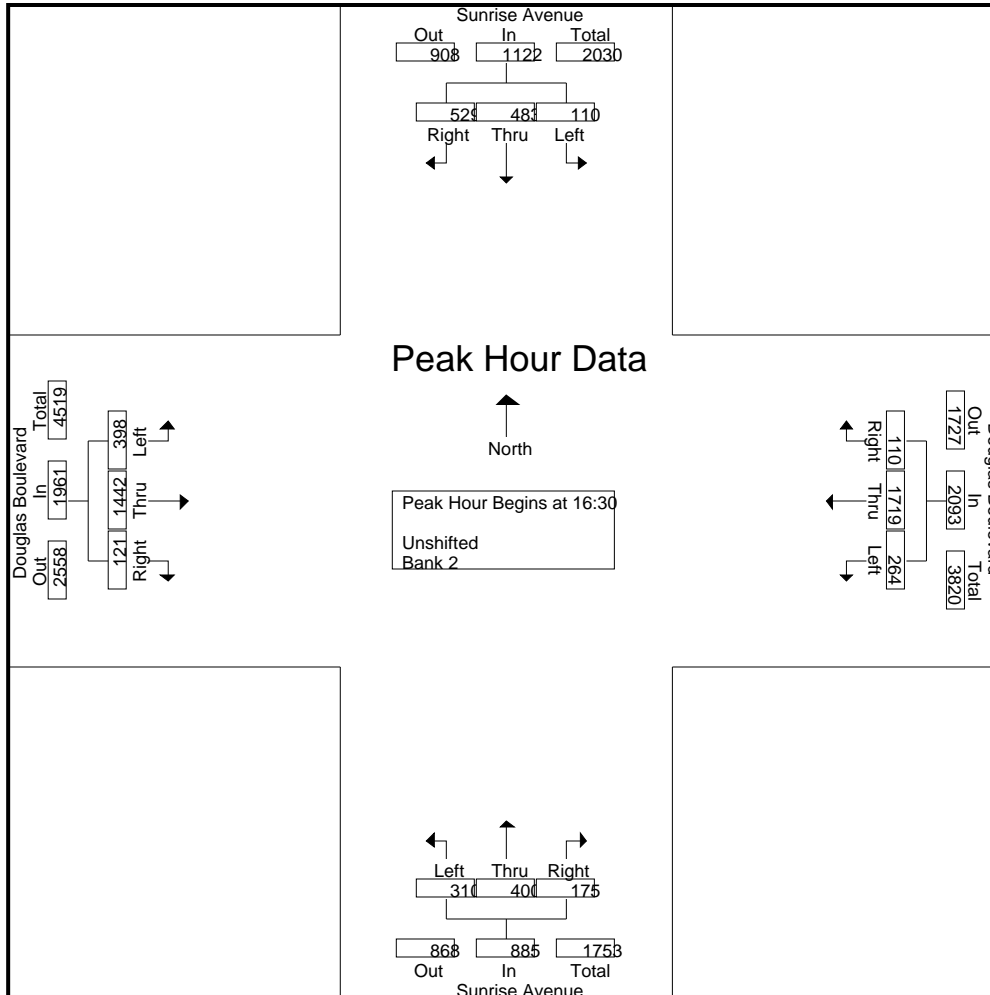
Start Time	Sunrise Avenue Southbound				Douglas Boulevard Westbound				Sunrise Avenue Northbound				Douglas Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	25	141	146	312	49	413	31	493	84	108	42	234	106	348	21	475	1514
16:45	28	110	110	248	69	425	20	514	81	113	45	239	111	379	28	518	1519
17:00	32	115	157	304	76	416	30	522	70	85	49	204	92	320	30	442	1472
17:15	25	117	116	258	70	465	29	564	75	94	39	208	89	395	42	526	1556
Total Volume	110	483	529	1122	264	1719	110	2093	310	400	175	885	398	1442	121	1961	6061
% App. Total	9.8	43	47.1		12.6	82.1	5.3		35	45.2	19.8		20.3	73.5	6.2		
PHF	.859	.856	.842	.899	.868	.924	.887	.928	.923	.885	.893	.926	.896	.913	.720	.932	.974

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-026 Sunrise-Douglas
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-027 Pacific-Woodside
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Pacific Street Southbound				Woodside Drive Westbound				Pacific Street Northbound				Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	1	101	0	102	16	0	2	18	0	35	1	36	0	0	0	0	156
06:15	2	133	0	135	15	0	1	16	0	47	4	51	0	0	0	0	202
06:30	4	193	0	197	28	0	9	37	0	55	2	57	0	0	0	0	291
06:45	5	212	0	217	23	0	3	26	0	65	2	67	0	0	0	0	310
Total	12	639	0	651	82	0	15	97	0	202	9	211	0	0	0	0	959
07:00	5	217	0	222	22	0	9	31	0	63	4	67	0	0	0	0	320
07:15	2	242	0	244	35	0	8	43	0	97	5	102	0	0	0	0	389
07:30	5	238	0	243	39	0	15	54	0	94	11	105	0	0	0	0	402
07:45	5	284	0	289	24	0	9	33	0	128	7	135	0	0	0	0	457
Total	17	981	0	998	120	0	41	161	0	382	27	409	0	0	0	0	1568
08:00	7	242	0	249	19	0	19	38	0	113	14	127	0	0	0	0	414
08:15	10	272	0	282	30	0	11	41	0	103	5	108	0	0	0	0	431
08:30	4	238	0	242	24	0	3	27	0	97	13	110	0	0	0	0	379
08:45	6	183	0	189	14	0	4	18	0	140	10	150	0	0	0	0	357
Total	27	935	0	962	87	0	37	124	0	453	42	495	0	0	0	0	1581
09:00	1	189	0	190	14	0	4	18	0	116	10	126	0	0	0	0	334
09:15	2	158	0	160	13	0	4	17	0	102	12	114	0	0	0	0	291
09:30	5	172	0	177	20	0	11	31	0	97	9	106	0	0	0	0	314
09:45	4	167	0	171	17	0	4	21	0	137	11	148	0	0	0	0	340
Total	12	686	0	698	64	0	23	87	0	452	42	494	0	0	0	0	1279
15:00	20	180	0	200	14	0	7	21	0	226	15	241	0	0	0	0	462
15:15	18	208	0	226	16	0	9	25	0	240	25	265	0	0	0	0	516
15:30	9	203	0	212	15	0	12	27	0	226	24	250	0	0	0	0	489
15:45	5	205	0	210	11	0	10	21	0	233	33	266	0	0	0	0	497
Total	52	796	0	848	56	0	38	94	0	925	97	1022	0	0	0	0	1964
16:00	12	181	0	193	11	0	4	15	0	265	21	286	0	0	0	0	494
16:15	12	223	0	235	14	0	6	20	0	257	27	284	0	0	0	0	539
16:30	10	197	0	207	12	0	6	18	0	267	27	294	0	0	0	0	519

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-027 Pacific-Woodside
Site Code : 00000000
Start Date : 2/9/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Pacific Street Southbound				Woodside Drive Westbound				Pacific Street Northbound				Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	8	199	0	207	11	0	9	20	0	259	31	290	0	0	0	0	517
Total	42	800	0	842	48	0	25	73	0	1048	106	1154	0	0	0	0	2069
17:00	12	219	0	231	25	0	6	31	0	304	27	331	0	0	0	0	593
17:15	8	207	0	215	13	0	7	20	0	374	39	413	0	0	0	0	648
17:30	13	196	0	209	18	0	14	32	0	304	29	333	0	0	0	0	574
17:45	7	179	0	186	13	0	12	25	0	299	24	323	0	0	0	0	534
Total	40	801	0	841	69	0	39	108	0	1281	119	1400	0	0	0	0	2349
18:00	10	187	0	197	18	0	10	28	0	254	23	277	0	0	0	0	502
18:15	8	153	0	161	18	0	8	26	0	255	29	284	0	0	0	0	471
18:30	7	142	0	149	13	0	5	18	0	184	18	202	0	0	0	0	369
18:45	13	103	0	116	16	0	7	23	0	155	16	171	0	0	0	0	310
Total	38	585	0	623	65	0	30	95	0	848	86	934	0	0	0	0	1652
Grand Total	240	6223	0	6463	591	0	248	839	0	5591	528	6119	0	0	0	0	13421
Apprch %	3.7	96.3	0		70.4	0	29.6		0	91.4	8.6		0	0	0		
Total %	1.8	46.4	0	48.2	4.4	0	1.8	6.3	0	41.7	3.9	45.6	0	0	0	0	
Unshifted	231	6189	0	6420	582	0	245	827	0	5534	513	6047	0	0	0	0	13294
% Unshifted	96.2	99.5	0	99.3	98.5	0	98.8	98.6	0	99	97.2	98.8	0	0	0	0	99.1
Bank 2	9	34	0	43	9	0	3	12	0	57	15	72	0	0	0	0	127
% Bank 2	3.8	0.5	0	0.7	1.5	0	1.2	1.4	0	1	2.8	1.2	0	0	0	0	0.9

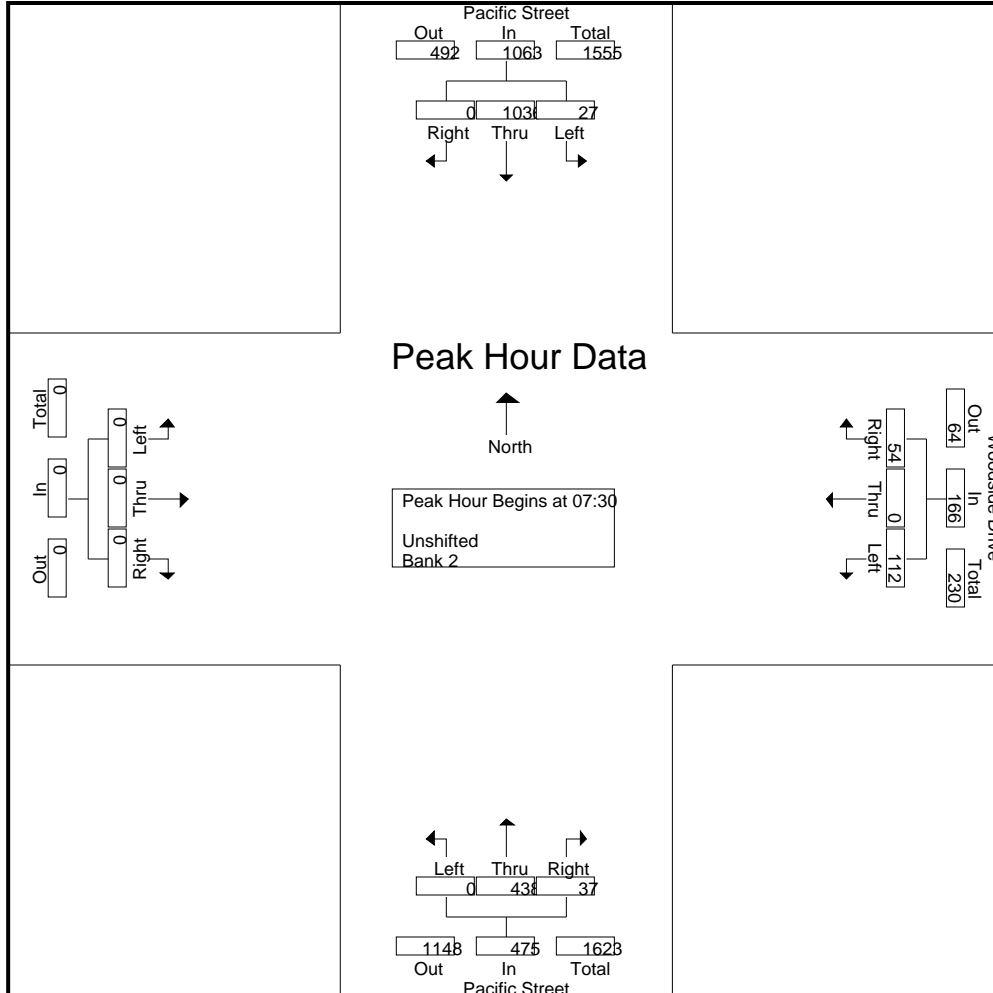
Start Time	Pacific Street Southbound				Woodside Drive Westbound				Pacific Street Northbound				Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	5	238	0	243	39	0	15	54	0	94	11	105	0	0	0	0	402
07:45	5	284	0	289	24	0	9	33	0	128	7	135	0	0	0	0	457
08:00	7	242	0	249	19	0	19	38	0	113	14	127	0	0	0	0	414
08:15	10	272	0	282	30	0	11	41	0	103	5	108	0	0	0	0	431
Total Volume	27	1036	0	1063	112	0	54	166	0	438	37	475	0	0	0	0	1704
% App. Total	2.5	97.5	0		67.5	0	32.5		0	92.2	7.8		0	0	0		
PHF	.675	.912	.000	.920	.718	.000	.711	.769	.000	.855	.661	.880	.000	.000	.000	.000	.932

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-027 Pacific-Woodside
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-027 Pacific-Woodside
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 4

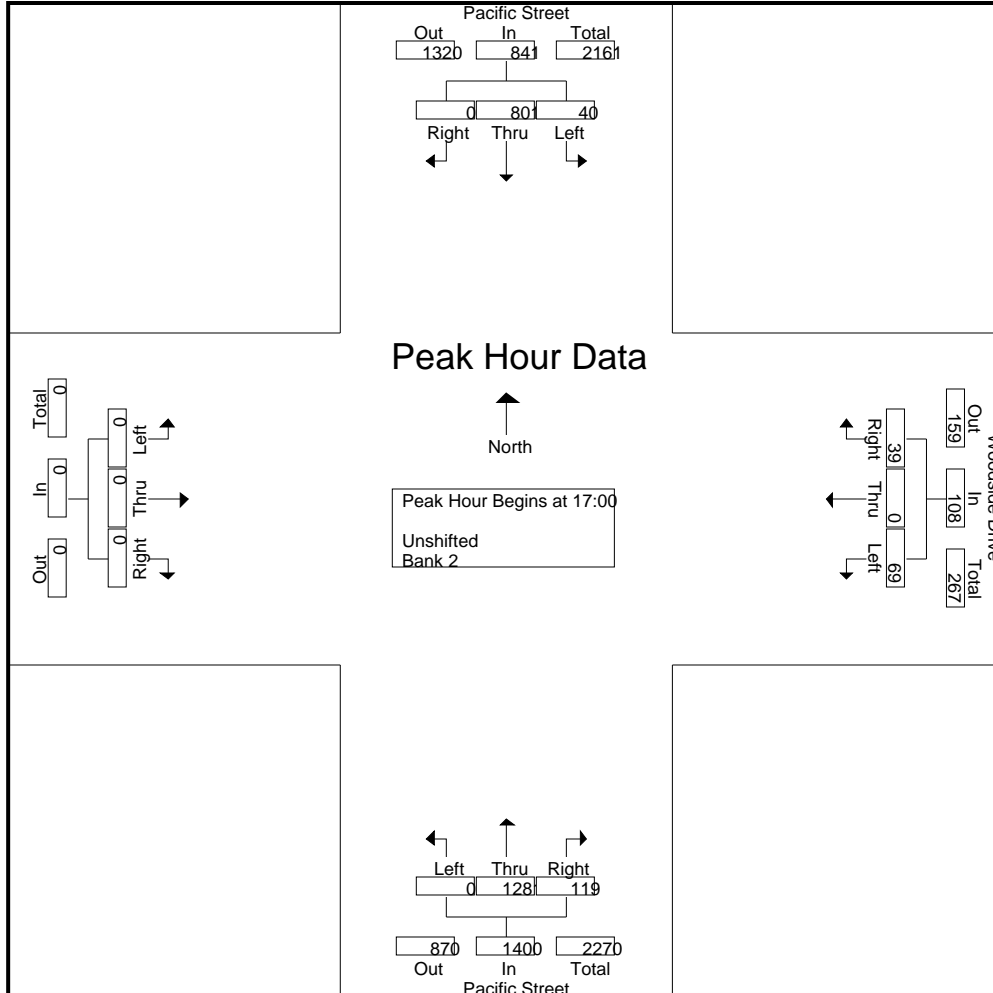
Start Time	Pacific Street Southbound				Woodside Drive Westbound				Pacific Street Northbound				Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 17:00																	
17:00	12	219	0	231	25	0	6	31	0	304	27	331	0	0	0	0	593
17:15	8	207	0	215	13	0	7	20	0	374	39	413	0	0	0	0	648
17:30	13	196	0	209	18	0	14	32	0	304	29	333	0	0	0	0	574
17:45	7	179	0	186	13	0	12	25	0	299	24	323	0	0	0	0	534
Total Volume	40	801	0	841	69	0	39	108	0	1281	119	1400	0	0	0	0	2349
% App. Total	4.8	95.2	0		63.9	0	36.1		0	91.5	8.5		0	0	0		
PHF	.769	.914	.000	.910	.690	.000	.696	.844	.000	.856	.763	.847	.000	.000	.000	.000	.906

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-027 Pacific-Woodside
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-028 Pacific-Sunset
Site Code : 00000000
Start Date : 2/9/2012
Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Pacific Street Southbound				Sunset Boulevard Westbound				Pacific Street Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	2	23	6	31	1	1	3	5	11	24	1	36	25	5	74	104	176
06:15	7	29	14	50	2	6	1	9	13	26	0	39	22	4	104	130	228
06:30	2	45	16	63	4	7	1	12	24	39	0	63	42	2	141	185	323
06:45	3	77	38	118	3	7	9	19	25	36	0	61	57	7	144	208	406
Total	14	174	74	262	10	21	14	45	73	125	1	199	146	18	463	627	1133
07:00	2	65	26	93	5	10	8	23	35	35	0	70	67	8	155	230	416
07:15	6	63	50	119	7	14	15	36	25	69	0	94	92	9	170	271	520
07:30	8	70	54	132	1	15	17	33	37	69	2	108	148	6	175	329	602
07:45	9	89	67	165	5	13	21	39	48	82	1	131	155	11	192	358	693
Total	25	287	197	509	18	52	61	131	145	255	3	403	462	34	692	1188	2231
08:00	13	78	76	167	5	18	30	53	40	74	3	117	115	8	169	292	629
08:15	19	98	76	193	8	14	20	42	38	79	1	118	131	12	169	312	665
08:30	13	98	74	185	7	16	14	37	38	50	3	91	102	11	140	253	566
08:45	10	65	86	161	7	14	9	30	69	75	2	146	96	6	112	214	551
Total	55	339	312	706	27	62	73	162	185	278	9	472	444	37	590	1071	2411
09:00	7	78	89	174	5	6	11	22	42	69	2	113	99	10	112	221	530
09:15	16	59	70	145	9	13	12	34	47	56	2	105	97	9	96	202	486
09:30	8	80	70	158	9	18	7	34	40	65	4	109	77	14	98	189	490
09:45	11	56	75	142	5	16	14	35	65	68	5	138	96	13	104	213	528
Total	42	273	304	619	28	53	44	125	194	258	13	465	369	46	410	825	2034
15:00	25	83	114	222	6	30	14	50	124	108	7	239	121	24	109	254	765
15:15	20	115	142	277	14	25	21	60	137	100	7	244	134	34	94	262	843
15:30	20	101	139	260	14	27	17	58	120	82	4	206	128	27	86	241	765
15:45	17	109	104	230	13	26	22	61	140	119	1	260	122	21	93	236	787
Total	82	408	499	989	47	108	74	229	521	409	19	949	505	106	382	993	3160
16:00	11	112	135	258	7	28	16	51	142	111	5	258	109	21	88	218	785
16:15	12	112	132	256	17	29	17	63	143	117	7	267	128	23	87	238	824
16:30	14	116	126	256	9	15	14	38	171	104	4	279	115	27	80	222	795

All Traffic Data

(916) 771-8700

Placer County
Pedestrians and Bicycles on Bank 1
Heavy Trucks on Bank 2

File Name : 12-7003-028 Pacific-Sunset
Site Code : 00000000
Start Date : 2/9/2012
Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Pacific Street Southbound				Sunset Boulevard Westbound				Pacific Street Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	19	89	141	249	20	33	25	78	154	114	4	272	121	21	96	238	837
Total	56	429	534	1019	53	105	72	230	610	446	20	1076	473	92	351	916	3241
17:00	4	119	174	297	9	23	20	52	172	112	2	286	126	21	97	244	879
17:15	23	101	163	287	9	23	14	46	193	116	8	317	111	24	106	241	891
17:30	28	98	141	267	8	32	21	61	219	114	9	342	124	19	103	246	916
17:45	16	95	145	256	10	33	12	55	213	92	4	309	104	21	91	216	836
Total	71	413	623	1107	36	111	67	214	797	434	23	1254	465	85	397	947	3522
18:00	25	57	125	207	18	32	14	64	158	91	4	253	109	26	104	239	763
18:15	18	60	121	199	6	26	15	47	191	80	6	277	87	8	93	188	711
18:30	14	61	96	171	10	15	12	37	107	75	7	189	96	15	66	177	574
18:45	12	51	85	148	4	16	11	31	79	58	6	143	63	10	56	129	451
Total	69	229	427	725	38	89	52	179	535	304	23	862	355	59	319	733	2499
Grand Total	414	2552	2970	5936	257	601	457	1315	3060	2509	111	5680	3219	477	3604	7300	20231
Apprch %	7	43	50		19.5	45.7	34.8		53.9	44.2	2		44.1	6.5	49.4		
Total %	2	12.6	14.7	29.3	1.3	3	2.3	6.5	15.1	12.4	0.5	28.1	15.9	2.4	17.8	36.1	
Unshifted	414	2527	2948	5889	256	599	455	1310	3051	2476	110	5637	3198	476	3595	7269	20105
% Unshifted	100	99	99.3	99.2	99.6	99.7	99.6	99.6	99.7	98.7	99.1	99.2	99.3	99.8	99.8	99.6	99.4
Bank 2	0	25	22	47	1	2	2	5	9	33	1	43	21	1	9	31	126
% Bank 2	0	1	0.7	0.8	0.4	0.3	0.4	0.4	0.3	1.3	0.9	0.8	0.7	0.2	0.2	0.4	0.6

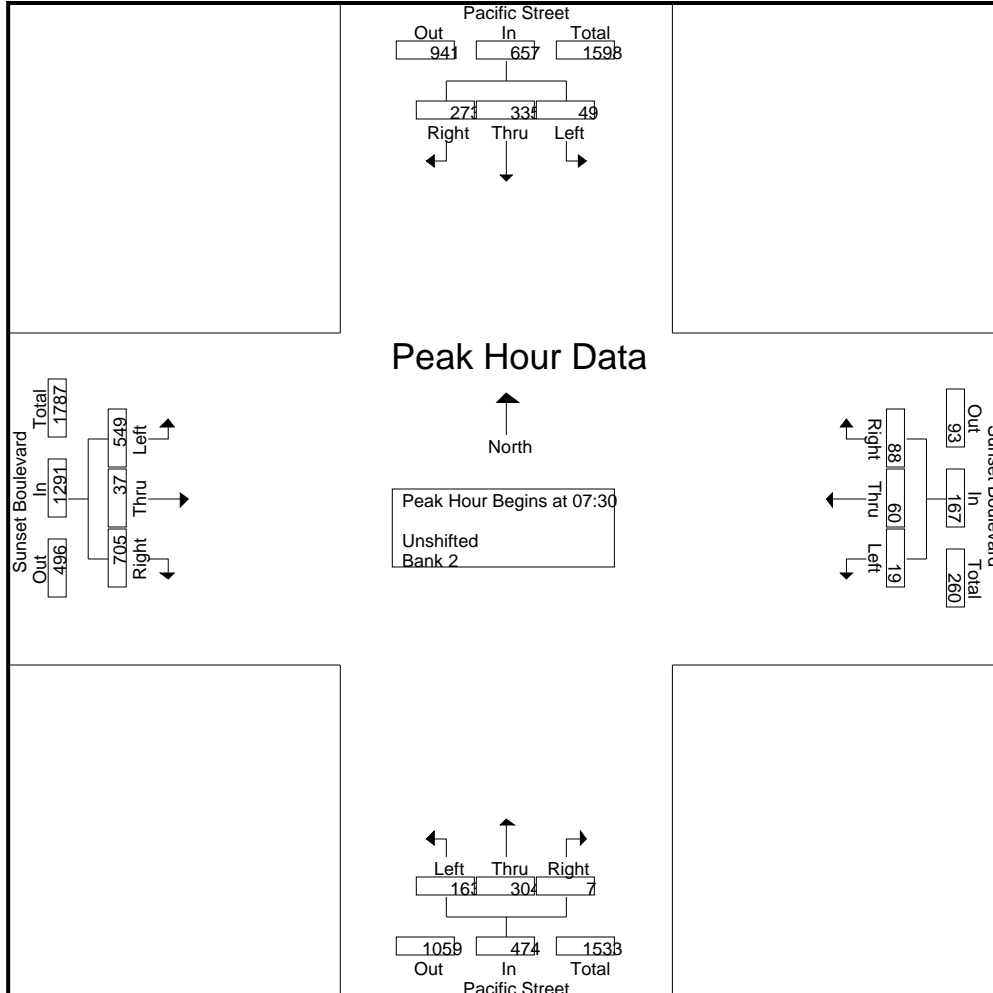
Start Time	Pacific Street Southbound				Sunset Boulevard Westbound				Pacific Street Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	8	70	54	132	1	15	17	33	37	69	2	108	148	6	175	329	602
07:45	9	89	67	165	5	13	21	39	48	82	1	131	155	11	192	358	693
08:00	13	78	76	167	5	18	30	53	40	74	3	117	115	8	169	292	629
08:15	19	98	76	193	8	14	20	42	38	79	1	118	131	12	169	312	665
Total Volume	49	335	273	657	19	60	88	167	163	304	7	474	549	37	705	1291	2589
% App. Total	7.5	51	41.6		11.4	35.9	52.7		34.4	64.1	1.5		42.5	2.9	54.6		
PHF	.645	.855	.898	.851	.594	.833	.733	.788	.849	.927	.583	.905	.885	.771	.918	.902	.934

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-028 Pacific-Sunset
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-028 Pacific-Sunset
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 4

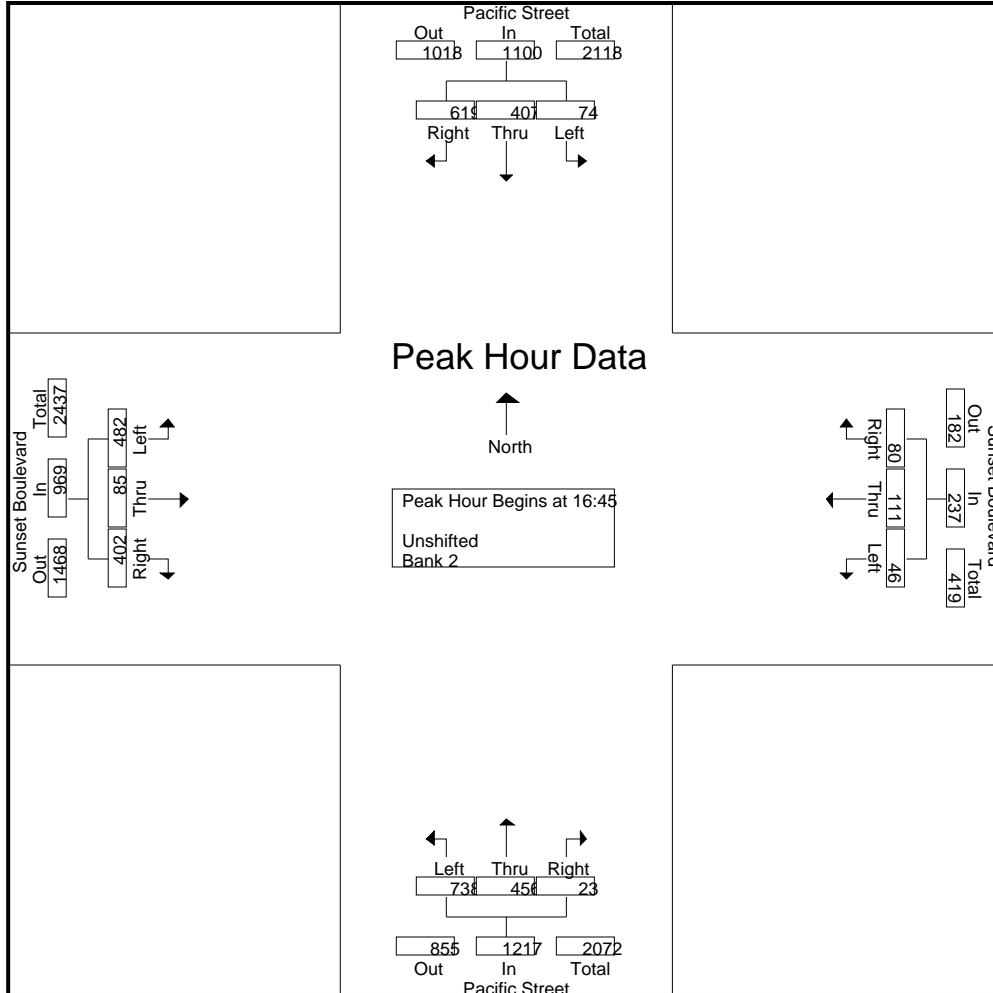
Start Time	Pacific Street Southbound				Sunset Boulevard Westbound				Pacific Street Northbound				Sunset Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	19	89	141	249	20	33	25	78	154	114	4	272	121	21	96	238	837
17:00	4	119	174	297	9	23	20	52	172	112	2	286	126	21	97	244	879
17:15	23	101	163	287	9	23	14	46	193	116	8	317	111	24	106	241	891
17:30	28	98	141	267	8	32	21	61	219	114	9	342	124	19	103	246	916
Total Volume	74	407	619	1100	46	111	80	237	738	456	23	1217	482	85	402	969	3523
% App. Total	6.7	37	56.3		19.4	46.8	33.8		60.6	37.5	1.9		49.7	8.8	41.5		
PHF	.661	.855	.889	.926	.575	.841	.800	.760	.842	.983	.639	.890	.956	.885	.948	.985	.962

All Traffic Data

(916) 771-8700

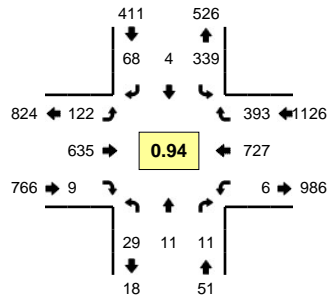
Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2

File Name : 12-7003-028 Pacific-Sunset
 Site Code : 00000000
 Start Date : 2/9/2012
 Page No : 5

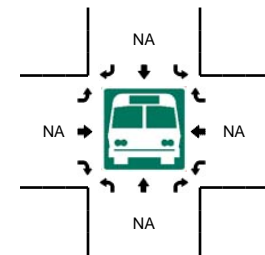
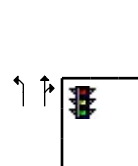
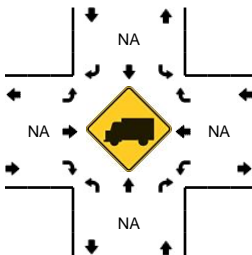
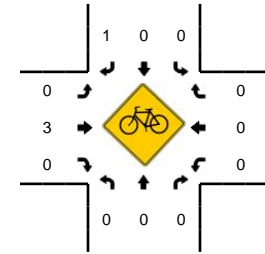
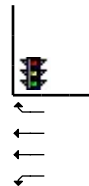
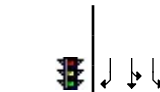
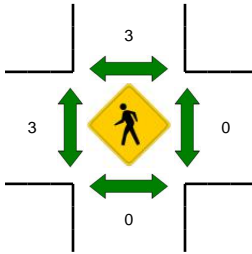
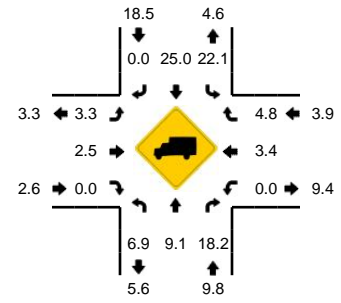


LOCATION: Granite Dr -- Rocklin Rd
CITY/STATE: Rocklin, CA

QC JOB #: 10680109
DATE: Wed, Nov 16 2011



Peak-Hour: 8:00 AM -- 9:00 AM
Peak 15-Min: 8:00 AM -- 8:15 AM

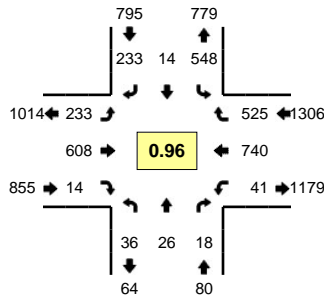


5-Min Count Period Beginning At	Granite Dr (Northbound)				Granite Dr (Southbound)				Rocklin Rd (Eastbound)				Rocklin Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:30 AM	2	0	2	0	17	0	4	0	7	55	0	0	1	30	36	0	154	1316
7:35 AM	1	0	0	0	27	0	3	0	5	68	3	0	0	27	28	0	162	1403
7:40 AM	1	2	3	0	12	1	4	0	4	70	1	0	1	31	35	0	165	1487
7:45 AM	4	1	3	0	19	0	3	0	8	49	0	0	0	23	40	0	150	1538
7:50 AM	0	2	0	0	15	0	6	0	10	65	0	1	2	53	38	0	192	1620
7:55 AM	2	0	0	0	9	1	4	0	4	29	0	0	1	21	28	0	99	1615
8:00 AM	1	1	0	0	13	0	6	0	14	60	0	0	0	72	56	0	223	1726
8:05 AM	2	3	0	0	24	2	7	0	7	60	0	0	0	59	35	0	199	1810
8:10 AM	4	0	1	0	20	0	8	0	7	83	0	0	0	45	35	0	203	1892
8:15 AM	4	0	0	0	14	0	7	0	8	54	1	0	0	57	38	0	183	1970
8:20 AM	1	0	1	0	24	0	7	0	14	44	0	0	1	62	35	0	189	2024
8:25 AM	2	0	0	0	25	1	4	0	9	62	0	0	0	64	28	0	195	2114
8:30 AM	3	1	2	0	29	0	6	0	6	45	1	0	0	71	30	0	194	2154
8:35 AM	2	0	3	0	19	0	2	0	15	51	1	0	1	61	24	0	179	2171
8:40 AM	1	0	0	0	26	1	3	0	7	48	1	0	1	84	19	1	192	2198
8:45 AM	4	4	3	0	42	0	4	0	12	42	3	0	0	61	22	0	197	2245
8:50 AM	3	1	0	0	58	0	6	0	10	37	0	0	1	48	35	0	199	2252
8:55 AM	2	1	1	0	45	0	8	0	13	49	2	0	1	43	36	0	201	2354
9:00 AM	2	1	2	0	25	0	15	0	6	47	0	0	0	35	39	0	172	2303
9:05 AM	3	1	0	0	21	0	9	0	3	45	2	0	3	31	28	0	146	2250
9:10 AM	0	0	1	0	35	1	14	0	12	49	1	0	1	38	20	0	172	2219
9:15 AM	1	2	0	0	11	1	4	0	9	67	0	1	0	30	25	0	151	2187
9:20 AM	0	0	2	0	19	0	8	0	13	49	0	0	0	27	41	0	159	2157
9:25 AM	1	4	1	0	23	1	8	0	10	37	0	0	0	37	43	0	165	2127
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	28	16	4	0	228	8	84	0	112	812	0	0	0	704	504	0	2500	
Heavy Trucks	4	4	0	0	4	0	0	0	0	24	0	0	0	20	32	0	88	
Pedestrians		0				8				8				0			16	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

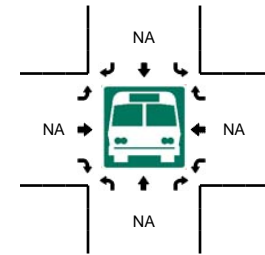
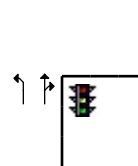
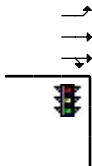
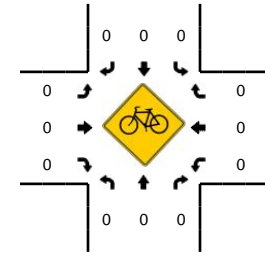
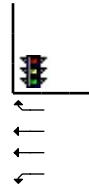
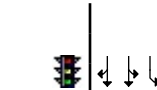
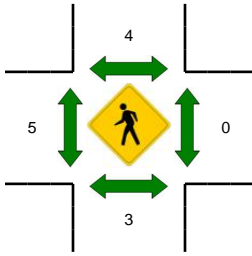
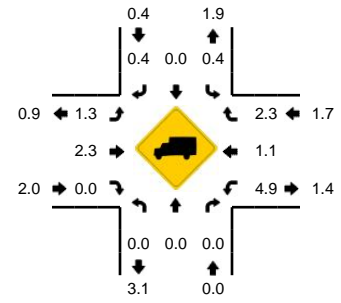
Comments:

LOCATION: Granite Dr -- Rocklin Rd
CITY/STATE: Rocklin, CA

QC JOB #: 10680110
DATE: Tue, Nov 15 2011



Peak-Hour: 4:25 PM -- 5:25 PM
Peak 15-Min: 5:10 PM -- 5:25 PM

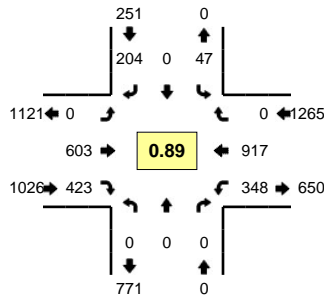


5-Min Count Period Beginning At	Granite Dr (Northbound)				Granite Dr (Southbound)				Rocklin Rd (Eastbound)				Rocklin Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:55 PM	7	1	3	0	27	0	15	0	10	37	2	0	1	57	30	0	190	2603
4:00 PM	2	0	0	0	30	2	10	0	24	57	0	0	1	64	37	0	227	2614
4:05 PM	4	0	2	0	35	1	14	0	19	42	1	0	0	49	36	0	203	2627
4:10 PM	1	2	2	0	37	0	16	0	25	47	1	0	3	76	32	1	243	2660
4:15 PM	7	3	5	0	20	0	22	0	17	43	1	0	4	68	41	0	231	2675
4:20 PM	0	2	0	0	43	0	19	0	12	53	1	0	1	52	54	0	237	2667
4:25 PM	5	1	0	0	26	0	17	0	26	52	0	0	2	73	46	2	250	2674
4:30 PM	3	1	0	0	51	0	19	0	11	35	0	1	1	64	44	1	231	2697
4:35 PM	1	0	2	0	43	1	22	0	24	46	3	0	3	69	52	0	266	2747
4:40 PM	2	3	1	0	49	1	23	0	16	55	1	0	4	72	41	0	268	2755
4:45 PM	2	2	4	0	36	2	21	0	23	54	0	1	3	61	39	0	248	2808
4:50 PM	2	1	3	0	43	1	18	0	17	53	1	1	6	63	51	0	260	2854
4:55 PM	3	1	4	0	40	0	14	0	13	48	3	0	3	56	40	0	225	2889
5:00 PM	3	3	0	0	56	1	14	0	21	36	0	0	2	51	40	0	227	2889
5:05 PM	3	4	3	0	62	1	21	0	21	65	1	1	6	47	34	1	270	2956
5:10 PM	4	2	0	0	58	2	16	0	20	59	1	1	3	67	42	1	276	2989
5:15 PM	4	5	1	0	33	1	26	0	11	42	2	0	1	66	35	0	227	2985
5:20 PM	4	3	0	0	51	4	22	0	25	63	2	0	2	51	61	0	288	3036
5:25 PM	4	2	1	0	42	3	16	0	12	51	2	0	2	49	42	0	226	3012
5:30 PM	2	2	4	0	36	1	24	0	16	50	1	0	3	58	47	0	244	3025
5:35 PM	6	0	1	0	41	0	16	0	12	54	2	0	2	71	37	0	242	3001
5:40 PM	5	1	2	0	51	1	28	0	13	52	2	0	3	47	32	0	237	2970
5:45 PM	3	2	0	0	28	3	24	0	14	53	1	0	2	55	32	0	217	2939
5:50 PM	1	6	1	0	23	1	20	0	19	46	0	0	2	50	34	0	203	2882
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	48	40	4	0	568	28	256	0	224	656	20	4	24	736	552	4	3164	
Heavy Trucks	0	0	0	0	0	0	0	0	4	4	0	0	4	4	0	0	16	
Pedestrians		4				8				4				0			16	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

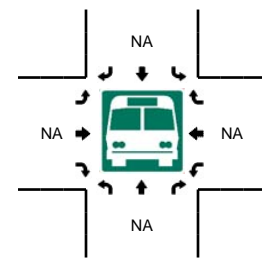
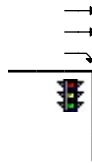
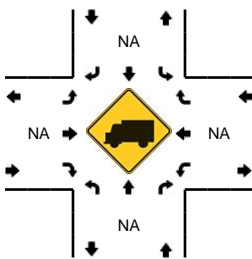
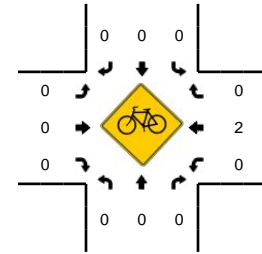
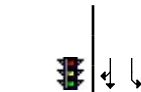
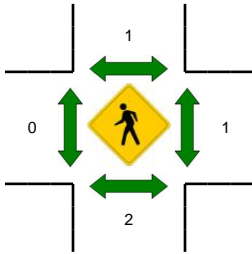
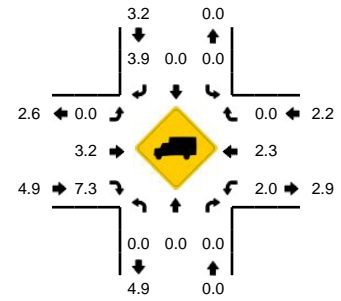
Comments:

LOCATION: I-80 WB Ramps -- Rocklin Rd
CITY/STATE: Rocklin, CA

QC JOB #: 10680101
DATE: Thu, Nov 17 2011



Peak-Hour: 7:45 AM -- 8:45 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

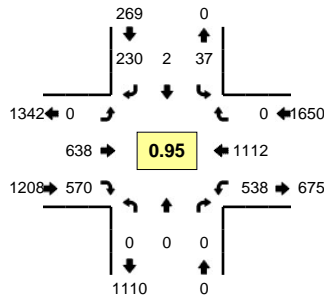


5-Min Count Period Beginning At	I-80 WB Ramps (Northbound)				I-80 WB Ramps (Southbound)				Rocklin Rd (Eastbound)				Rocklin Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:15 AM	0	0	0	0	4	0	13	0	0	36	24	0	30	45	0	0	152	1430
7:20 AM	0	0	0	0	7	0	12	0	0	41	22	0	38	39	0	0	159	1526
7:25 AM	0	0	0	0	2	0	16	0	0	45	23	0	45	52	0	0	183	1629
7:30 AM	0	0	0	0	5	0	6	0	0	46	19	0	19	41	0	0	136	1681
7:35 AM	0	0	0	0	6	0	11	0	0	72	27	0	23	59	0	0	198	1780
7:40 AM	0	0	0	0	3	0	8	0	0	55	30	0	24	55	0	0	175	1838
7:45 AM	0	0	0	0	3	0	18	0	0	68	25	0	32	70	0	0	216	1912
7:50 AM	0	0	0	0	5	0	19	0	0	53	23	0	28	71	0	0	199	1966
7:55 AM	0	0	0	0	9	0	23	0	0	46	21	0	41	108	0	0	248	2075
8:00 AM	0	0	0	0	5	0	19	0	0	41	39	0	35	100	0	0	239	2181
8:05 AM	0	0	0	0	0	0	16	0	0	40	40	0	31	98	0	0	225	2267
8:10 AM	0	0	0	0	1	0	21	0	0	51	41	0	25	72	0	0	211	2341
8:15 AM	0	0	0	0	5	0	23	0	0	46	38	0	23	74	0	0	209	2398
8:20 AM	0	0	0	0	4	0	18	0	0	46	40	0	36	77	0	0	221	2460
8:25 AM	0	0	0	0	5	0	14	0	0	65	41	0	22	65	0	0	212	2489
8:30 AM	0	0	0	0	3	0	10	0	0	53	26	0	24	60	0	0	176	2529
8:35 AM	0	0	0	0	4	0	11	0	0	43	31	0	25	54	0	0	168	2499
8:40 AM	0	0	0	0	3	0	12	0	0	51	58	0	26	68	0	0	218	2542
8:45 AM	0	0	0	0	3	0	8	0	0	49	52	0	32	52	0	0	196	2522
8:50 AM	0	0	0	0	6	0	14	0	0	48	43	0	25	72	0	0	208	2531
8:55 AM	0	0	0	0	5	0	14	0	0	40	33	0	28	66	0	0	186	2469
9:00 AM	0	0	0	0	6	0	11	0	0	41	41	0	17	57	0	0	173	2403
9:05 AM	0	0	0	0	6	0	8	0	0	56	34	0	28	48	0	0	180	2358
9:10 AM	0	0	0	0	6	0	9	0	0	61	32	0	31	42	0	0	181	2328
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	0	0	0	0	56	0	232	0	0	508	400	0	428	1224	0	0	2848	
Heavy Trucks	0	0	0	0	0	0	8	0	0	12	16	0	16	20	0	0	72	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

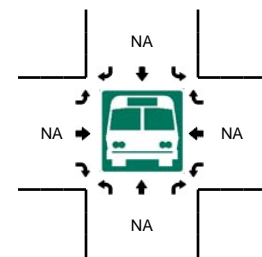
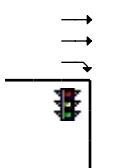
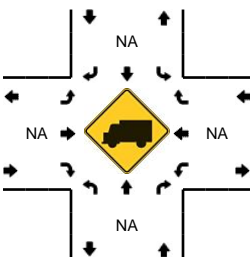
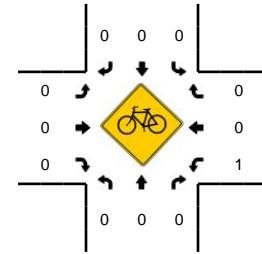
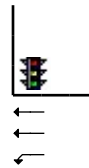
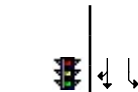
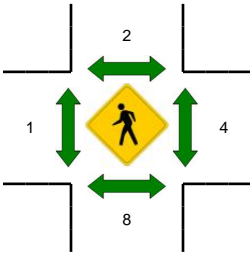
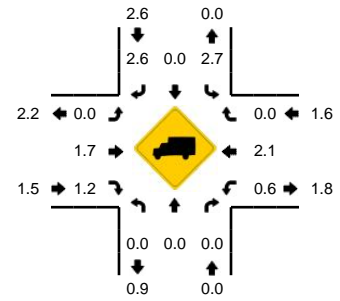
Comments:

LOCATION: I-80 WB Ramps -- Rocklin Rd
CITY/STATE: Rocklin, CA

QC JOB #: 10680102
DATE: Tue, Nov 15 2011



Peak-Hour: 4:20 PM -- 5:20 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

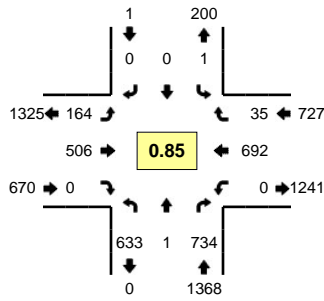


5-Min Count Period Beginning At	I-80 WB Ramps (Northbound)				I-80 WB Ramps (Southbound)				Rocklin Rd (Eastbound)				Rocklin Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:50 PM	0	0	0	0	4	0	18	0	0	42	31	0	41	71	0	0	207	
3:55 PM	0	0	0	0	3	0	21	0	0	53	32	0	37	74	0	0	220	2821
4:00 PM	0	0	0	0	5	0	17	0	0	45	33	0	40	88	0	0	228	2846
4:05 PM	0	0	0	0	2	0	21	0	0	39	39	0	33	89	0	0	223	2859
4:10 PM	0	0	0	0	1	0	13	0	0	40	48	0	43	98	0	0	243	2857
4:15 PM	0	0	0	0	6	0	23	0	0	39	35	0	42	90	0	0	235	2842
4:20 PM	0	0	0	0	3	1	21	0	0	52	46	0	31	98	0	0	252	2815
4:25 PM	0	0	0	0	6	1	19	0	0	46	23	0	58	97	0	0	250	2821
4:30 PM	0	0	0	0	7	0	25	0	0	39	63	0	31	97	0	0	262	2831
4:35 PM	0	0	0	0	2	0	23	0	0	45	52	0	57	99	0	0	278	2852
4:40 PM	0	0	0	0	4	0	27	0	0	53	55	0	48	92	0	0	279	2911
4:45 PM	0	0	0	0	1	0	25	0	0	59	35	0	48	91	0	0	259	2936
4:50 PM	0	0	0	0	2	0	12	0	0	70	41	0	31	92	0	0	248	2977
4:55 PM	0	0	0	0	2	0	11	0	0	49	41	0	58	81	0	0	242	2999
5:00 PM	0	0	0	0	1	0	14	0	0	55	51	0	59	111	0	0	291	3062
5:05 PM	0	0	0	0	2	0	18	0	0	67	68	0	32	78	0	0	265	3104
5:10 PM	0	0	0	0	6	0	18	0	0	49	49	0	38	83	0	0	243	3104
5:15 PM	0	0	0	0	1	0	17	0	0	54	46	0	47	93	0	0	258	3127
5:20 PM	0	0	0	0	4	0	32	0	0	46	38	0	30	72	0	0	222	3097
5:25 PM	0	0	0	0	5	0	20	0	0	65	38	0	21	89	0	0	238	3085
5:30 PM	0	0	0	0	2	0	25	0	0	52	45	0	32	87	0	0	243	3066
5:35 PM	0	0	0	0	3	0	18	0	0	55	45	0	33	84	0	0	238	3026
5:40 PM	0	0	0	0	6	0	9	0	0	49	43	0	27	84	0	0	218	2965
5:45 PM	0	0	0	0	4	0	16	0	0	49	38	0	25	69	0	0	201	2907
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	0	0	0	0	52	0	300	0	0	548	680	0	544	1152	0	0	3276	
Heavy Trucks	0	0	0	0	0	0	8	0	0	4	8	0	8	28	0	0	56	
Pedestrians		24			8				0				8				40	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

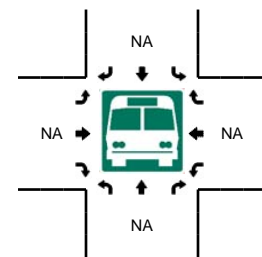
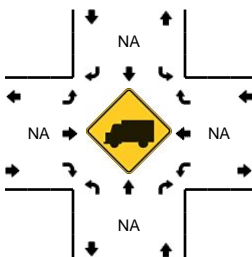
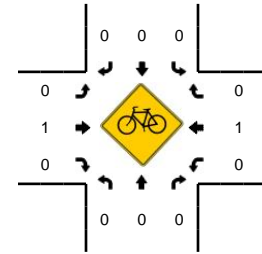
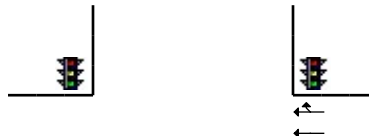
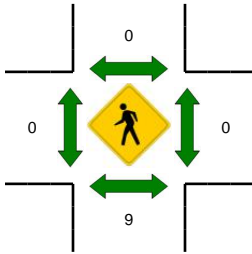
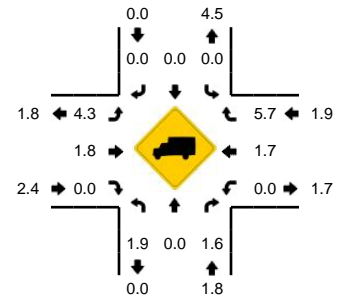
Comments:

LOCATION: I-80 EB Ramps -- Rocklin Rd
CITY/STATE: Rocklin, CA

QC JOB #: 10680103
DATE: Tue, Dec 06 2011



Peak-Hour: 7:35 AM -- 8:35 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

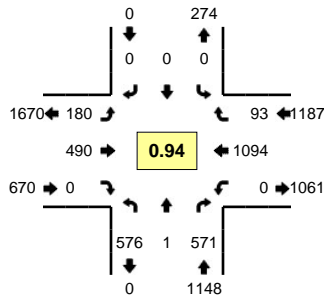


5-Min Count Period Beginning At	I-80 EB Ramps (Northbound)				I-80 EB Ramps (Southbound)				Rocklin Rd (Eastbound)				Rocklin Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:05 AM	21	0	29	0	0	0	0	0	4	20	0	0	0	40	1	0	115	1094
7:10 AM	24	0	28	0	0	0	0	0	19	27	0	0	0	37	2	0	137	1159
7:15 AM	31	0	36	0	0	0	0	0	11	25	0	0	0	41	3	0	147	1252
7:20 AM	26	0	41	0	0	0	0	0	11	21	0	0	0	45	1	0	145	1343
7:25 AM	36	0	54	0	0	0	0	0	9	27	0	0	0	42	5	0	173	1454
7:30 AM	20	0	52	0	0	0	0	0	16	35	0	0	0	31	2	0	156	1542
7:35 AM	37	0	83	0	0	0	0	0	23	45	0	0	0	35	3	0	226	1697
7:40 AM	34	0	84	0	0	0	0	0	19	40	0	0	0	42	1	0	220	1816
7:45 AM	63	0	96	0	0	0	0	0	16	67	0	0	0	45	3	0	290	1990
7:50 AM	52	0	87	0	0	0	0	0	10	50	0	0	0	43	4	0	246	2114
7:55 AM	75	0	77	0	0	0	0	0	12	40	0	0	0	67	3	0	274	2258
8:00 AM	88	0	72	0	0	0	0	0	9	29	0	0	0	78	3	0	279	2408
8:05 AM	61	0	42	0	0	0	0	0	9	37	0	0	0	78	0	0	227	2520
8:10 AM	49	1	37	0	0	0	0	0	17	36	0	0	0	68	3	0	211	2594
8:15 AM	63	0	42	0	0	0	0	0	15	36	0	0	0	57	6	0	219	2666
8:20 AM	37	0	39	0	0	0	0	0	15	37	0	0	0	66	2	0	196	2717
8:25 AM	41	0	32	0	0	0	0	0	7	44	0	0	0	56	3	0	183	2727
8:30 AM	33	0	43	0	1	0	0	0	12	45	0	0	0	57	4	0	195	2766
8:35 AM	31	0	36	0	0	0	0	0	6	15	0	0	0	66	4	0	158	2698
8:40 AM	32	0	51	0	0	0	0	0	10	35	0	0	0	40	4	0	172	2650
8:45 AM	39	0	58	0	0	0	0	0	11	27	0	0	0	57	3	0	195	2555
8:50 AM	42	0	46	0	0	0	0	0	9	29	0	0	0	62	3	0	191	2500
8:55 AM	45	0	60	0	0	0	0	0	17	40	0	0	0	50	3	0	215	2441
9:00 AM	37	0	63	0	0	0	0	0	9	40	0	0	0	57	6	0	212	2374
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	760	0	1040	0	0	0	0	0	152	628	0	0	0	620	40	0	3240	
Heavy Trucks	8	0	12	0	0	0	0	0	12	16	0	0	0	8	4	0	60	
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

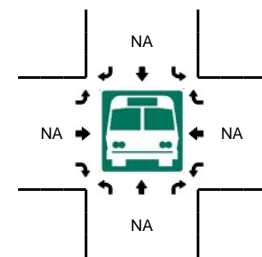
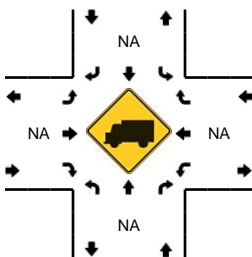
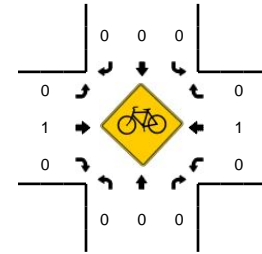
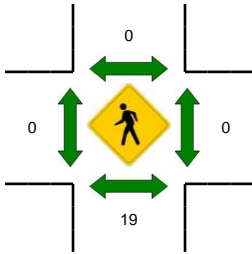
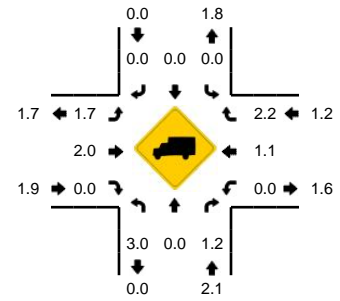
Comments:

LOCATION: I-80 EB Ramps -- Rocklin Rd
CITY/STATE: Rocklin, CA

QC JOB #: 10680104
DATE: Tue, Nov 15 2011



Peak-Hour: 4:20 PM -- 5:20 PM
Peak 15-Min: 4:40 PM -- 4:55 PM

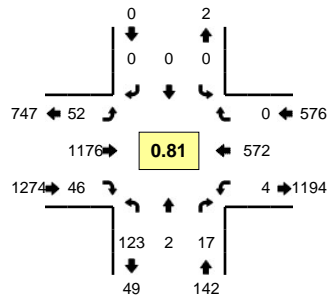


5-Min Count Period Beginning At	I-80 EB Ramps (Northbound)				I-80 EB Ramps (Southbound)				Rocklin Rd (Eastbound)				Rocklin Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:50 PM	38	0	39	0	0	0	0	0	15	34	0	0	0	89	1	0	216	
3:55 PM	41	0	40	0	0	0	0	0	10	45	0	0	0	75	10	0	221	2751
4:00 PM	37	0	39	0	0	0	0	0	16	41	0	0	0	68	4	0	205	2779
4:05 PM	43	0	47	0	0	0	0	0	10	32	0	0	0	89	7	0	228	2811
4:10 PM	59	0	36	0	0	0	0	0	14	27	0	0	0	74	4	0	214	2820
4:15 PM	53	0	47	0	0	0	0	0	15	30	0	0	0	81	9	0	235	2806
4:20 PM	45	0	58	0	0	0	0	0	8	37	0	0	0	105	9	0	262	2827
4:25 PM	59	0	30	0	0	0	0	0	14	46	0	0	0	62	2	0	213	2783
4:30 PM	58	0	42	0	0	0	0	0	13	38	0	0	0	89	8	0	248	2766
4:35 PM	51	0	41	0	0	0	0	0	16	27	0	0	0	92	6	0	233	2745
4:40 PM	42	0	57	0	0	0	0	0	16	30	0	0	0	106	7	0	258	2760
4:45 PM	53	0	62	0	0	0	0	0	19	41	0	0	0	91	6	0	272	2805
4:50 PM	53	0	59	0	0	0	0	0	16	46	0	0	0	88	9	0	271	2860
4:55 PM	49	1	40	0	0	0	0	0	22	50	0	0	0	77	6	0	245	2884
5:00 PM	29	0	46	0	0	0	0	0	12	40	0	0	0	112	7	0	246	2925
5:05 PM	47	0	38	0	0	0	0	0	12	39	0	0	0	111	12	0	259	2956
5:10 PM	46	0	48	0	0	0	0	0	23	45	0	0	0	79	8	0	249	2991
5:15 PM	44	0	50	0	0	0	0	0	9	51	0	0	0	82	13	0	249	3005
5:20 PM	46	0	44	0	0	0	0	0	21	36	0	0	0	75	10	0	232	2975
5:25 PM	43	0	50	0	0	0	0	0	14	46	0	0	0	73	4	0	230	2992
5:30 PM	49	1	49	0	0	0	0	0	17	48	0	0	0	68	5	0	237	2981
5:35 PM	45	0	43	0	0	0	0	0	17	39	0	0	0	61	6	0	211	2959
5:40 PM	40	0	50	0	0	0	0	0	17	43	0	0	0	81	3	0	234	2935
5:45 PM	39	0	57	0	0	0	0	0	9	45	0	0	0	60	3	0	213	2876
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	592	0	712	0	0	0	0	0	204	468	0	0	0	1140	88	0	3204	
Heavy Trucks	28	0	12	0	0	0	0	0	0	8	0	0	0	8	0	0	56	
Pedestrians		24			0					0				0			24	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

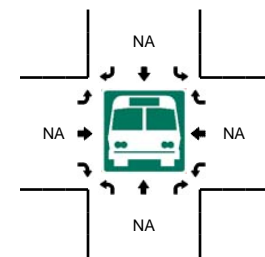
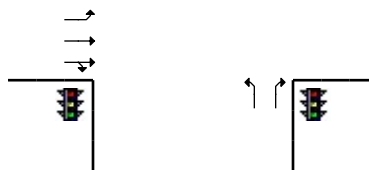
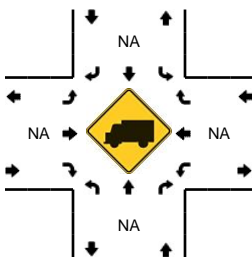
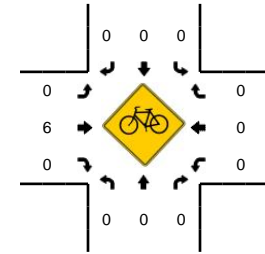
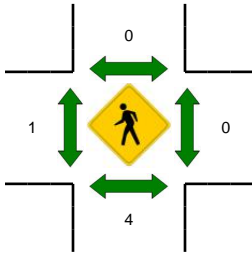
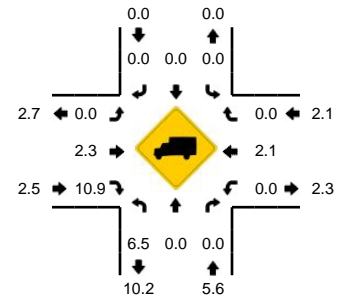
Comments:

LOCATION: Aguilar Rd -- Rocklin Rd
CITY/STATE: Rocklin, CA

QC JOB #: 10680111
DATE: Wed, Nov 16 2011



Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

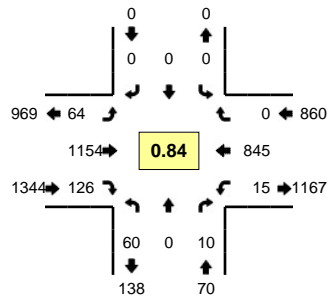


5-Min Count Period Beginning At	Aguilar Rd (Northbound)				Aguilar Rd (Southbound)				Rocklin Rd (Eastbound)				Rocklin Rd (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
7:00 AM	8	0	2	0	0	0	0	0	0	0	52	3	4	0	22	0	0	91	715
7:05 AM	11	0	0	0	0	0	0	0	0	0	59	3	3	0	28	0	0	104	789
7:10 AM	6	0	0	0	0	0	0	0	0	0	60	1	7	2	45	0	0	121	879
7:15 AM	9	0	0	0	0	0	0	0	0	0	49	3	4	0	34	0	0	99	948
7:20 AM	15	0	0	0	0	0	0	0	0	0	61	5	5	1	29	0	0	116	1021
7:25 AM	6	0	0	0	0	0	0	0	0	1	70	1	5	0	29	0	0	112	1081
7:30 AM	9	0	2	0	0	0	0	0	0	0	102	2	10	0	35	0	1	161	1191
7:35 AM	8	1	2	0	0	0	0	0	0	0	119	1	6	0	29	0	0	166	1306
7:40 AM	9	0	1	0	0	0	0	0	0	0	115	2	3	1	28	0	0	159	1400
7:45 AM	10	0	4	0	0	0	0	0	0	0	156	5	3	0	30	0	0	208	1529
7:50 AM	14	0	0	0	0	0	0	0	0	0	134	8	2	0	39	0	0	197	1638
7:55 AM	10	0	1	0	0	0	0	0	0	0	118	4	0	0	76	0	0	209	1743
8:00 AM	16	0	1	0	0	0	0	0	0	0	86	3	4	0	47	0	0	157	1809
8:05 AM	7	0	1	0	0	0	0	0	0	0	84	3	1	0	65	0	0	161	1866
8:10 AM	13	0	1	0	0	0	0	0	0	0	70	2	7	0	66	0	0	159	1904
8:15 AM	9	0	2	0	0	0	0	0	0	0	69	4	2	2	61	0	0	149	1954
8:20 AM	11	1	2	0	0	0	0	0	0	0	63	7	9	0	40	0	0	133	1971
8:25 AM	7	0	0	0	0	0	0	0	0	0	60	5	5	0	56	0	0	133	1992
8:30 AM	5	0	1	0	0	0	0	0	0	0	66	4	4	2	51	0	2	135	1966
8:35 AM	2	0	1	0	0	0	0	0	0	0	73	1	5	1	44	0	1	128	1928
8:40 AM	7	0	1	0	0	0	0	0	0	0	64	3	4	0	50	0	1	130	1899
8:45 AM	5	0	2	0	0	0	0	0	0	0	72	6	3	1	39	0	0	128	1819
8:50 AM	4	0	2	0	0	0	0	0	0	0	91	0	4	1	42	0	0	144	1766
8:55 AM	6	0	2	0	0	0	0	0	0	0	100	5	5	0	40	0	1	159	1716
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
All Vehicles	136	0	20	0	0	0	0	0	0	1632	68	20	0	580	0	0	2456		
Heavy Trucks	8	0	0	0	0	0	0	0	0	20	0	0	0	8	0	0	36		
Pedestrians	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4		
Bicycles	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2		
Railroad																			
Stopped Buses																			

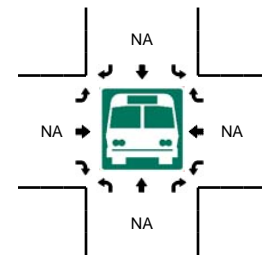
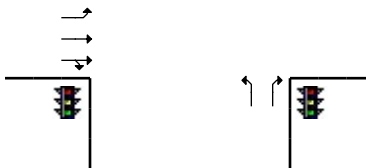
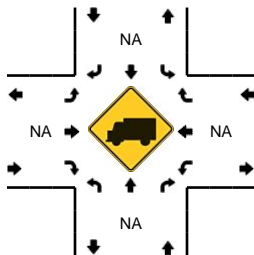
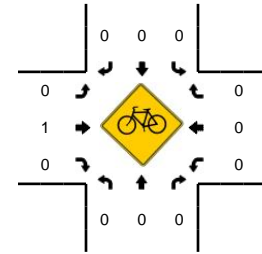
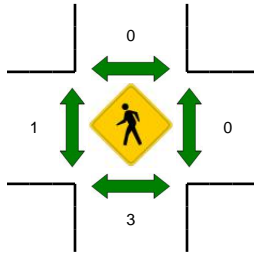
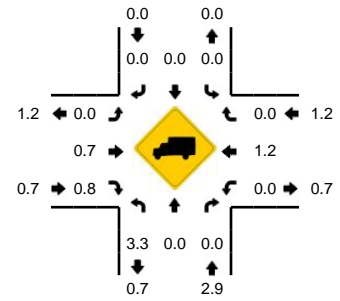
Comments:

LOCATION: Aguilar Rd -- Rocklin Rd
CITY/STATE: Rocklin, CA

QC JOB #: 10680112
DATE: Tue, Nov 15 2011



Peak-Hour: 5:40 PM -- 6:40 PM
Peak 15-Min: 6:10 PM -- 6:25 PM

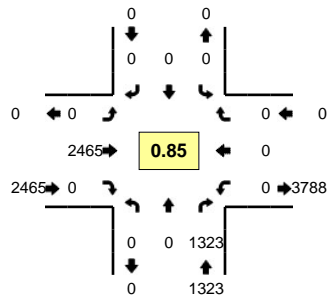


5-Min Count Period Beginning At	Aguilar Rd (Northbound)				Aguilar Rd (Southbound)				Rocklin Rd (Eastbound)				Rocklin Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
5:00 PM	9	0	2	0	0	0	0	0	0	68	10	10	0	106	0	1	206	2163
5:05 PM	7	0	0	0	0	0	0	0	0	84	16	2	2	100	0	0	211	2215
5:10 PM	8	0	0	0	0	0	0	0	0	61	15	4	0	77	0	1	166	2238
5:15 PM	2	0	1	0	0	0	0	0	0	77	12	5	1	75	0	0	173	2208
5:20 PM	4	0	0	0	0	0	0	0	0	85	5	9	0	76	0	0	179	2212
5:25 PM	3	0	0	0	0	0	0	0	0	95	8	10	1	57	0	0	174	2233
5:30 PM	5	0	2	0	0	0	0	0	0	89	7	6	0	66	0	1	176	2245
5:35 PM	7	0	0	0	0	0	0	0	0	50	9	4	1	69	0	1	141	2202
5:40 PM	5	0	0	0	0	0	0	0	0	96	13	6	1	49	0	1	171	2183
5:45 PM	4	0	2	0	0	0	0	0	0	110	11	1	1	57	0	0	186	2162
5:50 PM	6	0	1	0	0	0	0	0	0	73	12	4	0	72	0	0	168	2135
5:55 PM	8	0	0	0	0	0	0	0	0	77	12	6	0	52	0	0	155	2106
6:00 PM	3	0	1	0	0	0	0	0	0	81	8	3	3	65	0	1	165	2065
6:05 PM	4	0	0	0	0	0	0	0	0	108	9	7	1	65	0	0	194	2048
6:10 PM	8	0	0	0	0	0	0	0	0	124	10	2	1	71	0	1	217	2099
6:15 PM	2	0	2	0	0	0	0	0	0	130	15	4	0	79	0	0	232	2158
6:20 PM	3	0	1	0	0	0	0	0	0	129	6	10	1	80	0	0	230	2209
6:25 PM	8	0	1	0	0	0	0	0	0	84	11	5	1	88	0	0	198	2233
6:30 PM	4	0	2	0	0	0	0	0	0	73	10	8	0	98	0	0	195	2252
6:35 PM	5	0	0	0	0	0	0	0	0	69	9	8	3	69	0	0	163	2274
6:40 PM	7	0	0	0	0	0	0	0	0	50	6	8	4	43	0	0	118	2221
6:45 PM	6	0	0	0	0	0	0	0	0	53	10	3	1	51	0	0	124	2159
6:50 PM	4	0	0	0	0	0	0	0	0	49	8	4	0	56	0	0	121	2112
6:55 PM	8	0	2	0	0	0	0	0	0	38	5	4	0	50	0	0	107	2064
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	52	0	12	0	0	0	0	0	0	1532	124	64	8	920	0	4	2716	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	
Pedestrians	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

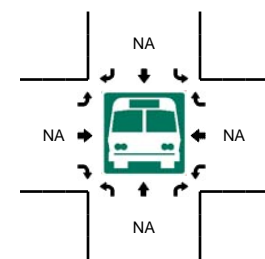
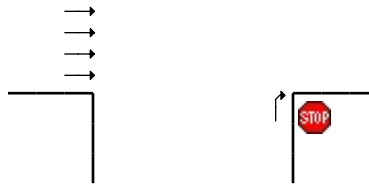
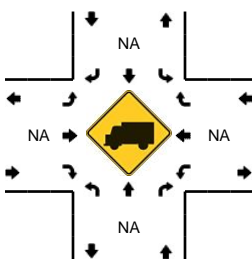
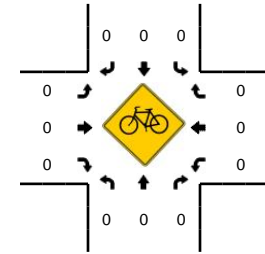
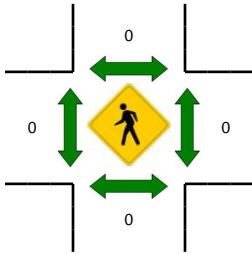
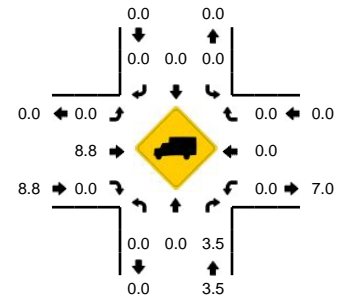
Comments:

LOCATION: I-80 EB On Ramp from SR 65 -- I-80 EB
CITY/STATE: Rocklin, CA

QC JOB #: 10680117
DATE: Wed, Nov 16 2011



Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

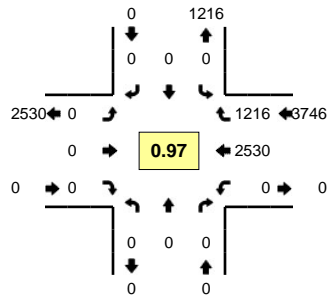


5-Min Count Period Beginning At	I-80 EB On Ramp from SR 65 (Northbound)				I-80 EB On Ramp from SR 65 (Southbound)				I-80 EB (Eastbound)				I-80 EB (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	49	0	0	0	0	0	0	124	0	0	0	0	0	0	173	1877
7:05 AM	0	0	45	0	0	0	0	0	0	130	0	0	0	0	0	0	175	1947
7:10 AM	0	0	85	0	0	0	0	0	0	153	0	0	0	0	0	0	238	2082
7:15 AM	0	0	87	0	0	0	0	0	0	161	0	0	0	0	0	0	248	2216
7:20 AM	0	0	81	0	0	0	0	0	0	180	0	0	0	0	0	0	261	2358
7:25 AM	0	0	93	0	0	0	0	0	0	152	0	0	0	0	0	0	245	2443
7:30 AM	0	0	114	0	0	0	0	0	0	213	0	0	0	0	0	0	327	2615
7:35 AM	0	0	115	0	0	0	0	0	0	204	0	0	0	0	0	0	319	2770
7:40 AM	0	0	143	0	0	0	0	0	0	230	0	0	0	0	0	0	373	2947
7:45 AM	0	0	129	0	0	0	0	0	0	245	0	0	0	0	0	0	374	3143
7:50 AM	0	0	113	0	0	0	0	0	0	255	0	0	0	0	0	0	368	3322
7:55 AM	0	0	112	0	0	0	0	0	0	247	0	0	0	0	0	0	359	3460
8:00 AM	0	0	140	0	0	0	0	0	0	208	0	0	0	0	0	0	348	3635
8:05 AM	0	0	100	0	0	0	0	0	0	166	0	0	0	0	0	0	266	3726
8:10 AM	0	0	100	0	0	0	0	0	0	159	0	0	0	0	0	0	259	3747
8:15 AM	0	0	107	0	0	0	0	0	0	173	0	0	0	0	0	0	280	3779
8:20 AM	0	0	81	0	0	0	0	0	0	177	0	0	0	0	0	0	258	3776
8:25 AM	0	0	69	0	0	0	0	0	0	188	0	0	0	0	0	0	257	3788
8:30 AM	0	0	80	0	0	0	0	0	0	192	0	0	0	0	0	0	272	3733
8:35 AM	0	0	64	0	0	0	0	0	0	199	0	0	0	0	0	0	263	3677
8:40 AM	0	0	72	0	0	0	0	0	0	196	0	0	0	0	0	0	268	3572
8:45 AM	0	0	69	0	0	0	0	0	0	216	0	0	0	0	0	0	285	3483
8:50 AM	0	0	69	0	0	0	0	0	0	206	0	0	0	0	0	0	275	3390
8:55 AM	0	0	89	0	0	0	0	0	0	202	0	0	0	0	0	0	291	3322
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	1540	0	0	0	0	0	0	2920	0	0	0	0	0	0	4460	
Heavy Trucks	0	0	36	0	0	0	0	0	0	176	0	0	0	0	0	0	212	
Pedestrians			0				0			0						0	0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Railroad																		
Stopped Buses																		

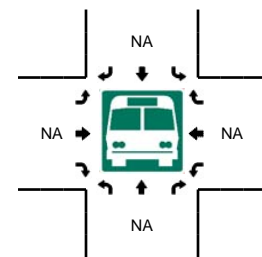
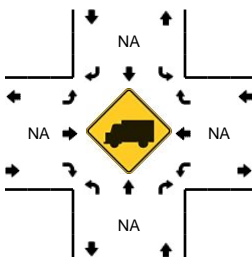
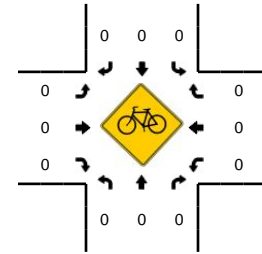
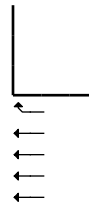
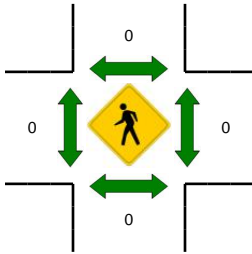
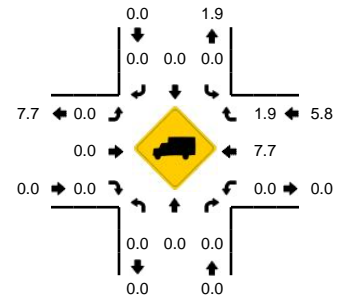
Comments: Freeway Video Count

LOCATION: I-80 WB Off Ramp to SR 65 -- I-80 WB
CITY/STATE: Rocklin, CA

QC JOB #: 10680116
DATE: Tue, Nov 15 2011



Peak-Hour: 4:15 PM -- 5:15 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

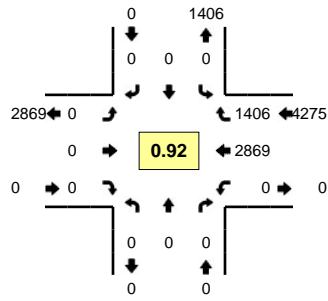


5-Min Count Period Beginning At	I-80 WB Off Ramp to SR 65 (Northbound)				I-80 WB Off Ramp to SR 65 (Southbound)				I-80 WB (Eastbound)				I-80 WB (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	217	94	0	311	
3:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	199	100	0	299	
3:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	175	77	0	252	3680
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	192	87	0	279	3679
4:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	191	87	0	278	3655
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	211	94	0	305	3658
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	244	106	0	350	3703
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	204	96	0	300	3693
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	192	109	0	301	3688
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	198	92	0	290	3664
4:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	198	105	0	303	3616
4:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	223	98	0	321	3589
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	232	111	0	343	3621
4:50 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	201	88	0	289	3611
4:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	203	99	0	302	3661
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	196	105	0	301	3683
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	223	100	0	323	3728
5:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	216	107	0	323	3746
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	220	101	0	321	3717
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	215	91	0	306	3723
5:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	194	102	0	296	3718
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	203	86	0	289	3717
5:35 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	216	105	0	321	3735
5:40 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	211	108	0	319	3733
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	2612	1256	0	3868	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	224	24	0	248	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

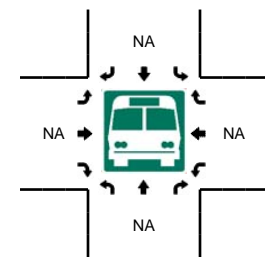
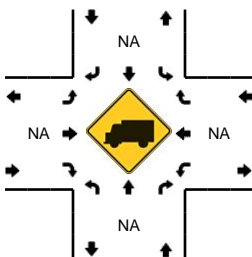
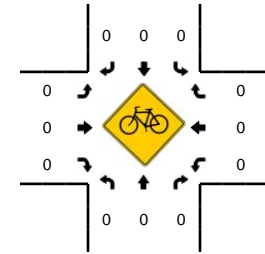
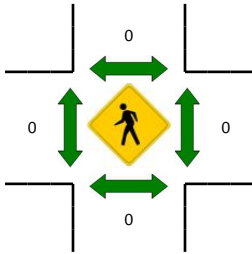
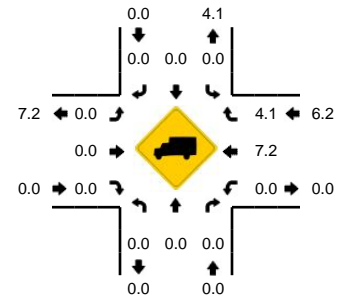
Comments: Freeway Video Count

LOCATION: I-80 WB Off Ramp to SR 65 -- I-80 WB
CITY/STATE: Rocklin, CA

QC JOB #: 10680115
DATE: Wed, Nov 16 2011



Peak-Hour: 7:20 AM -- 8:20 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

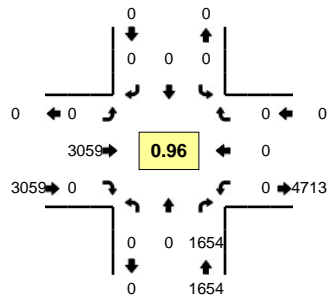


5-Min Count Period Beginning At	I-80 WB Off Ramp to SR 65 (Northbound)				I-80 WB Off Ramp to SR 65 (Southbound)				I-80 WB (Eastbound)				I-80 WB (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	263	49	0	312	
6:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	238	83	0	321	2884
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	240	56	0	296	3021
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	228	70	0	298	3138
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	219	73	0	292	3238
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	238	84	0	322	3349
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	244	116	0	360	3514
7:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	238	101	0	339	3611
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	192	92	0	284	3680
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	230	99	0	329	3760
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	237	132	0	369	3843
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	212	118	0	330	3852
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	259	130	0	389	3929
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	280	136	0	416	4024
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	240	112	0	352	4080
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	234	135	0	369	4151
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	252	112	0	364	4223
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	251	123	0	374	4275
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	243	48	0	291	4206
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	269	42	0	311	4178
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	289	44	0	333	4227
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	250	42	0	292	4190
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	295	30	0	325	4146
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	282	42	0	324	4140
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	0	0	0	0	0	0	0	0	0	3116	1512	0	4628	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	224	48	0	272	
Pedestrians														0			0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

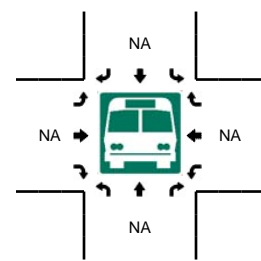
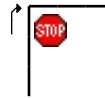
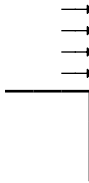
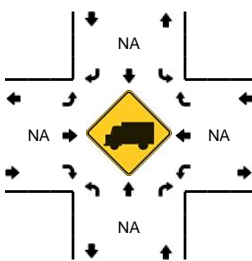
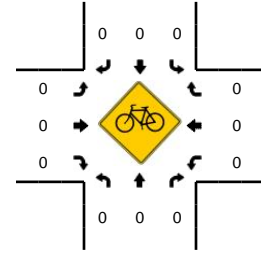
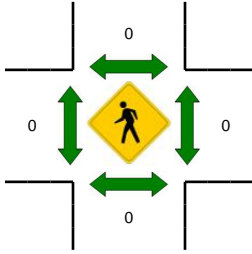
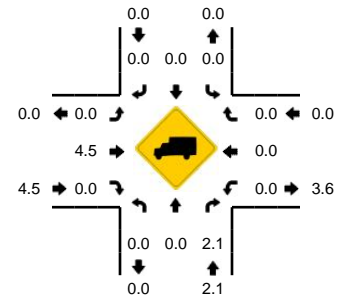
Comments: Freeway Video Count

LOCATION: I-80 EB On Ramp from SR 65 -- I-80 EB
CITY/STATE: Rocklin, CA

QC JOB #: 10680118
DATE: Tue, Nov 15 2011



Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 5:15 PM -- 5:30 PM



5-Min Count Period Beginning At	I-80 EB On Ramp from SR 65 (Northbound)				I-80 EB On Ramp from SR 65 (Southbound)				I-80 EB (Eastbound)				I-80 EB (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
4:05 PM	0	0	103	0	0	0	0	0	0	243	0	0	0	0	0	0	0	346	4313
4:10 PM	0	0	125	0	0	0	0	0	0	289	0	0	0	0	0	0	0	414	4392
4:15 PM	0	0	139	0	0	0	0	0	0	252	0	0	0	0	0	0	0	391	4419
4:20 PM	0	0	141	0	0	0	0	0	0	254	0	0	0	0	0	0	0	395	4440
4:25 PM	0	0	117	0	0	0	0	0	0	272	0	0	0	0	0	0	0	389	4460
4:30 PM	0	0	113	0	0	0	0	0	0	244	0	0	0	0	0	0	0	357	4468
4:35 PM	0	0	136	0	0	0	0	0	0	245	0	0	0	0	0	0	0	381	4486
4:40 PM	0	0	149	0	0	0	0	0	0	217	0	0	0	0	0	0	0	366	4485
4:45 PM	0	0	164	0	0	0	0	0	0	252	0	0	0	0	0	0	0	416	4523
4:50 PM	0	0	114	0	0	0	0	0	0	281	0	0	0	0	0	0	0	395	4559
4:55 PM	0	0	129	0	0	0	0	0	0	261	0	0	0	0	0	0	0	390	4621
5:00 PM	0	0	129	0	0	0	0	0	0	232	0	0	0	0	0	0	0	361	4601
5:05 PM	0	0	132	0	0	0	0	0	0	226	0	0	0	0	0	0	0	358	4613
5:10 PM	0	0	142	0	0	0	0	0	0	276	0	0	0	0	0	0	0	418	4617
5:15 PM	0	0	136	0	0	0	0	0	0	299	0	0	0	0	0	0	0	435	4661
5:20 PM	0	0	151	0	0	0	0	0	0	214	0	0	0	0	0	0	0	365	4631
5:25 PM	0	0	142	0	0	0	0	0	0	280	0	0	0	0	0	0	0	422	4664
5:30 PM	0	0	130	0	0	0	0	0	0	276	0	0	0	0	0	0	0	406	4713
5:35 PM	0	0	133	0	0	0	0	0	0	215	0	0	0	0	0	0	0	348	4680
5:40 PM	0	0	128	0	0	0	0	0	0	263	0	0	0	0	0	0	0	391	4705
5:45 PM	0	0	125	0	0	0	0	0	0	253	0	0	0	0	0	0	0	378	4667
5:50 PM	0	0	138	0	0	0	0	0	0	232	0	0	0	0	0	0	0	370	4642
5:55 PM	0	0	126	0	0	0	0	0	0	183	0	0	0	0	0	0	0	309	4561
6:00 PM	0	0	106	0	0	0	0	0	0	229	0	0	0	0	0	0	0	335	4535
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	0	0	1716	0	0	0	0	0	0	3172	0	0	0	0	0	0	0	4888	
Heavy Trucks	0	0	28	0	0	0	0	0	0	140	0	0	0	0	0	0	0	168	
Pedestrians			0				0			0					0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0			0	
Railroad																			
Stopped Buses																			

Comments: Freeway Video Count

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-029 Riverside-I80 WB
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	Riverside Avenue Southbound				I-80 Westbound Ramps Westbound				Riverside Avenue Northbound				I-80 Westbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	0	53	232	285	19	0	17	36	0	59	30	89	0	0	0	0	410
06:15	0	79	295	374	27	0	25	52	0	89	33	122	0	0	0	0	548
06:30	0	100	347	447	33	0	29	62	0	129	67	196	0	0	0	0	705
06:45	0	113	310	423	55	0	36	91	1	144	73	218	0	0	0	0	732
Total	0	345	1184	1529	134	0	107	241	1	421	203	625	0	0	0	0	2395
07:00	0	152	321	473	58	0	40	98	0	138	81	219	0	0	0	0	790
07:15	0	200	336	536	79	0	37	116	0	212	100	312	0	0	0	0	964
07:30	0	208	320	528	54	0	43	97	0	199	64	263	0	0	0	0	888
07:45	0	189	262	451	64	0	63	127	0	295	37	332	0	0	0	0	910
Total	0	749	1239	1988	255	0	183	438	0	844	282	1126	0	0	0	0	3552
08:00	0	177	253	430	83	0	83	166	0	244	23	267	0	0	0	0	863
08:15	0	207	269	476	85	0	67	152	0	284	27	311	0	0	0	0	939
08:30	0	145	259	404	78	0	66	144	0	209	39	248	0	0	0	0	796
08:45	0	154	223	377	81	0	77	158	0	225	29	254	0	0	0	0	789
Total	0	683	1004	1687	327	0	293	620	0	962	118	1080	0	0	0	0	3387
09:00	0	152	200	352	76	0	75	151	0	188	28	216	0	0	0	0	719
09:15	0	116	211	327	64	0	82	146	0	219	20	239	0	0	0	0	712
09:30	0	133	199	332	64	0	74	138	0	200	25	225	0	0	0	0	695
09:45	0	141	196	337	66	0	60	126	0	198	23	221	0	0	0	0	684
Total	0	542	806	1348	270	0	291	561	0	805	96	901	0	0	0	0	2810
15:00	0	159	171	330	90	0	81	171	0	342	26	368	0	0	0	0	869
15:15	0	185	178	363	89	0	62	151	0	372	45	417	0	0	0	0	931
15:30	0	155	204	359	116	0	73	189	0	350	37	387	0	0	0	0	935
15:45	0	191	190	381	93	0	81	174	0	360	49	409	0	0	0	0	964
Total	0	690	743	1433	388	0	297	685	0	1424	157	1581	0	0	0	0	3699
16:00	0	200	216	416	109	0	59	168	0	350	57	407	0	0	0	0	991
16:15	0	178	206	384	130	0	86	216	0	346	47	393	0	0	0	0	993
16:30	0	207	199	406	116	0	71	187	0	408	44	452	0	0	0	0	1045

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-029 Riverside-I80 WB
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	Riverside Avenue Southbound				I-80 Westbound Ramps Westbound				Riverside Avenue Northbound				I-80 Westbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	0	192	231	423	130	0	62	192	0	391	53	444	0	0	0	0	1059
Total	0	777	852	1629	485	0	278	763	0	1495	201	1696	0	0	0	0	4088
17:00	0	185	255	440	121	0	66	187	0	376	44	420	0	0	0	0	1047
17:15	0	217	269	486	131	0	72	203	0	378	64	442	0	0	0	0	1131
17:30	0	193	215	408	116	0	55	171	0	434	54	488	0	0	0	0	1067
17:45	0	177	190	367	123	0	47	170	0	363	37	400	0	0	0	0	937
Total	0	772	929	1701	491	0	240	731	0	1551	199	1750	0	0	0	0	4182
18:00	0	158	199	357	88	0	49	137	0	344	45	389	0	0	0	0	883
18:15	0	155	156	311	95	0	42	137	0	351	37	388	0	0	0	0	836
18:30	0	111	130	241	87	0	51	138	0	345	34	379	0	0	0	0	758
18:45	0	116	129	245	67	0	50	117	0	230	28	258	0	0	0	0	620
Total	0	540	614	1154	337	0	192	529	0	1270	144	1414	0	0	0	0	3097
Grand Total	0	5098	7371	12469	2687	0	1881	4568	1	8772	1400	10173	0	0	0	0	27210
Apprch %	0	40.9	59.1		58.8	0	41.2		0	86.2	13.8		0	0	0		
Total %	0	18.7	27.1	45.8	9.9	0	6.9	16.8	0	32.2	5.1	37.4	0	0	0	0	
Unshifted	0	5045	7331	12376	2648	0	1842	4490	0	8686	1384	10070	0	0	0	0	26936
% Unshifted	0	99	99.5	99.3	98.5	0	97.9	98.3	0	99	98.9	99	0	0	0	0	99
Bank 2	0	53	40	93	39	0	39	78	1	86	16	103	0	0	0	0	274
% Bank 2	0	1	0.5	0.7	1.5	0	2.1	1.7	100	1	1.1	1	0	0	0	0	1

Start Time	Riverside Avenue Southbound				I-80 Westbound Ramps Westbound				Riverside Avenue Northbound				I-80 Westbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15	0	200	336	536	79	0	37	116	0	212	100	312	0	0	0	0	964
07:30	0	208	320	528	54	0	43	97	0	199	64	263	0	0	0	0	888
07:45	0	189	262	451	64	0	63	127	0	295	37	332	0	0	0	0	910
08:00	0	177	253	430	83	0	83	166	0	244	23	267	0	0	0	0	863
Total Volume	0	774	1171	1945	280	0	226	506	0	950	224	1174	0	0	0	0	3625
% App. Total	0	39.8	60.2		55.3	0	44.7		0	80.9	19.1		0	0	0		
PHF	.000	.930	.871	.907	.843	.000	.681	.762	.000	.805	.560	.884	.000	.000	.000	.000	.940

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

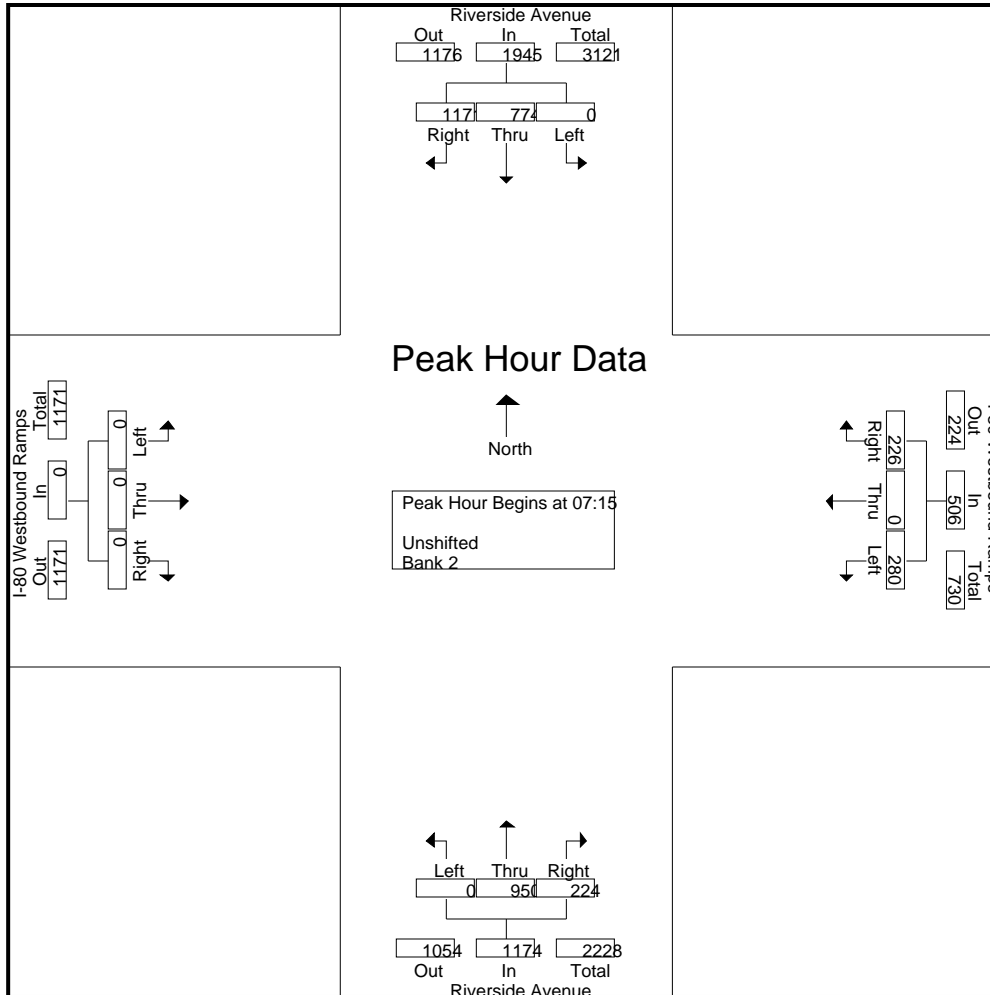
Peak Hour for Entire Intersection Begins at 07:15

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-029 Riverside-I80 WB
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-029 Riverside-I80 WB
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

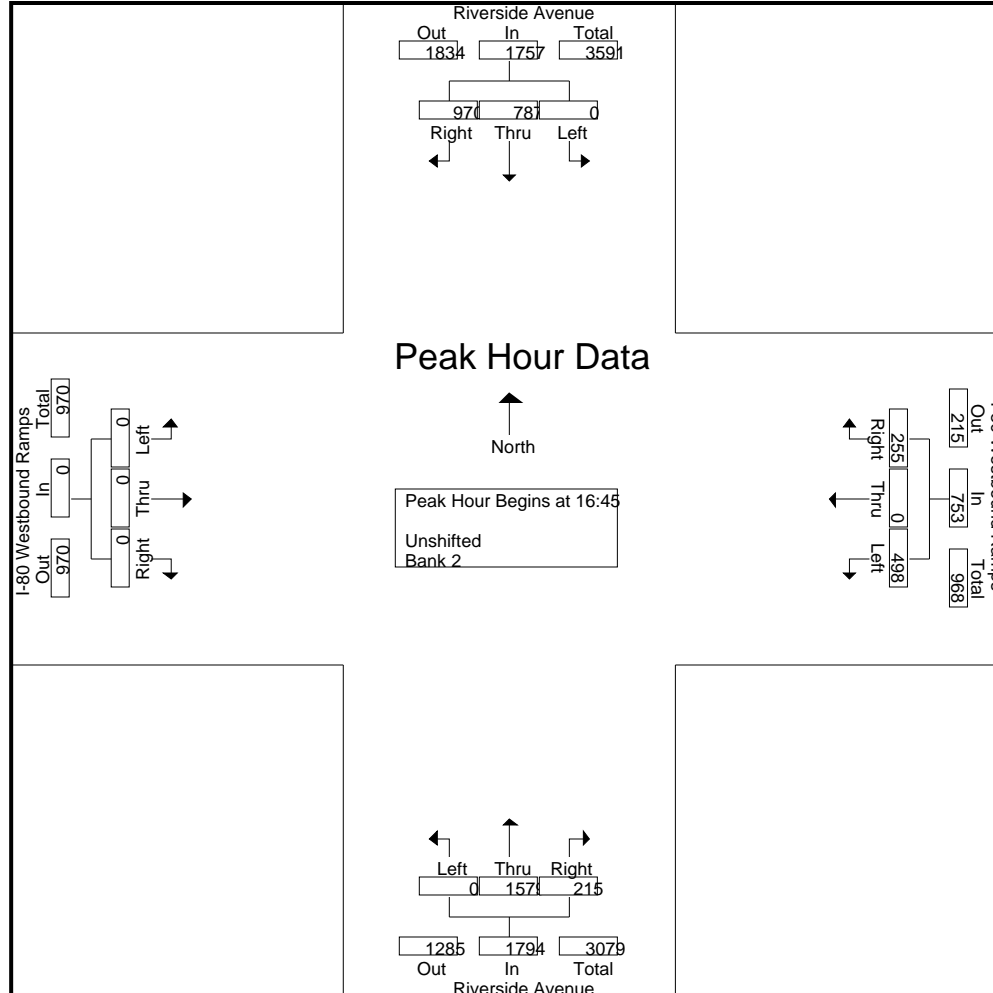
Start Time	Riverside Avenue Southbound				I-80 Westbound Ramps Westbound				Riverside Avenue Northbound				I-80 Westbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	0	192	231	423	130	0	62	192	0	391	53	444	0	0	0	0	1059
17:00	0	185	255	440	121	0	66	187	0	376	44	420	0	0	0	0	1047
17:15	0	217	269	486	131	0	72	203	0	378	64	442	0	0	0	0	1131
17:30	0	193	215	408	116	0	55	171	0	434	54	488	0	0	0	0	1067
Total Volume	0	787	970	1757	498	0	255	753	0	1579	215	1794	0	0	0	0	4304
% App. Total	0	44.8	55.2		66.1	0	33.9		0	88	12		0	0	0		
PHF	.000	.907	.901	.904	.950	.000	.885	.927	.000	.910	.840	.919	.000	.000	.000	.000	.951

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-029 Riverside-I80 WB
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-030 I80 WB-Antelope
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Westbound Ramps Southbound				Antelope Road Westbound				I-80 Westbound Ramps Northbound				Antelope Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	10	0	28	38	0	68	135	203	0	0	0	0	0	139	79	218	459
06:15	20	0	38	58	0	93	168	261	0	0	0	0	0	163	88	251	570
06:30	16	0	38	54	0	108	190	298	0	0	0	0	0	216	130	346	698
06:45	18	0	56	74	0	148	191	339	0	0	0	0	0	315	119	434	847
Total	64	0	160	224	0	417	684	1101	0	0	0	0	0	833	416	1249	2574
07:00	28	0	59	87	0	199	181	380	0	0	0	0	0	349	128	477	944
07:15	32	0	60	92	0	208	150	358	0	0	0	0	0	448	141	589	1039
07:30	39	0	69	108	0	261	134	395	0	0	0	0	0	499	96	595	1098
07:45	34	0	58	92	0	301	144	445	0	0	0	0	0	444	94	538	1075
Total	133	0	246	379	0	969	609	1578	0	0	0	0	0	1740	459	2199	4156
08:00	35	0	93	128	0	221	131	352	0	0	0	0	0	356	81	437	917
08:15	31	0	52	83	0	223	127	350	0	0	0	0	0	325	62	387	820
08:30	25	0	71	96	0	165	108	273	0	0	0	0	0	342	66	408	777
08:45	37	0	69	106	0	149	78	227	0	0	0	0	0	255	75	330	663
Total	128	0	285	413	0	758	444	1202	0	0	0	0	0	1278	284	1562	3177
09:00	33	0	65	98	0	171	94	265	0	0	0	0	0	296	67	363	726
09:15	28	0	72	100	0	157	84	241	0	0	0	0	0	245	63	308	649
09:30	29	0	74	103	0	174	72	246	0	0	0	0	0	278	95	373	722
09:45	32	0	54	86	0	169	101	270	0	0	0	0	0	309	64	373	729
Total	122	0	265	387	0	671	351	1022	0	0	0	0	0	1128	289	1417	2826
15:00	40	0	124	164	0	322	80	402	0	0	0	0	0	292	62	354	920
15:15	55	0	134	189	0	324	88	412	0	0	0	0	0	313	75	388	989
15:30	60	0	161	221	0	303	84	387	0	0	0	0	0	316	56	372	980
15:45	63	0	161	224	0	275	81	356	0	0	0	0	0	288	59	347	927
Total	218	0	580	798	0	1224	333	1557	0	0	0	0	0	1209	252	1461	3816
16:00	65	0	136	201	0	326	85	411	0	0	0	0	0	341	66	407	1019
16:15	73	0	153	226	0	347	93	440	0	0	0	0	0	308	71	379	1045
16:30	63	0	164	227	0	341	78	419	0	0	0	0	0	321	75	396	1042

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-030 I80 WB-Antelope
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Westbound Ramps Southbound				Antelope Road Westbound				I-80 Westbound Ramps Northbound				Antelope Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	73	0	177	250	0	301	74	375	0	0	0	0	0	356	83	439	1064
Total	274	0	630	904	0	1315	330	1645	0	0	0	0	0	1326	295	1621	4170
17:00	102	0	171	273	0	339	87	426	0	0	0	0	0	352	56	408	1107
17:15	95	0	187	282	0	323	86	409	0	0	0	0	0	285	49	334	1025
17:30	66	0	146	212	0	368	73	441	0	0	0	0	0	341	72	413	1066
17:45	59	0	140	199	0	358	79	437	0	0	0	0	0	355	51	406	1042
Total	322	0	644	966	0	1388	325	1713	0	0	0	0	0	1333	228	1561	4240
18:00	44	0	106	150	0	346	85	431	0	0	0	0	0	315	48	363	944
18:15	54	0	150	204	0	288	77	365	0	0	0	0	0	279	42	321	890
18:30	52	0	127	179	0	286	93	379	0	0	0	0	0	261	39	300	858
18:45	47	0	109	156	0	234	70	304	0	0	0	0	0	223	32	255	715
Total	197	0	492	689	0	1154	325	1479	0	0	0	0	0	1078	161	1239	3407
Grand Total	1458	0	3302	4760	0	7896	3401	11297	0	0	0	0	0	9925	2384	12309	28366
Apprch %	30.6	0	69.4		0	69.9	30.1		0	0	0		0	80.6	19.4		
Total %	5.1	0	11.6	16.8	0	27.8	12	39.8	0	0	0	0	0	35	8.4	43.4	
Unshifted	1432	0	3241	4673	0	7816	3365	11181	0	0	0	0	0	9827	2344	12171	28025
% Unshifted	98.2	0	98.2	98.2	0	99	98.9	99	0	0	0	0	0	99	98.3	98.9	98.8
Bank 2	26	0	61	87	0	80	36	116	0	0	0	0	0	98	40	138	341
% Bank 2	1.8	0	1.8	1.8	0	1	1.1	1	0	0	0	0	0	1	1.7	1.1	1.2

Start Time	I-80 Westbound Ramps Southbound				Antelope Road Westbound				I-80 Westbound Ramps Northbound				Antelope Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00	28	0	59	87	0	199	181	380	0	0	0	0	0	349	128	477	944
07:15	32	0	60	92	0	208	150	358	0	0	0	0	0	448	141	589	1039
07:30	39	0	69	108	0	261	134	395	0	0	0	0	0	499	96	595	1098
07:45	34	0	58	92	0	301	144	445	0	0	0	0	0	444	94	538	1075
Total Volume	133	0	246	379	0	969	609	1578	0	0	0	0	0	1740	459	2199	4156
% App. Total	35.1	0	64.9		0	61.4	38.6		0	0	0		0	79.1	20.9		
PHF	.853	.000	.891	.877	.000	.805	.841	.887	.000	.000	.000	.000	.000	.872	.814	.924	.946

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

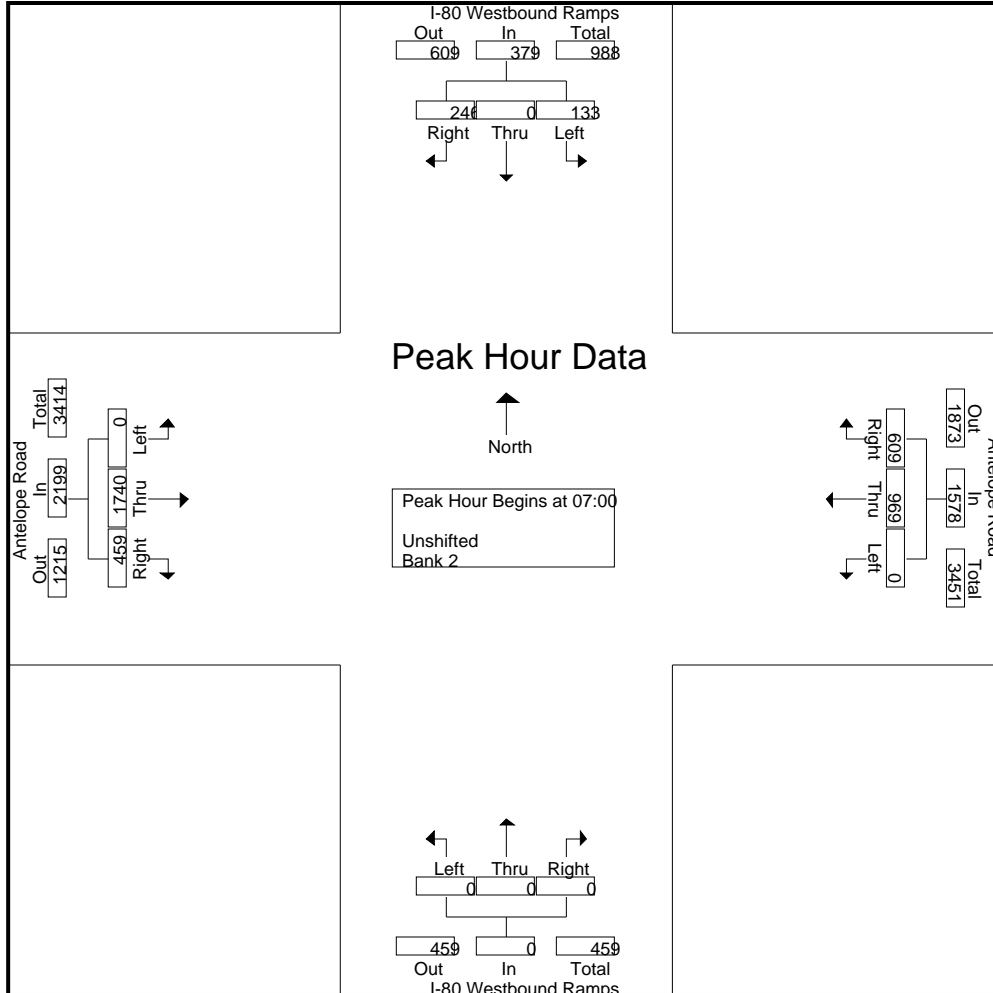
Peak Hour for Entire Intersection Begins at 07:00

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-030 I80 WB-Antelope
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-030 I80 WB-Antelope
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

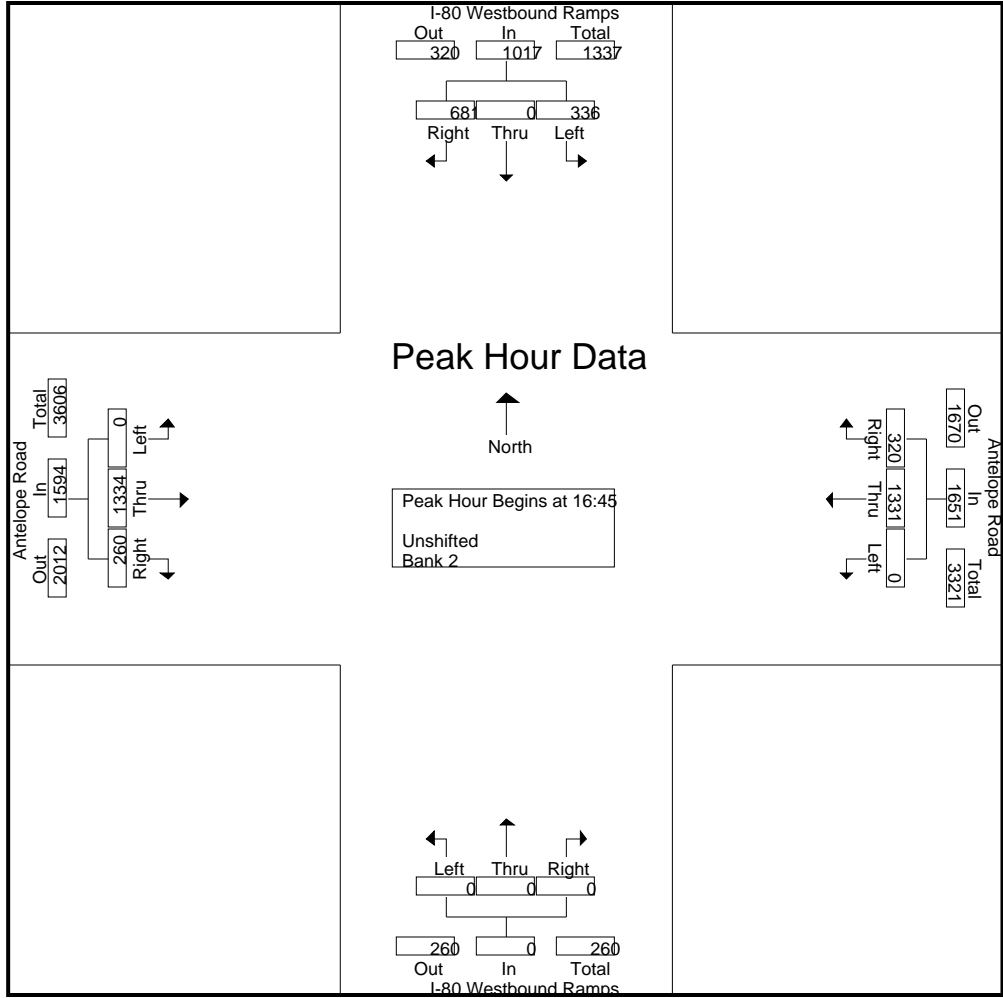
Start Time	I-80 Westbound Ramps Southbound				Antelope Road Westbound				I-80 Westbound Ramps Northbound				Antelope Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:45																	
16:45	73	0	177	250	0	301	74	375	0	0	0	0	0	356	83	439	1064
17:00	102	0	171	273	0	339	87	426	0	0	0	0	0	352	56	408	1107
17:15	95	0	187	282	0	323	86	409	0	0	0	0	0	285	49	334	1025
17:30	66	0	146	212	0	368	73	441	0	0	0	0	0	341	72	413	1066
Total Volume	336	0	681	1017	0	1331	320	1651	0	0	0	0	0	1334	260	1594	4262
% App. Total	33	0	67		0	80.6	19.4		0	0	0		0	83.7	16.3		
PHF	.824	.000	.910	.902	.000	.904	.920	.936	.000	.000	.000	.000	.000	.937	.783	.908	.963

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-030 I80 WB-Antelope
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-031 I80 WB-Elkhorn
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 1

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Westbound Ramps Southbound				Elkhorn Boulevard Westbound				I-80 Westbound Ramps Northbound				Elkhorn Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
06:00	42	0	25	67	0	90	136	226	0	0	0	0	0	191	190	381	674
06:15	50	0	25	75	0	116	182	298	0	0	0	0	0	299	209	508	881
06:30	89	0	43	132	0	132	233	365	0	0	0	0	0	316	257	573	1070
06:45	96	0	48	144	0	199	159	358	0	0	0	0	0	372	222	594	1096
Total	277	0	141	418	0	537	710	1247	0	0	0	0	0	1178	878	2056	3721
07:00	120	0	48	168	0	210	173	383	0	0	0	0	0	439	226	665	1216
07:15	121	0	33	154	0	318	113	431	0	0	0	0	0	543	276	819	1404
07:30	135	0	49	184	0	331	122	453	0	0	0	0	0	554	220	774	1411
07:45	165	0	50	215	0	318	173	491	0	0	0	0	0	522	180	702	1408
Total	541	0	180	721	0	1177	581	1758	0	0	0	0	0	2058	902	2960	5439
08:00	154	0	52	206	0	236	192	428	0	0	0	0	0	486	177	663	1297
08:15	128	0	50	178	0	302	175	477	0	0	0	0	0	435	182	617	1272
08:30	111	0	39	150	0	240	161	401	0	0	0	0	0	427	183	610	1161
08:45	103	0	38	141	0	280	153	433	0	0	0	0	0	425	174	599	1173
Total	496	0	179	675	0	1058	681	1739	0	0	0	0	0	1773	716	2489	4903
09:00	99	0	45	144	0	268	152	420	0	0	0	0	0	343	173	516	1080
09:15	100	0	47	147	0	286	153	439	0	0	0	0	0	357	184	541	1127
09:30	94	0	60	154	0	261	167	428	0	0	0	0	0	408	174	582	1164
09:45	104	0	39	143	0	266	153	419	0	0	0	0	0	335	157	492	1054
Total	397	0	191	588	0	1081	625	1706	0	0	0	0	0	1443	688	2131	4425
15:00	127	0	85	212	0	579	166	745	0	0	0	0	0	342	139	481	1438
15:15	114	0	97	211	0	612	162	774	0	0	0	0	0	349	130	479	1464
15:30	134	0	102	236	0	584	186	770	0	0	0	0	0	375	178	553	1559
15:45	147	0	102	249	0	672	164	836	0	0	0	0	0	381	156	537	1622
Total	522	0	386	908	0	2447	678	3125	0	0	0	0	0	1447	603	2050	6083
16:00	136	0	112	248	0	638	156	794	0	0	0	0	0	366	167	533	1575
16:15	146	0	86	232	0	629	165	794	0	0	0	0	0	356	116	472	1498
16:30	130	0	86	216	0	664	182	846	0	0	0	0	0	426	174	600	1662

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-031 I80 WB-Elkhorn
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 2

Groups Printed- Unshifted - Bank 2

Start Time	I-80 Westbound Ramps Southbound				Elkhorn Boulevard Westbound				I-80 Westbound Ramps Northbound				Elkhorn Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
16:45	171	0	101	272	0	656	174	830	0	0	0	0	0	394	141	535	1637
Total	583	0	385	968	0	2587	677	3264	0	0	0	0	0	1542	598	2140	6372
17:00	121	0	104	225	0	675	162	837	0	0	0	0	0	409	151	560	1622
17:15	181	0	122	303	0	635	189	824	0	0	0	0	0	386	144	530	1657
17:30	145	0	124	269	0	630	177	807	0	0	0	0	0	416	152	568	1644
17:45	174	0	105	279	0	622	119	741	0	0	0	0	0	328	101	429	1449
Total	621	0	455	1076	0	2562	647	3209	0	0	0	0	0	1539	548	2087	6372
18:00	146	0	87	233	0	682	105	787	0	0	0	0	0	378	145	523	1543
18:15	141	0	84	225	0	592	147	739	0	0	0	0	0	365	138	503	1467
18:30	109	0	74	183	0	569	136	705	0	0	0	0	0	433	150	583	1471
18:45	98	0	59	157	0	506	139	645	0	0	0	0	0	357	112	469	1271
Total	494	0	304	798	0	2349	527	2876	0	0	0	0	0	1533	545	2078	5752
Grand Total	3931	0	2221	6152	0	13798	5126	18924	0	0	0	0	0	12513	5478	17991	43067
Apprch %	63.9	0	36.1		0	72.9	27.1		0	0	0		0	69.6	30.4		
Total %	9.1	0	5.2	14.3	0	32	11.9	43.9	0	0	0	0	0	29.1	12.7	41.8	
Unshifted	3888	0	2195	6083	0	13656	5033	18689	0	0	0	0	0	12424	5390	17814	42586
% Unshifted	98.9	0	98.8	98.9	0	99	98.2	98.8	0	0	0	0	0	99.3	98.4	99	98.9
Bank 2	43	0	26	69	0	142	93	235	0	0	0	0	0	89	88	177	481
% Bank 2	1.1	0	1.2	1.1	0	1	1.8	1.2	0	0	0	0	0	0.7	1.6	1	1.1

Start Time	I-80 Westbound Ramps Southbound				Elkhorn Boulevard Westbound				I-80 Westbound Ramps Northbound				Elkhorn Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15	121	0	33	154	0	318	113	431	0	0	0	0	0	543	276	819	1404
07:30	135	0	49	184	0	331	122	453	0	0	0	0	0	554	220	774	1411
07:45	165	0	50	215	0	318	173	491	0	0	0	0	0	522	180	702	1408
08:00	154	0	52	206	0	236	192	428	0	0	0	0	0	486	177	663	1297
Total Volume	575	0	184	759	0	1203	600	1803	0	0	0	0	0	2105	853	2958	5520
% App. Total	75.8	0	24.2		0	66.7	33.3		0	0	0		0	71.2	28.8		
PHF	.871	.000	.885	.883	.000	.909	.781	.918	.000	.000	.000	.000	.000	.950	.773	.903	.978

Peak Hour Analysis From 06:00 to 09:45 - Peak 1 of 1

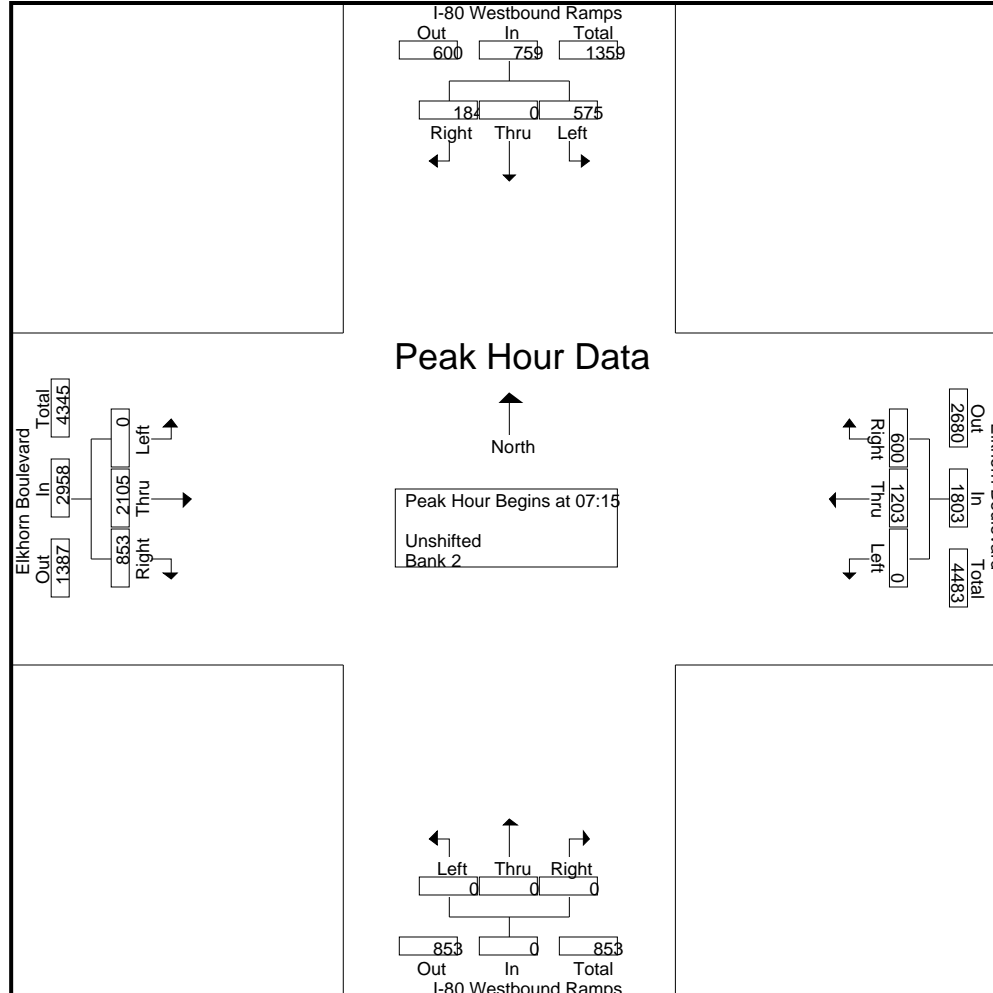
Peak Hour for Entire Intersection Begins at 07:15

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-031 I80 WB-Elkhorn
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 3



All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-031 I80 WB-Elkhorn
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 4

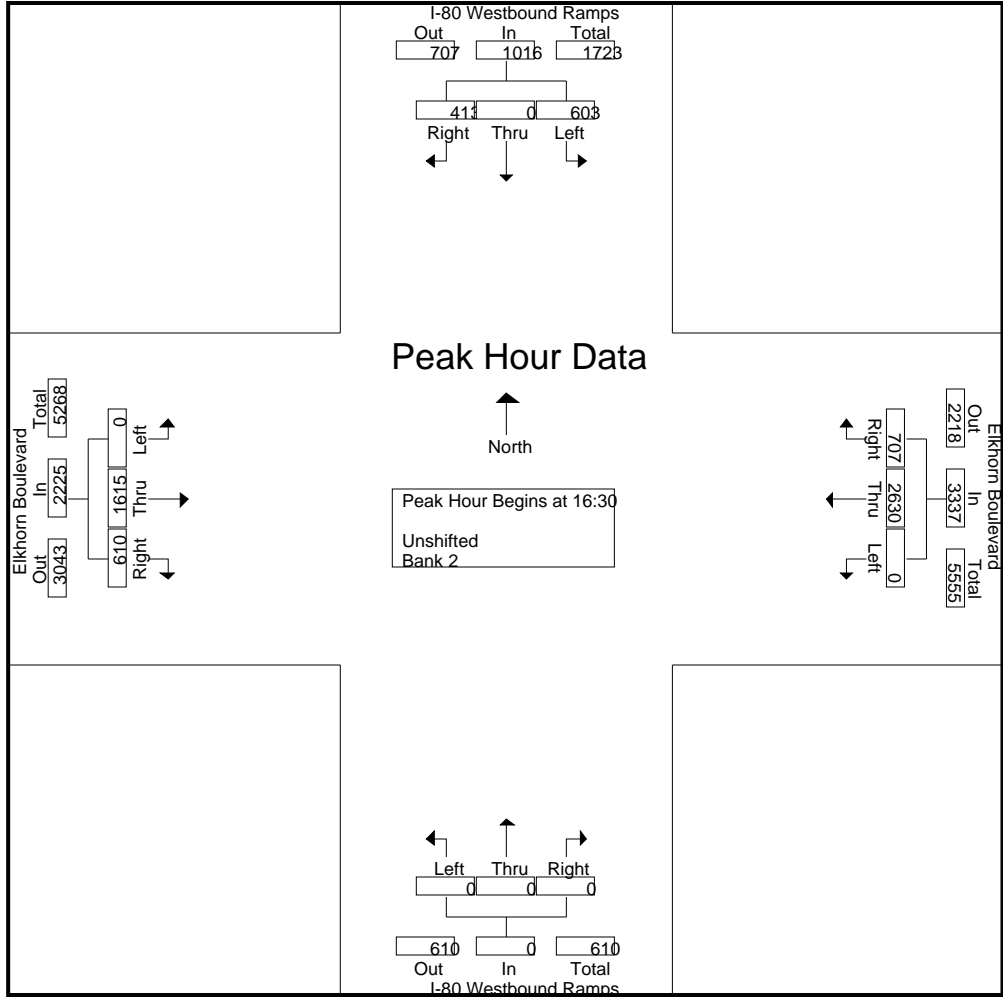
Start Time	I-80 Westbound Ramps Southbound				Elkhorn Boulevard Westbound				I-80 Westbound Ramps Northbound				Elkhorn Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 15:00 to 18:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:30																	
16:30	130	0	86	216	0	664	182	846	0	0	0	0	0	426	174	600	1662
16:45	171	0	101	272	0	656	174	830	0	0	0	0	0	394	141	535	1637
17:00	121	0	104	225	0	675	162	837	0	0	0	0	0	409	151	560	1622
17:15	181	0	122	303	0	635	189	824	0	0	0	0	0	386	144	530	1657
Total Volume	603	0	413	1016	0	2630	707	3337	0	0	0	0	0	1615	610	2225	6578
% App. Total	59.4	0	40.6		0	78.8	21.2		0	0	0		0	72.6	27.4		
PHF	.833	.000	.846	.838	.000	.974	.935	.986	.000	.000	.000	.000	.000	.948	.876	.927	.989

All Traffic Data

(916) 771-8700

Placer County
 Pedestrians and Bicycles on Bank 1
 Heavy Trucks on Bank 2
 7-10am from 2-14-12

File Name : 12-7003-031 I80 WB-Elkhorn
 Site Code : 00000000
 Start Date : 1/31/2012
 Page No : 5



I-80/SR 65 Interchange Improvements

**Travel Demand Forecasts Memorandum
June 2012**

MEMORANDUM

Date: June 29, 2012

To: I-80/SR-65 Interchange Project Development Team

From: David Stanek & Ronald T. Milam, Fehr & Peers

Subject: I-80/SR-65 Interchange – Travel Demand Forecasts

RS11-2872

Fehr & Peers is preparing the traffic report for the Interstate 80 (I-80) / State Route 65 (SR-65) Interchange project in Placer County. This technical memorandum documents the travel demand forecasts for the project as an interim submittal for review and comment. Please review the memorandum and provide comments and/or suggestions for improvement.

BACKGROUND

The I-80/SR-65 project proposes to increase capacity and improve safety for freeway-to-freeway movements between I-80 to the west and SR-65. The study area for the traffic analysis is shown in Figure 1.

The transportation analysis for the I-80/SR-65 Interchange project uses an integrated modeling approach that has three different levels of detail: macro, meso, and micro. At the macro level, the regional travel forecasting model (SACMET) is used to forecast peak period origin-destination (OD) traffic volume flows between traffic analysis zones both internal and external to the study area. At the meso level, the peak period OD flows are divided into four one-hour trip tables and disaggregated into three modes – single occupant vehicle (SOV), high occupancy vehicle (HOV), and truck – and then assigned to the subarea roadway network using a VISUM model. The assignment process is based on congested travel times that reflect roadway link speeds and capacity. At the micro level, the traffic volumes are converted to individual vehicles that are assigned to the operational study area using a VISSIM model that contains detailed inputs governing traffic controls (signal timings), geometrics (lane configurations), and driver behavior.

The traffic forecasts are developed using the first two modeling platforms (macro and meso). The first platform is a modified version of the regional SACMET model developed by SACOG for the Metropolitan Transportation Plan (MTP)/Sustainable Communities Strategy (SCS). The second platform is VISUM sub-area trip assignment model, which was used to assign the trips generated from the SACMET model to a

detailed roadway network within the study area. Figure 1 displays the mesoscopic and microscopic analysis areas.

SOCIOECONOMIC FORECASTS

The traffic volume forecasts are derived from future socioeconomic projections. We started with regional socioeconomic projections developed by SACOG for the regional MTP/SCS. These were reviewed by the project development team (PDT) and modified to better reflect local plans. Figure 2 displays the final growth projections within the study area.

When reviewing the traffic volume forecasts, consider that the socioeconomic projections are the largest single influence. They will affect volume projections to a greater extent than the roadway network changes or any other modeling component. If these forecasts vary in reality, it will have a direct effect on future traffic volumes.

PLANNED TRANSPORTATION NETWORK

The traffic volume forecasts are also influenced by modifications to the existing transportation network according to improvement projects anticipated to be constructed by the design year (2040). These projects are based on the financially constrained project list contained in the MTP/SCS but also consider projects the PDT agreed would likely be constructed by the design year. The rationale for adding projects to the MTP/SCS list was that the design year is five years beyond the 2035 horizon of the MTP/SCS. This creates a longer timeframe for revenue to accumulate. Further, the additional socioeconomic growth added to the model would also be contributing to transportation revenue to help pay for these improvements.

Figure 3 shows the location of the separate projects that are planned to be constructed by 2040. Table 1 lists the projects and notes whether each will be constructed by the construction year (2020) or design year (2040).

TABLE 1: PLANNED SEPARATE PROJECTS

Category	Project
Complete by 2020 (Construction Year)	<ul style="list-style-type: none"> • Atkinson St: widen from 2 to 4 lanes from Foothills Blvd to south of Dry Creek • Baseline Rd: widen from 3 to 4 lanes from Brady Ln to Fiddymment Rd • Baseline Rd: widen from 2 to 4 lanes from Fiddymment Rd to Watt Ave • Baseline Rd: widen from 2 to 4 lanes from Watt Ave to (future) 16th St • Baseline Rd: widen from 2 to 4 lanes from (future) 16th St to county line • Blue Oaks Blvd: construct 4 lanes from Fiddymment Rd to Hayden Pkwy and 2 lanes from Hayden Pkwy to Westbrook Blvd • Blue Oaks Blvd: widen from 2 to 4 lanes from Hayden Pkwy to Westbrook Blvd and construct 4 lanes from Westbrook Blvd to Santucci Blvd • Cirby Way: widen from 4 to 5 lanes from Riverside Ave to Regency Ave • Cook Riolo Rd: widen from 1 to 2 lanes Dry Creek Bridge • Dominguez Rd: construct 2 lanes from Granite Dr to Sierra College Blvd • East Joiner Pkwy: widen from 2 to 4 lanes from Del Webb Pkwy to Twelve Bridges Dr • Eureka Rd: widen from 2 to 4 lanes from Sierra College Blvd to city limits • Ferrari Ranch Rd: construct 2 lanes from city limit to Moore Rd • Fiddymment Rd: widen to 4 lanes from Pleasant Grove Blvd to Baseline Rd • I-80/Eureka Rd On-ramp Improvements • Industrial Ave: widen from 2 to 4 lanes from SR-65 to Twelve Bridges Dr • Industrial Ave: replace 2 lane bridge at Pleasant Grove Creek • Market St: construct 2 lanes from Baseline Road to Pleasant Grove Blvd • Pacific St: widen to 4 lanes from Sierra Meadows Dr to Loomis town limits • PFE Rd: widen from 2 to 4 lanes from Watt Ave to Walerga Rd • Placer Pkwy: construct 4-lane expressway from SR-65 to Santucci Blvd • Pleasant Grove Blvd: widen from 4 to 6 lanes from Foothills Blvd to Woodcreek Oaks Blvd • Pleasant Grove Blvd: widen from 2 to 4 lanes from Fiddymment Road to Santucci Blvd • Rocklin Rd: widen from 4 to 6 lanes from Granite Dr to I-80 Westbound Ramps • Roseville Rd: widen from 2 to 4 lanes from city limits to Cirby Way • Santucci Blvd: construct 4 lanes from Baseline Road to Blue Oaks Blvd • Sierra College Blvd: widen to 6 lanes from county line to Olympus Dr • Sierra College Blvd: widen from 4 to 5 lanes from Nightwatch Dr to Aguilar Tributary • Sierra College Blvd: widen from 4 to 6 lanes from Aguilar Tributary to I-80 • Sierra College Blvd: widen from 4 to 6 lanes from Granite Dr to Bankhead Rd • Sierra College Blvd: widen from 2 to 4 lanes from Taylor Rd to north town limits • SR-65 Lincoln Bypass – Phase 1 & 2A • SR-65/Ferrari Ranch Rd Interchange • SR-65/Whitney Ranch Pkwy: construct interchange • Sunset Blvd: construct 2 lanes from Fiddymment Rd to Foothills Blvd • Sunset Blvd: widen from 2 to 4 lanes from Cincinnati Ave to SR-65 • Sunset Blvd: widen to 6 lanes from SR-65 to West Stanford Ranch Rd • Twelve Bridges Dr: widen from 2 to 4 lanes from Industrial Ave to SR-65 including interchange • University Ave: construct 4 lanes from Whitney Ranch Pkwy to Ranch View Dr • University Ave: construct 4 lanes from Sunset Blvd to Whitney Ranch Pkwy • Walerga Rd: widen from 2 to 4 lanes from Baseline Rd to county line • Washington Blvd: widen to 4 lanes from Sawtell Rd to Pleasant Grove Blvd • Whitney Ranch Pkwy: construct 6 lanes from SR-65 to east of Wildcat Blvd

TABLE 1: PLANNED SEPARATE PROJECTS

Category	Project
Complete by 2035	<ul style="list-style-type: none"> • Aviation Blvd: widen from 2 to 4 lanes from Venture Dr to 0.5 mi north of Venture Dr • Dyer Ln: construct 4 lanes from Watt Ave to Baseline Rd • Fiddymment Rd: widen from 2 to 4 lanes from Roseville city limits to Athens Rd • Foothills Blvd: construct 2 lanes from Roseville city limits to Sunset Blvd • I-80/Horseshoe Bar Rd Interchange: widen overcrossing from 2 to 4 lanes • I-80/Rocklin Rd Interchange improvements • Industrial Ave: widen from 2 to 4 lanes from Twelve Bridges Dr to Athens Ave • Nicolaus Rd: widen from 2 to 4 lanes from Airport Rd to Aviation Blvd • Midas Ave: construct grade separation at UPRR • Rocklin Rd: widen from 2 to 4 lanes from Sierra College Blvd to Loomis town limits • Rocklin Rd: widen from 2 to 4 lanes from west Loomis town limits to Barton Rd • North Antelope Rd: widen from 2 to 4 lanes from county line to PFE Rd • Sierra College Blvd: widen from 2 to 4 lanes from SR-193 to Loomis town limits • Sierra College Blvd: widen to 4 lanes from (future) Valley View Pkwy to Loomis town limits • SR-65/Galleria Blvd Interchange Improvements (Phase II) • Sunset Blvd: widen from 4 to 6 lanes from Stanford Ranch Rd to Topaz Ave • Sunset Blvd: widen from 4 to 6 lanes from Topaz Ave to Whitney Blvd • Sunset Blvd: widen from 4 to 6 lanes from Whitney Blvd to Pacific St • Taylor Rd: widen from 2 to 4 lanes from Horseshoe Bar Rd to King Rd • Valley View Pkwy: construct 2 lanes from Park Dr to Sierra College Blvd • West Oaks Blvd: construct 4 lanes from terminus to (future) Whitney Ranch Pkwy • Whitney Ranch Pkwy: construct 4 lanes from terminus to Whitney Oaks Dr • Watt Ave: widen from 2 to 4 lanes from Baseline Rd to county line
Assumed to be Complete by 2040 (Design Year)	<ul style="list-style-type: none"> • Baseline Rd: widen from 4 to 6 lanes from Fiddymment Rd to Watt Ave • Foothills Blvd: widen to 6 lanes from Cirby Way to Misty Wood Dr • Nelson Ln: widen from 2 to 4 lanes from SR-65 (Lincoln Bypass) to Nicolaus Rd • PFE Rd: widen from 2 to 4 lanes from North Antelope Rd to Roseville city limits • Santucci Blvd: construct 6 lanes from Baseline Road to Blue Oaks Blvd • SR-65 Capacity and Operational Improvements: I-80 to Blue Oaks Blvd • Taylor Rd: widen from 2 to 4 lanes from Roseville Pkwy to I-80 • Taylor Rd: widen from 2 to 4 lanes from I-80 to city limits • Westbrook Blvd: construct new road from Baseline Rd to Pleasant Grove Blvd • Westbrook Blvd: construct new road from Pleasant Grove Blvd to Blue Oaks Blvd • Westbrook Blvd: construct new road from Blue Oaks Blvd to city limits

Sources: SACOG and Fehr & Peers, 2012

PROJECT ALTERNATIVES

The following project alternatives will be analyzed in the transportation analysis report.

- No Build Alternative – includes the planned projects, but no improvements to the I-80/SR-65 Interchange.
- Transportation System Management (TSM) Alternative – a set of alternate improvements in the study area including ramp metering strategies, signal coordination, park and ride lot and transit stop changes, driver information signs, and auxiliary lanes on westbound I-80 from Douglas

Boulevard to Riverside Avenue, on I-80 from SR-65 to Rocklin Road, and on SR-65 between Galleria Boulevard and I-80.

- No Taylor Alternative – reconstruction of the I-80/SR-65 interchange from a trumpet (Type F-6) to a directional (F-5) design, including removal of the I-80/Taylor Road interchange and auxiliary lanes on I-80 from Eureka Road to SR-65 and on SR-65 from I-80 to Galleria Boulevard.
- Half Taylor Alternative – same as the No Taylor Alternative with the existing I-80/Taylor Road ramps relocated to the inside of the I-80/SR-65 interchange
- Taylor Diamond Alternative – same as the Half Taylor Alternative with ramps to and from the east added as a tight diamond interchange (L-1)
- Taylor Trumpet Alternative – same as the Half Taylor Alternative with ramps to and from the east added as a trumpet interchange (L-12)

From a forecasting perspective, the last two alternatives are similar since the connection points for the proposed I-80/Taylor Road interchange occur at about the same location. Therefore, these two alternatives will share one set of forecasts, called the "Full Taylor Alternative" in this memorandum.

Traffic forecasts were developed for one additional alternative: Full Taylor Alternative with Antelope Creek Drive Connection. In this alternative, Antelope Creek Drive is extended east across the railroad tracks to Taylor Road. The traffic forecasts for this alternative will be used for a qualitative assessment, rather than the detailed traffic analysis that will be done for the other alternatives.

DESIGN YEAR FORECASTS

From a macro perspective, the proposed project alternatives would not change regional travel demand. The most significant effects on future traffic volumes will occur in terms of trip routing within the meso-scale study area due to travel time differences caused by the alternatives. Therefore, all project alternatives use the same set of trip tables, which means that volumes at the subarea boundaries are similar across alternatives.

The volume forecast process began with isolating the incremental peak period volume growth (2008 to 2035) between traffic analysis zones (TAZs) in the subarea using the modified SACMET model (macro level). This incremental growth was then added to the base year VISUM trip table (meso level) that was derived from the Airsage cell phone data. The incremental SACMET growth was inspected to verify that the changes in origin-destination trips were commensurate with the location of socioeconomic growth. Individual origin-destination pair volumes were not allowed to decrease between base and cumulative years.

In the next step, the four-hour peak period trip tables were divided into hourly trip tables by mode: SOV, HOV, and truck. The conversion from peak period to hourly trip tables used the existing ratio of hourly traffic volume to peak period volume. The mode share for HOVs and trucks was based on the relative peak period mode share in the 2035 SACMET model. For the entire meso study area, the overall forecast HOV shares are 18 and 19 percent during the AM and PM peak periods, respectively. The truck share is 14 percent during both peak periods.

Some adjustments were made to the HOV shares for select locations based on previous comments from Caltrans about HOV forecasts being lower than observed conditions on I-80. Table 2 shows the AM and PM peak hour HOV percentages for the I-80 western gateway from the 2035 SACMET model, the 2012 traffic counts, and the proposed 2040 forecast values. The 2008 and 2035 SACMET model forecasts show similar values of 11 to 13 percent at this gateway. These values are lower than the traffic counts that were collected early this year. The proposed 2040 HOV percentages use the 2012 traffic count percentages for the off-peak directions. In the peak direction, a five percentage point increase was assumed to compensate for the difference between model estimates and counts. Additionally, traffic congestion is expected to be more severe in the design year, which would encourage the formation of more carpools.

Direction	2035 SACMET		2012 Counts		2040 Forecast	
	AM	PM	AM	PM	AM	PM
Eastbound	11%	13%	15%	17%	15%	22%
Westbound ¹	13%	13%	14%	18%	19%	18%

Note: 1. The count location was at the Riverside Ave/Auburn Blvd overcrossing, but the westbound study area gateway is between Elkhorn Blvd and Madison Ave.

Source: Fehr & Peers, 2012

The five percentage point increase was also validated based on a June 2012 sampling of traffic volumes at the I-80/Douglas Boulevard, I-80/Eureka Road, and SR-65/Galleria Boulevard on-ramps, which found HOV percentages ranging from 9 to 25 percent for the AM peak hour and 14 to 36 percent for the PM peak hour. The AM and PM peak hour averages of 16 and 24 percent from these samples are generally similar to the 2035 SACMET forecasts of 18 and 19 percent, respectively. However, peak direction HOV percentages were some of the largest values observed. The adjustments noted in Table 2 result in HOV volume forecasts that are at or near the HOV lane operating capacity under design year conditions, so they were considered reasonable for purposes of this study.

The future year VISUM trip tables were then assigned to each project alternative network. These networks included all the planned transportation improvements identified above plus unique features of each alternative. The preliminary forecasts from this step were reviewed and adjusted for any anomalies such as unexpected decreases in traffic volumes when compared to existing conditions. A few decreases occur that are expected as noted below.

- Riverside Avenue slip on-ramp to westbound I-80 – This ramp shows a decrease over existing volumes. This decrease is allowed since the cumulative roadway network includes several projects that increase parallel capacity between west Roseville and Sacramento County (widening Baseline Road/Riego Road between SR-99 and Foothills Boulevard, widening Watt Avenue, etc.). These capacity enhancements redistribute some existing long-distance trips from Placer County to Sacramento County to alternative routes.

- Sunset Boulevard loop on-ramp to southbound SR-65 – The construction of the SR-65/Whitney Ranch Parkway interchange provides an alternate route so that the demand at SR-65/Sunset Boulevard is lower.
- Taylor Road off-ramp from eastbound I-80 for the Half and Full Taylor Alternatives – With the widening of the eastbound to northbound freeway connector, traffic destined to Rocklin can use SR-65 to Stanford Ranch Road rather than the more indirect route of Taylor Road to Sunset Boulevard.

The final trip tables and the travel paths associated with them from the VISUM assignment will be input to VISSIM for final assignment and analysis.

Figure 4 shows the existing conditions AM and PM peak hour volumes for comparison. Figures 5 through 10 display the AM and PM peak hour traffic volume forecasts for the project alternatives. These volumes represent traffic demand that may not be fully accommodated during the peak hour, which will be determined as part of the VISSIM analysis.

Exhibits 1 through 4 show comparison plots between project alternatives. The orange and red colors indicate a volume decrease for the AM and PM peak hours, respectively. The blue and green colors indicate a volume increase for the AM and PM peak hours, respectively.

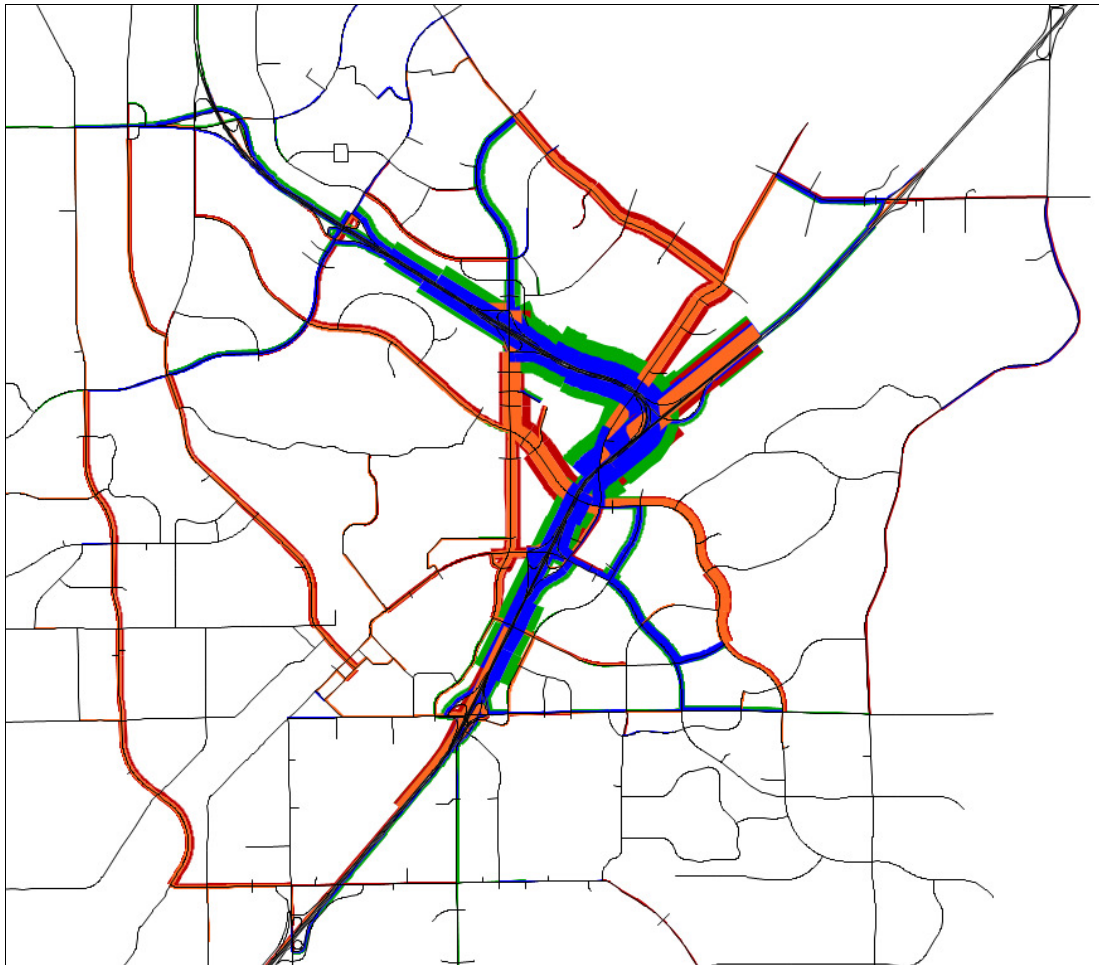


Exhibit 1. Volume Comparison of No Build and No Taylor Alternatives

Exhibit 1 shows a comparison of the No Taylor and No Build Alternatives. With the additional capacity at the I-80/SR-65 interchange, volumes are higher under the No Taylor Alternative from Douglas Boulevard on I-80 to Blue Oaks Boulevard on SR-65. Volume increases also occur on arterials that intersect this freeway segment: Eureka Road east of I-80, Stanford Ranch Road north of SR-65, and Pleasant Grove Boulevard and Blue Oaks Boulevard west of SR-65. Routes parallel to the freeway segment show decreases: Foothill Boulevard, Washington Boulevard, Roseville Parkway, and Galleria Boulevard/Harding Boulevard. Removing the I-80/Taylor Road interchange shifts traffic from Taylor Road and Sunset Boulevard to SR-65 and Stanford Ranch Road. The differences between the No Build Alternative and the other freeway reconstruction alternatives (Half and Full Taylor) are similar.

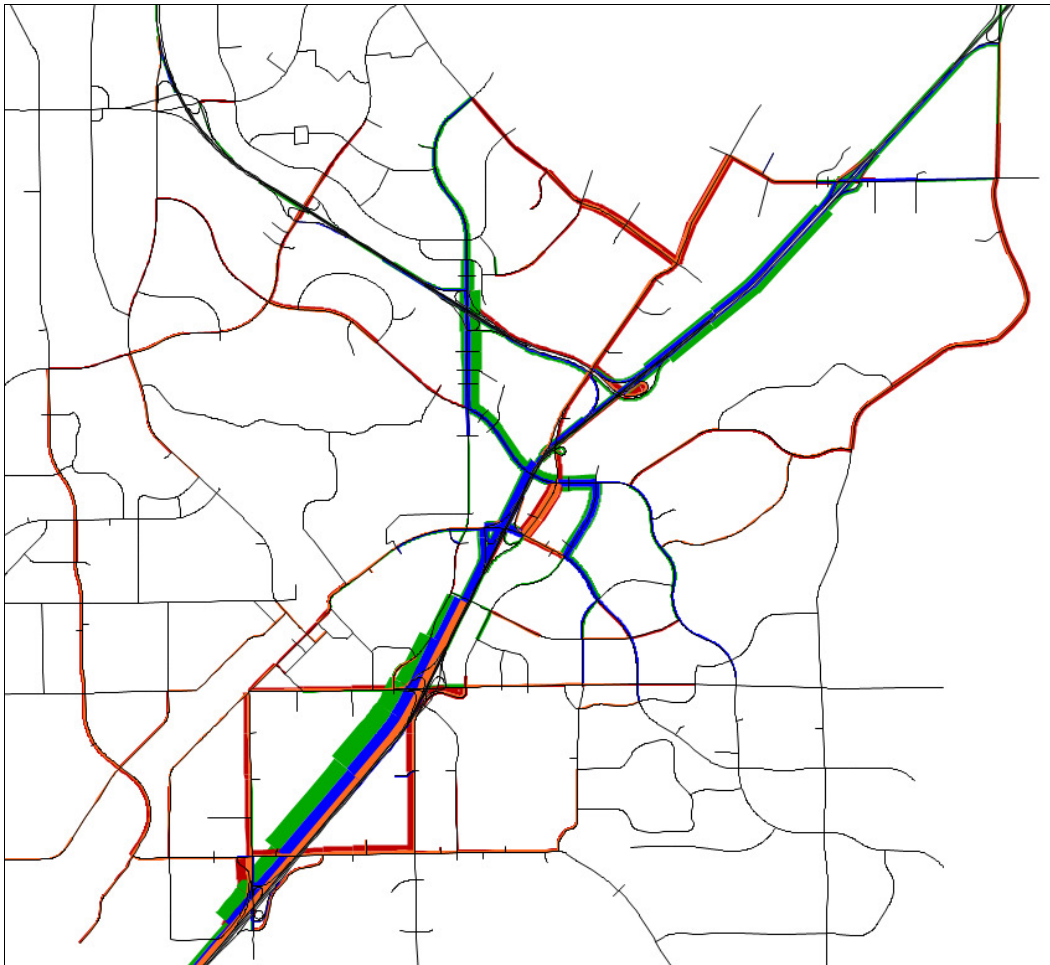


Exhibit 2. Volume Comparison of No Build and TSM Alternatives

Exhibit 2 compares the TSM and No Build Alternatives. Volume increases are shown for the locations with additional auxiliary lanes along I-80: westbound between Douglas Boulevard and between SR-65 and Rocklin Road. The signal coordination improvements along Galleria Boulevard and Roseville Parkway are expected to provide higher volumes, too. Volume decreases would occur on the parallel routes at the auxiliary lane locations: Douglas Blvd, Riverside Avenue, Sunrise Avenue, and Cirby Way to the south and Taylor Road and Sierra College Boulevard to the north. Despite the addition of auxiliary lanes, the traffic demand volume for SR-65 between I-80 and Galleria Boulevard is not forecasted to change much. While the auxiliary lanes would provide more capacity, the I-80 ramps to and from the west would remain over capacity, which would constrain the demand volume.

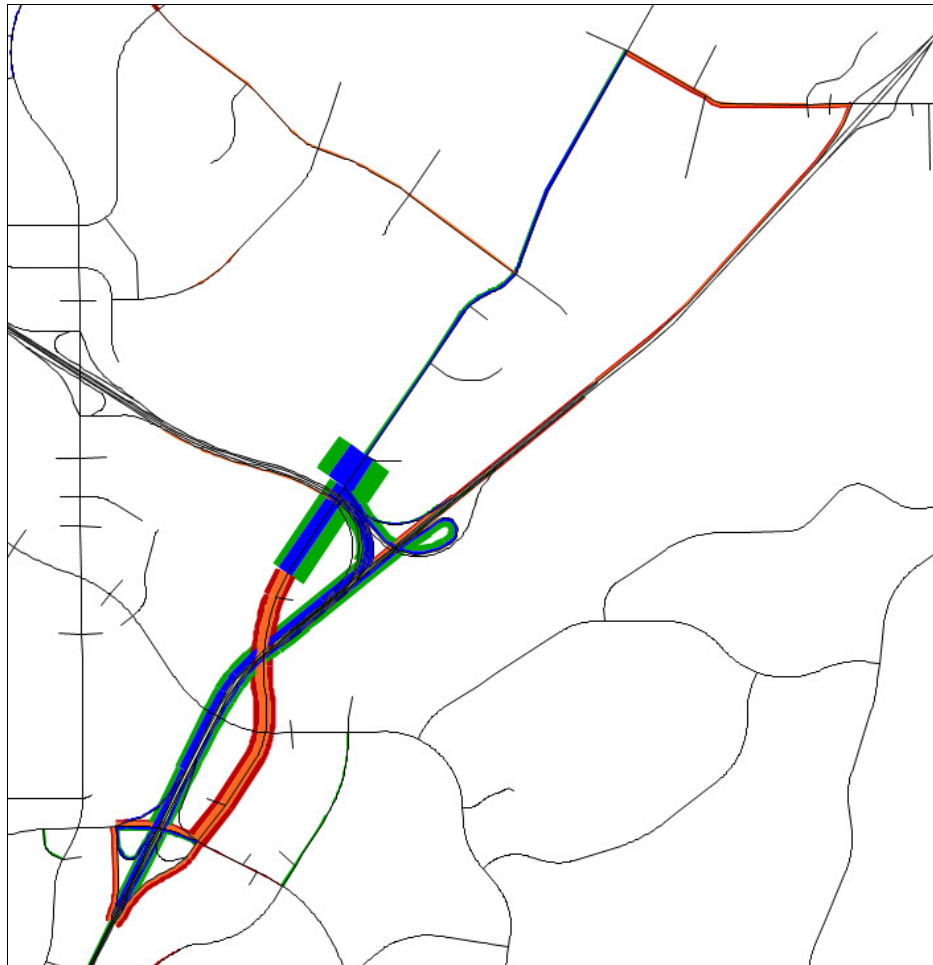


Exhibit 3. Volume Comparison of No Taylor and Half Taylor Alternatives

Exhibit 3 shows the volume differences between the No Taylor and Half Taylor Alternatives. Although both alternatives would expand the I-80/SR-65 interchange, the Half Taylor Alternative restores the existing Taylor Road connections. As a result, traffic volume would mostly shift from the Eureka Road interchange to the new Taylor Road interchange. The Rocklin Road interchange would see some diversion, but no change would occur at the SR-65/Galleria Boulevard interchange. As noted above, the increase in capacity at the freeway-to-freeway interchange would shift volume to the Galleria Boulevard interchange without regard to whether an interchange is provided at Taylor Road.

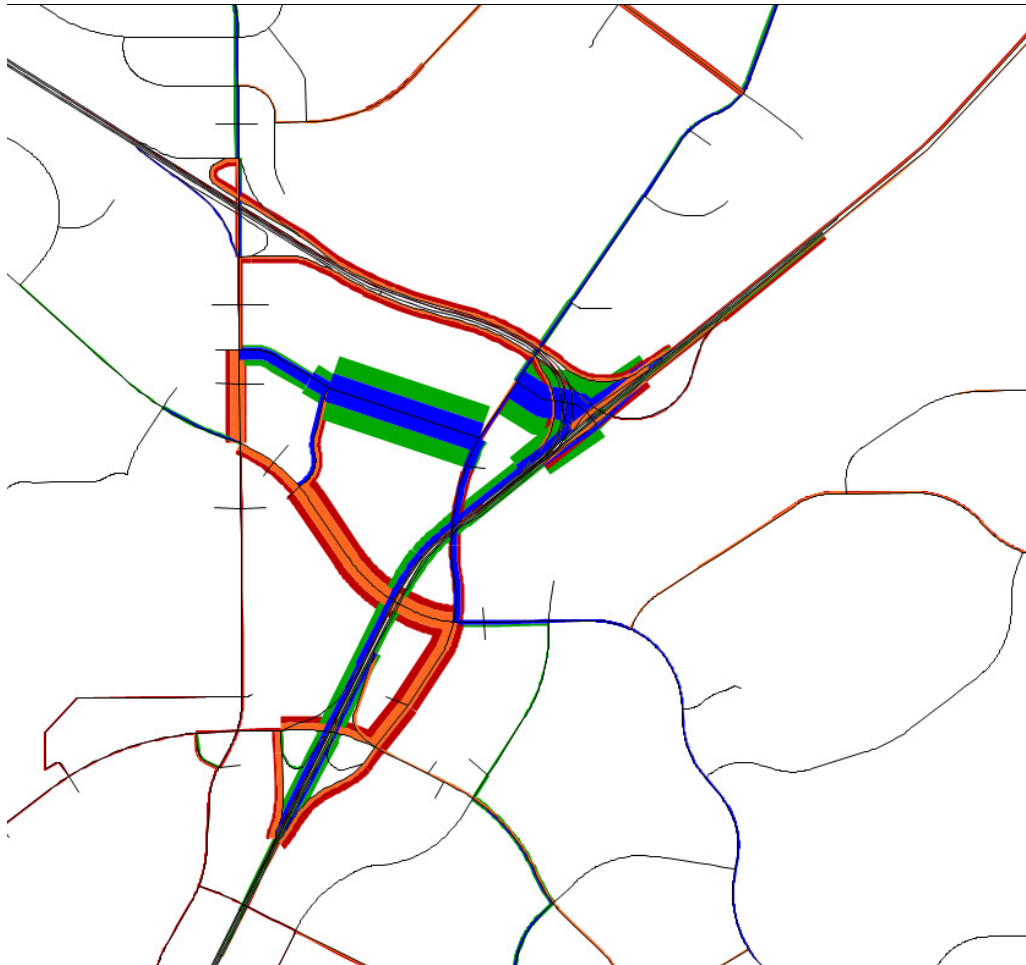


Exhibit 4. Volume Comparison showing the Antelope Creek Drive Connection

Exhibit 4 shows the effect of adding the Antelope Creek Drive connection to Taylor Road under the Full Taylor Alternative. The new connection to the retail areas along Galleria Boulevard would increase travel demand for the I-80/Taylor Road interchange, Taylor Road north of Roseville Parkway, and I-80 between Eureka Road and Taylor Road. Traffic would shift from the I-80/Eureka Road and SR-65/Galleria Boulevard interchanges. In particular, the demand volume would be lower for the SR-65 viaduct between I-80 and Galleria Boulevard, which parallels the proposed Antelope Creek Drive connection.

The VISUM software models HOV lanes as separate roadway links to account for the additional HOV-only capacity. Due to the close-spacing of the ramps, access to the HOV direct connectors at the I-80/SR-65 interchange is restricted in the model to traffic west of Eureka Road and north of Galleria Boulevard. The resulting HOV lane projections for the project alternatives are listed in Table 3.

TABLE 3: HOV LANE VOLUME FOR DESIGN YEAR CONDITIONS										
Location	No Build		TSM		No Taylor		Half Taylor		Full Taylor	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Eastbound I-80: Eureka Rd to SR-65	850	1,380	850	1,370	880	1,520	900	1,590	900	1,680
Westbound I-80: SR-65 to Eureka Rd	1,100	910	1,140	930	1,310	1,070	1,330	1,020	1,300	1,010
Eastbound I-80 to Northbound SR-65	n/a	n/a	n/a	n/a	570	1,170	560	1,150	570	1,110
Southbound SR-65 to Westbound I-80	n/a	n/a	n/a	n/a	940	600	940	590	890	580
Northbound SR-65: I-80 to Galleria Blvd	100 ¹	960	100 ¹	950	620	1,530	630	1,520	640	1,490
Southbound SR-65: Galleria Blvd to I-80	280	430	300	470	940	680	940	670	890	680
Note: 1. An estimated minimum value. Source: Fehr & Peers, 2012										

Under the No Build Alternative, HOVs will use the regular direct connector ramps to travel between the HOV lanes on I-80 and SR-65. Because the ramps will be over capacity, the demand will be constrained. In particular, the AM peak hour HOV lane volume on northbound SR-65 would be particularly low. With demand constrained at the I-80 interchange, northbound SR-65 would be relatively free from congestion, so the HOV lane would not provide a travel time advantage.

With the addition of the HOV direct connector ramps, the mainline HOV lane volume would increase. The HOV direct connector peak-hour volume is projected to range from 560 to 1,170 vehicles per hour depending on the direction and peak hour. With the HOVs from the westbound to northbound connector added in, the HOV lane volume on northbound SR-65 would be similar to the eastbound I-80 volume. HOV lane volumes would be similar across the build alternatives.

The traffic forecasts for the study intersections are still under development. They will be finalized after comments have been received on the preliminary design year forecasts for the freeway mainline and ramps.

CONSTRUCTION YEAR FORECASTS

The construction year (2020) forecasts will be developed by interpolating between the hourly matrices for the baseline (2012) traffic volume estimates and the design year (2040) forecasts. Using VISUM, the resulting matrices will be assigned to the roadway network that corresponds to the planned projects expected to be completed by 2020 (as shown in Table 1). Due to these changes, construction year

demand volumes at any particular location may not be the exact linearly interpolated value between the existing and design year volumes.

This process presumes a linear growth relationship and captures some of the influence of project alternatives on trip assignment. One of the potential limitations of this approach is that recent growth has not kept pace with the projected linear growth rate. The sluggish economic recovery from the 2008/09 recession may result in actual construction year volumes that are lower than the projections, but this outcome is acceptable for the purpose of designing and evaluating project alternatives.

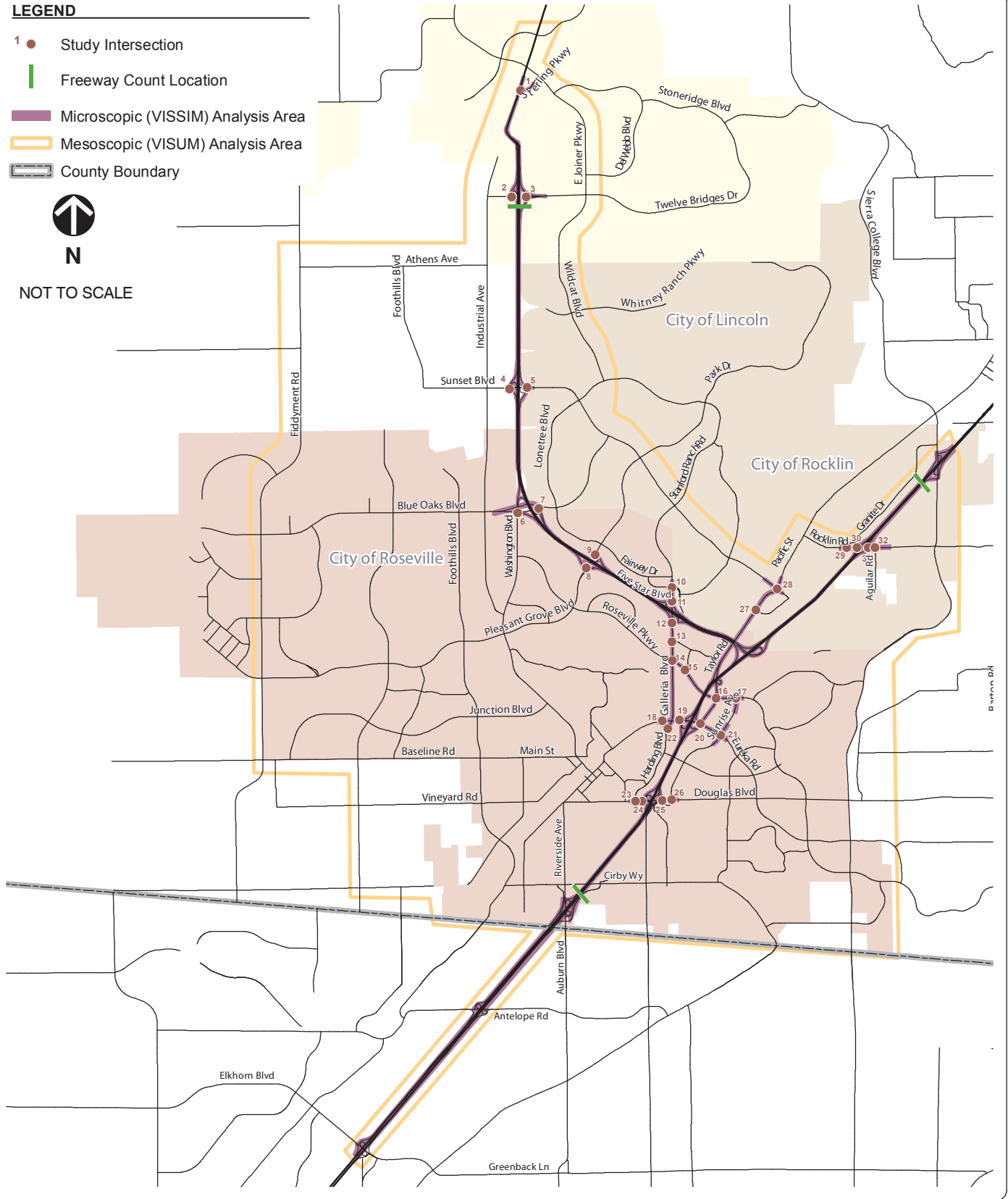
LEGEND

- 1 ● Study Intersection
- █ Freeway Count Location
- █ Microscopic (VISSIM) Analysis Area
- █ Mesoscopic (VISUM) Analysis Area
- ▭ County Boundary



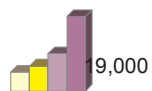
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NOT TO SCALE



LEGEND

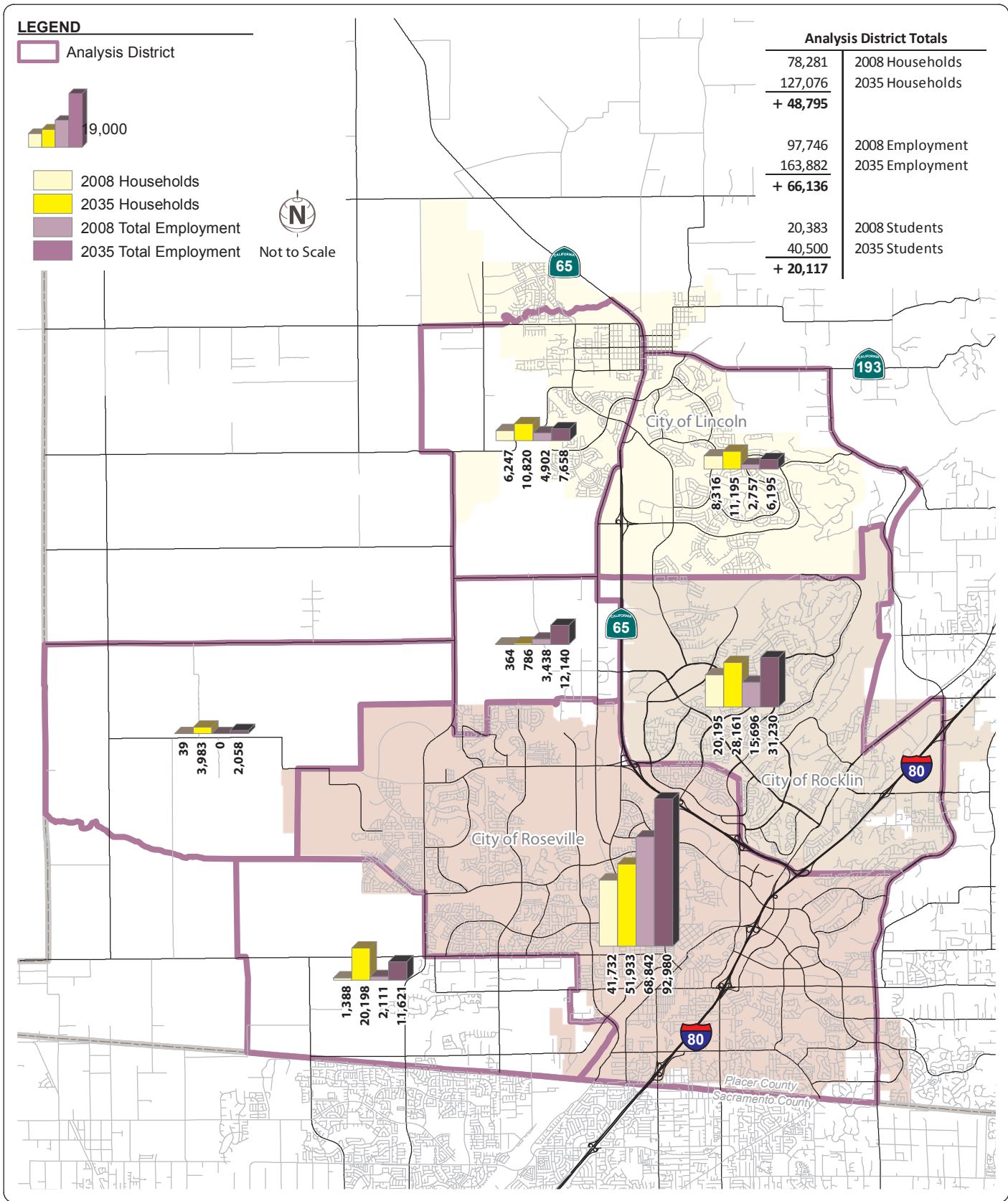
Analysis District



- 2008 Households
- 2035 Households
- 2008 Total Employment
- 2035 Total Employment










N
Not to Scale

Analysis District Totals	
78,281	2008 Households
127,076	2035 Households
+ 48,795	
97,746	2008 Employment
163,882	2035 Employment
+ 66,136	
20,383	2008 Students
40,500	2035 Students
+ 20,117	



LEGEND

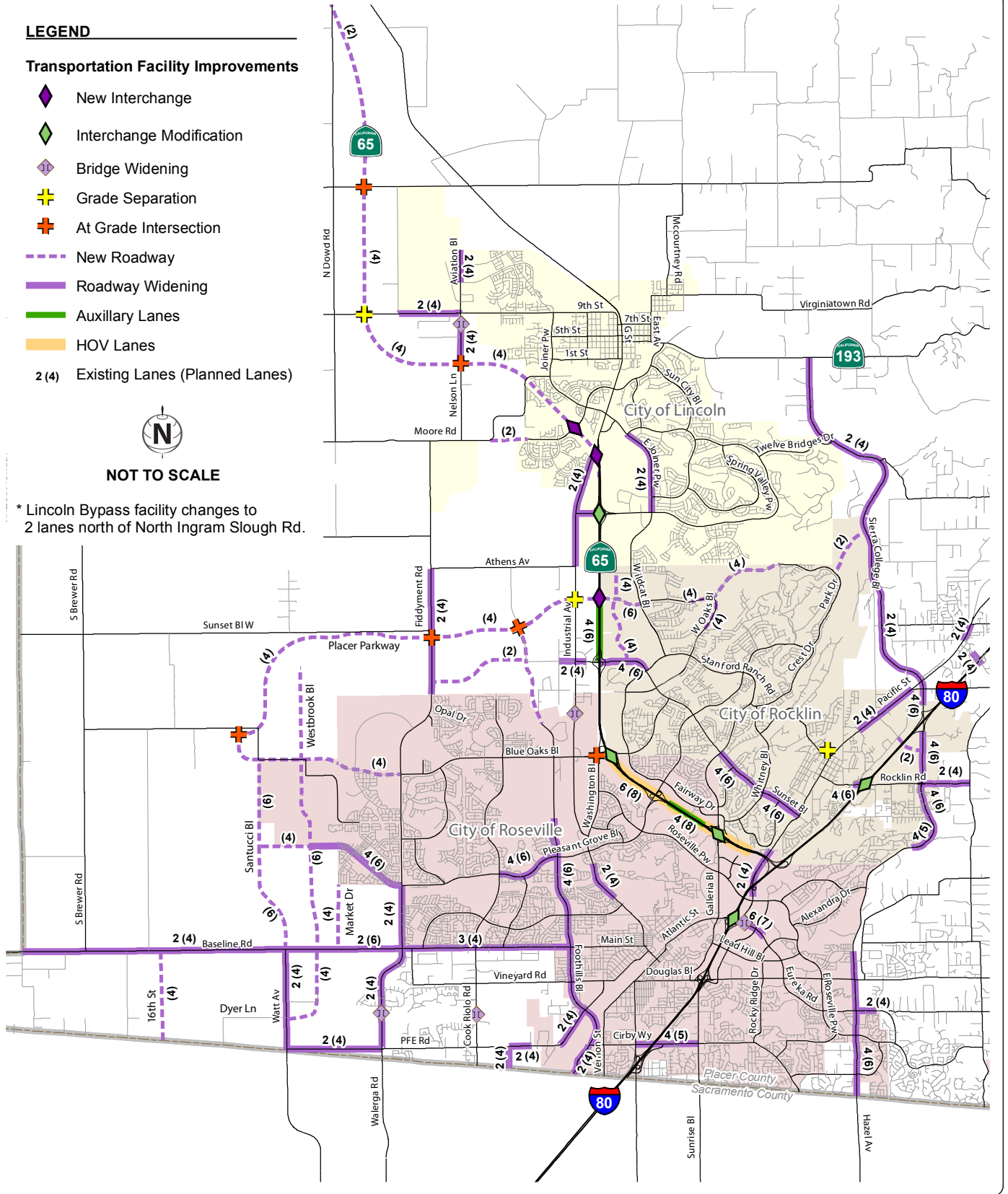
Transportation Facility Improvements

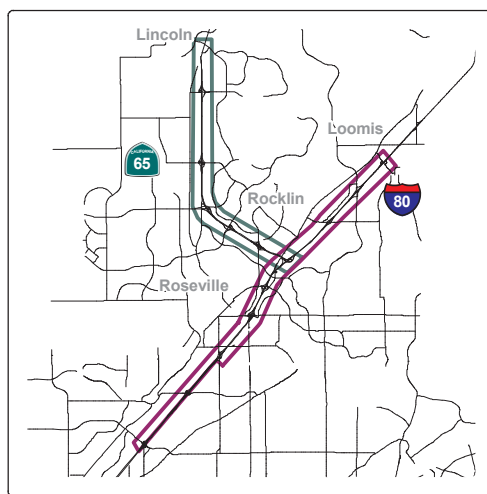
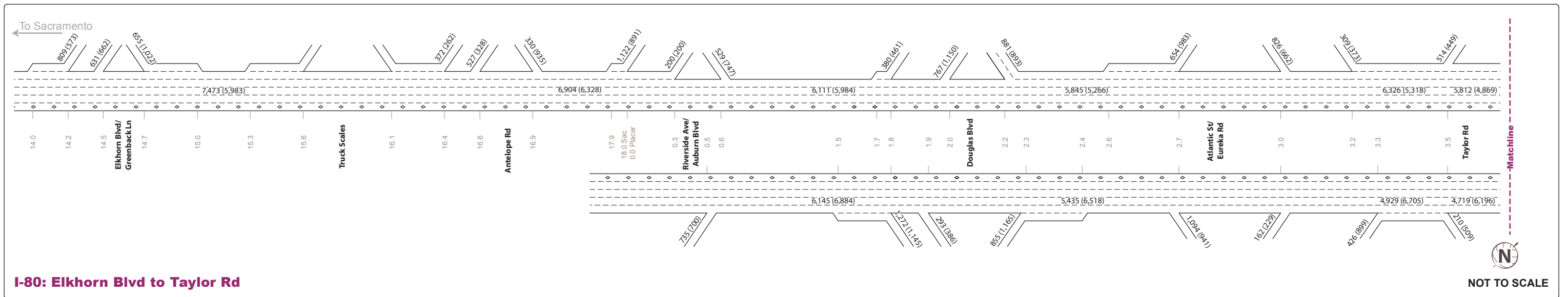
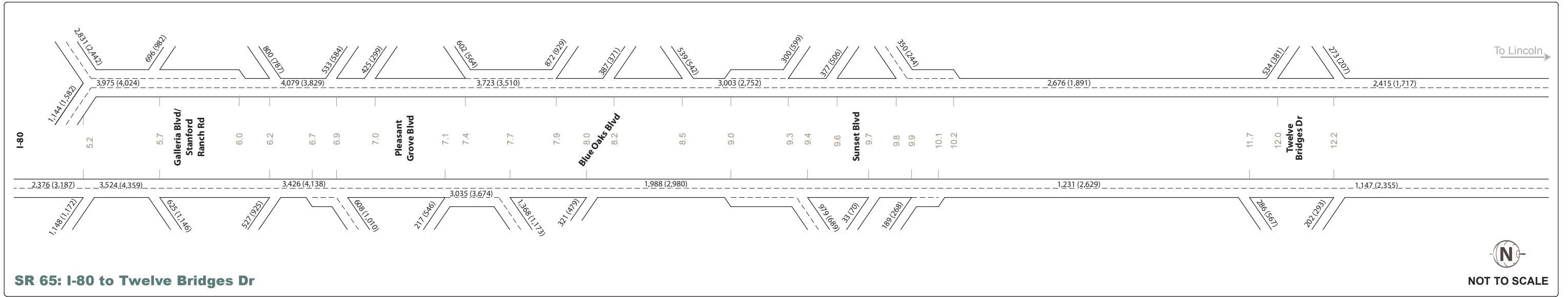
-  New Interchange
-  Interchange Modification
-  Bridge Widening
-  Grade Separation
-  At Grade Intersection
-  New Roadway
-  Roadway Widening
-  Auxillary Lanes
-  HOV Lanes
- 2 (4) Existing Lanes (Planned Lanes)



NOT TO SCALE

* Lincoln Bypass facility changes to 2 lanes north of North Ingram Slough Rd.



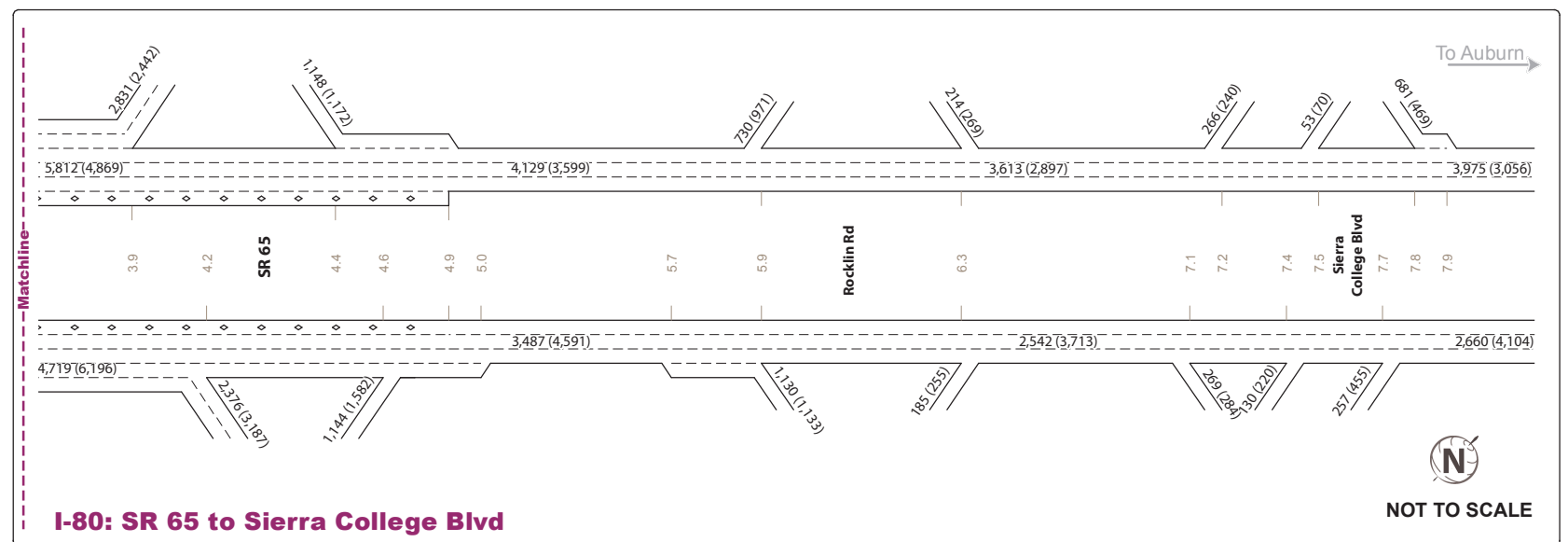


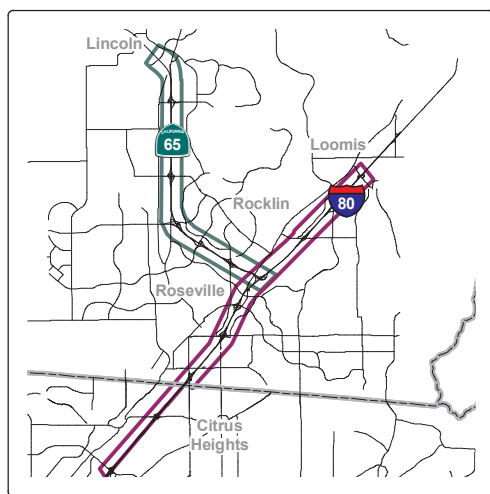
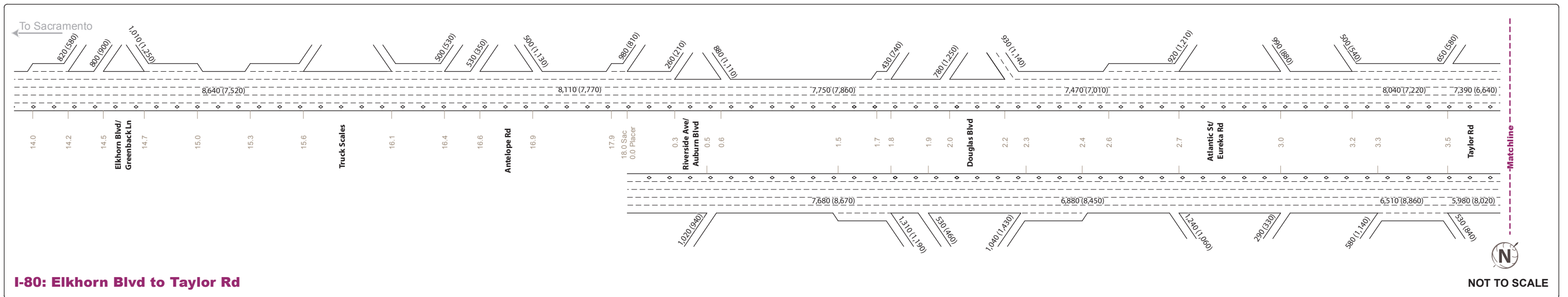
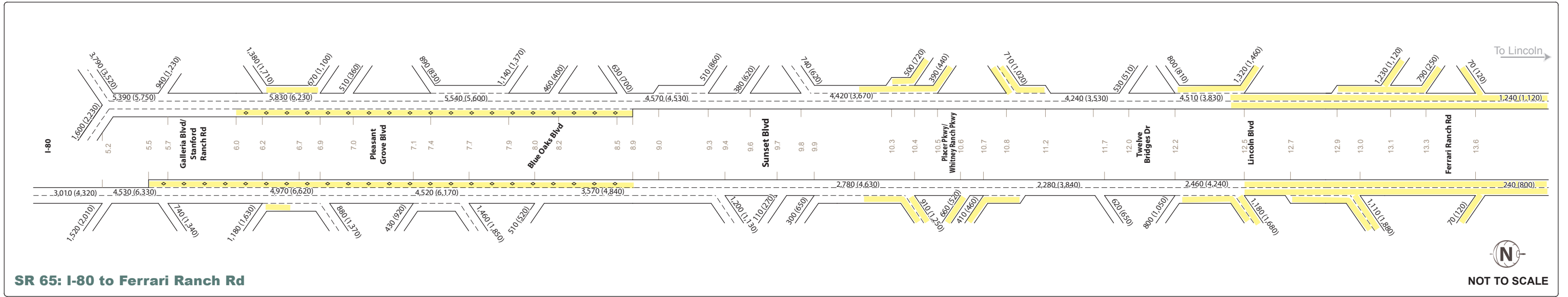
LEGEND

AM (PM) Peak Hour Traffic Volume

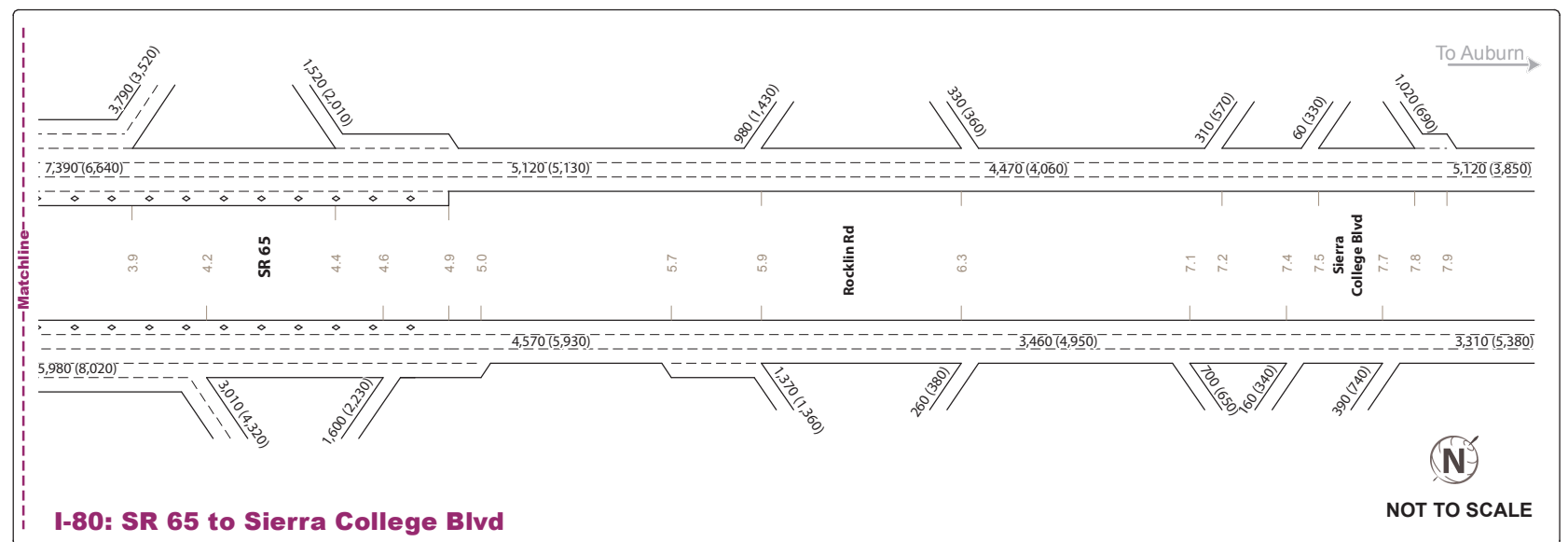
10.1 Postmile

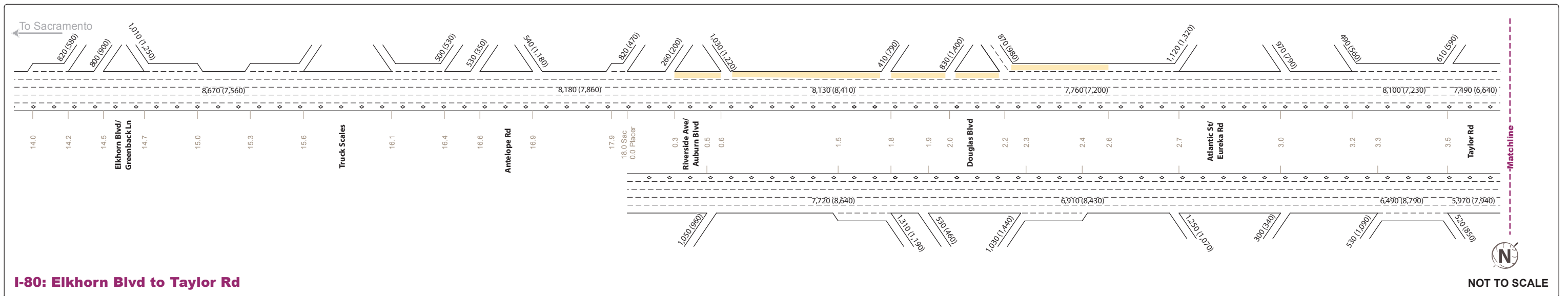
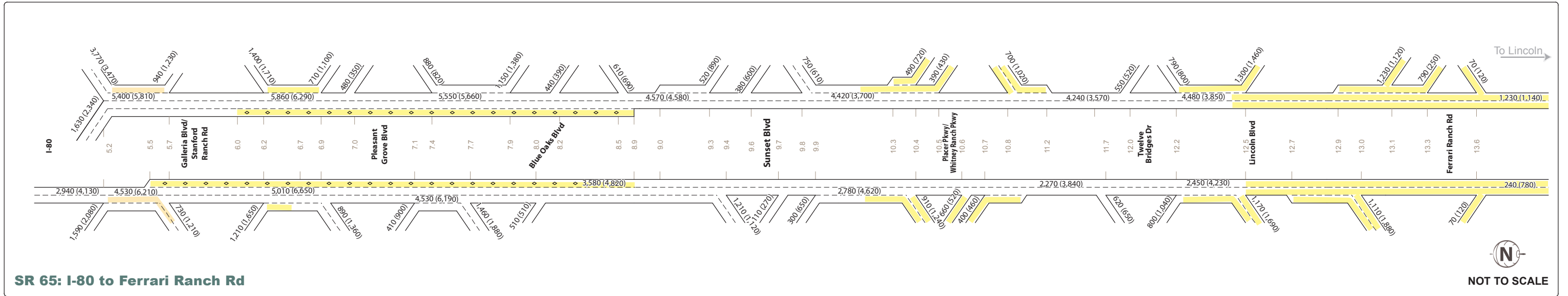
NOTE: Traffic volumes collected in February 2012.



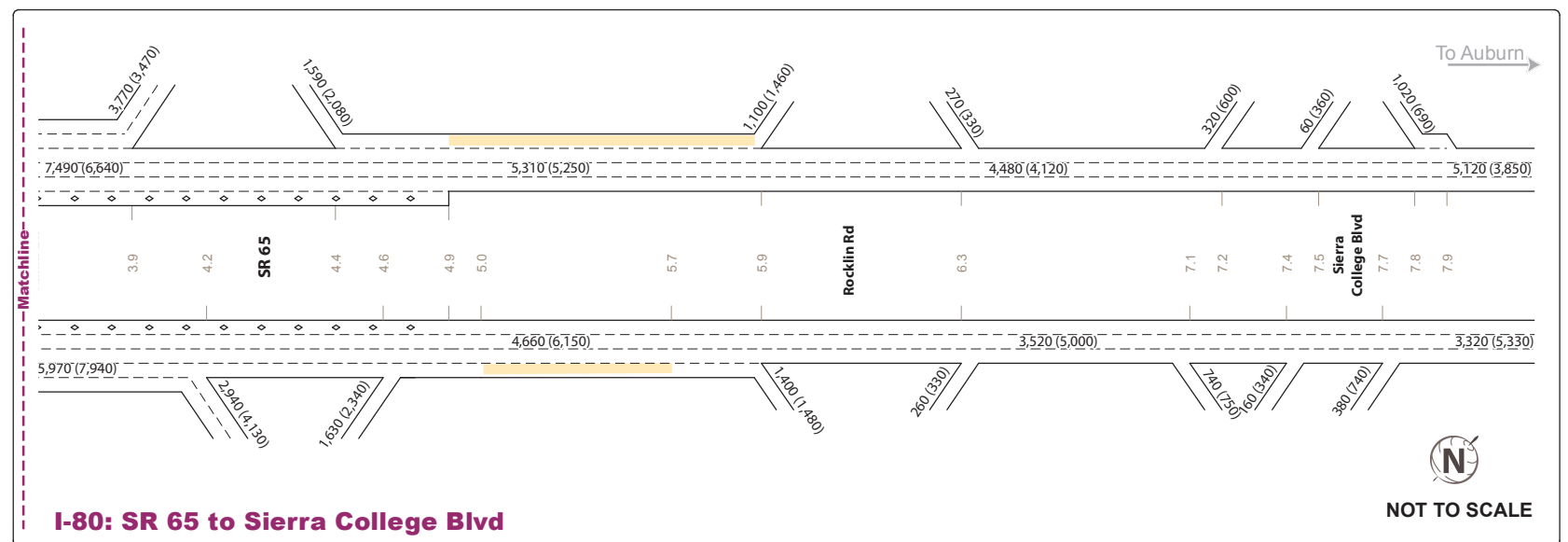


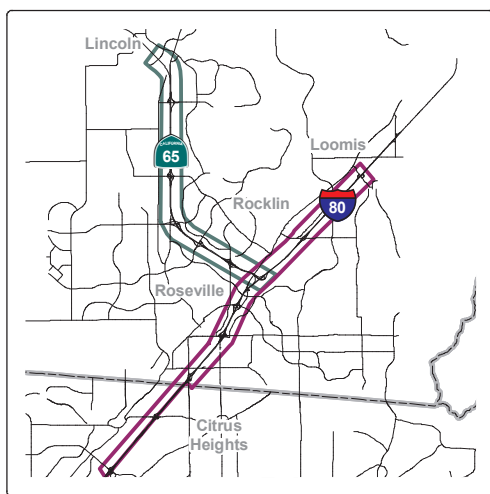
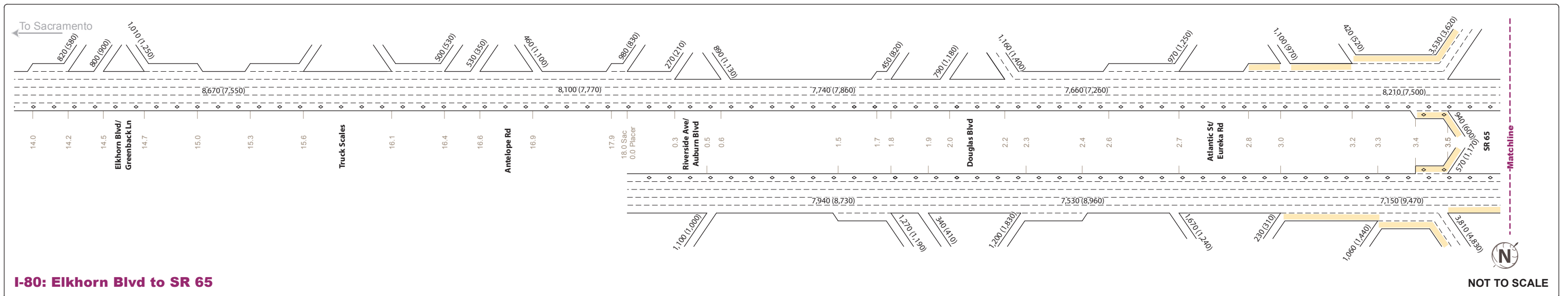
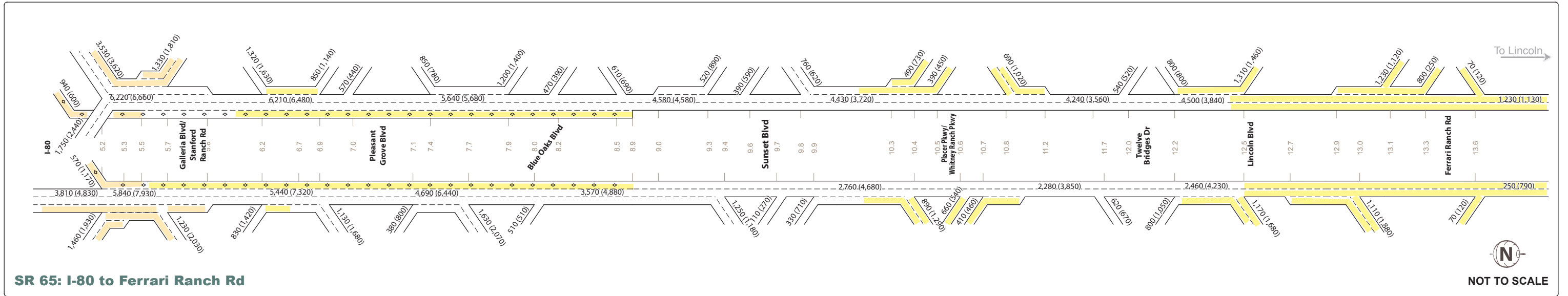
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Separate Planned Projects



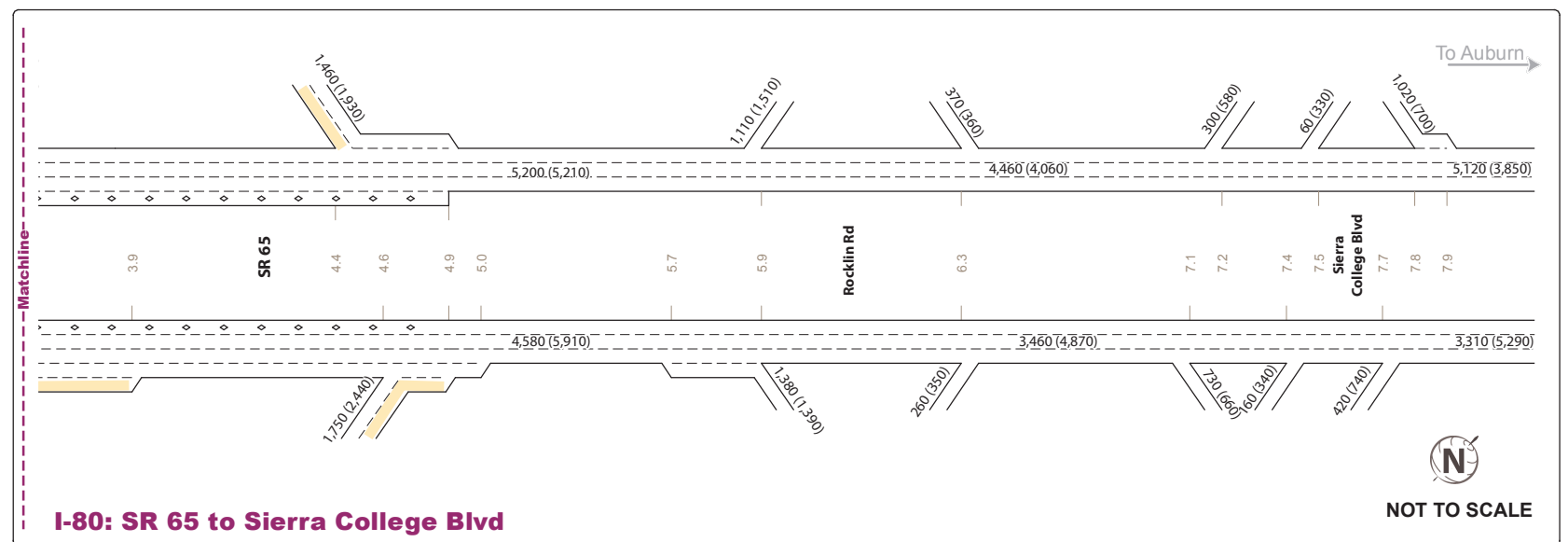


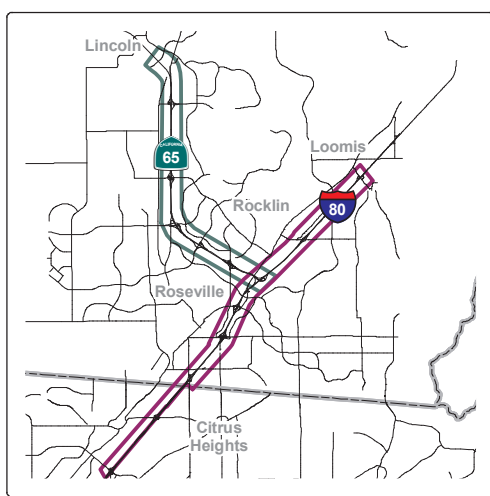
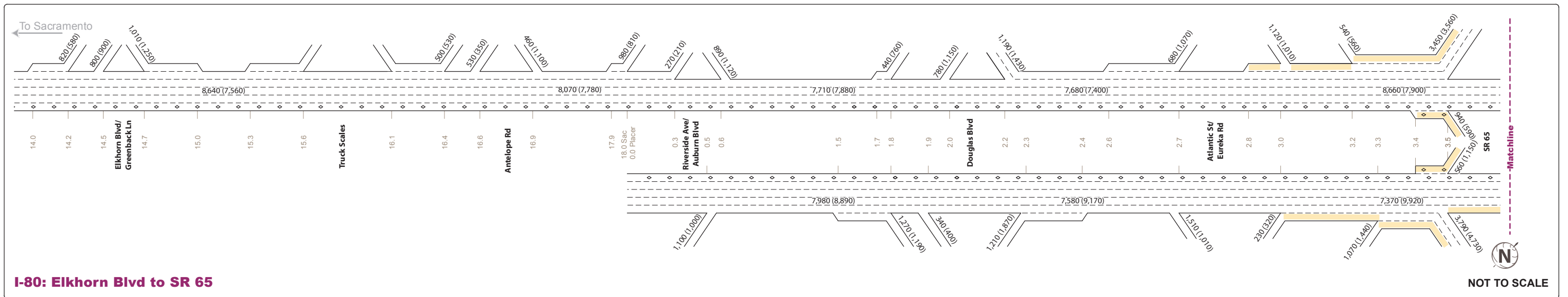
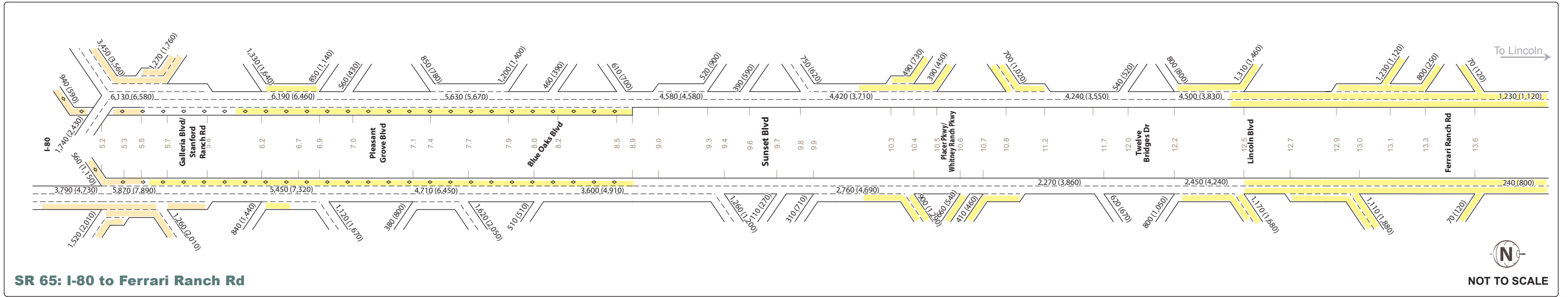
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: TSM Alternative



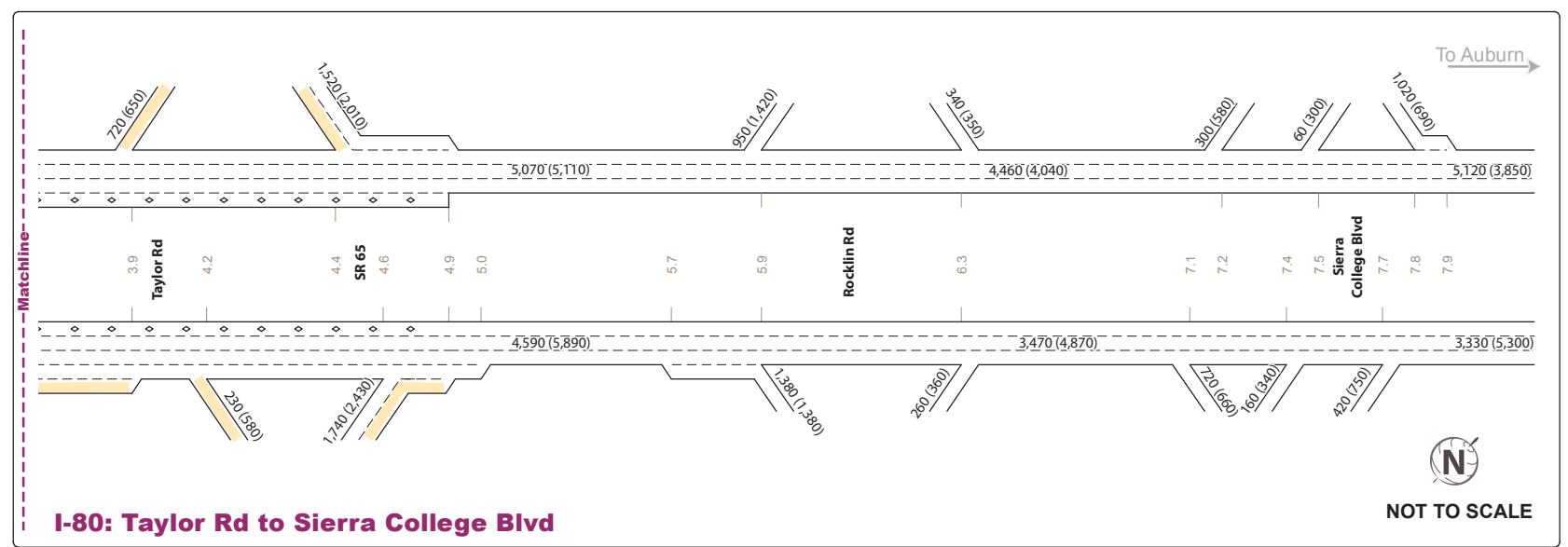


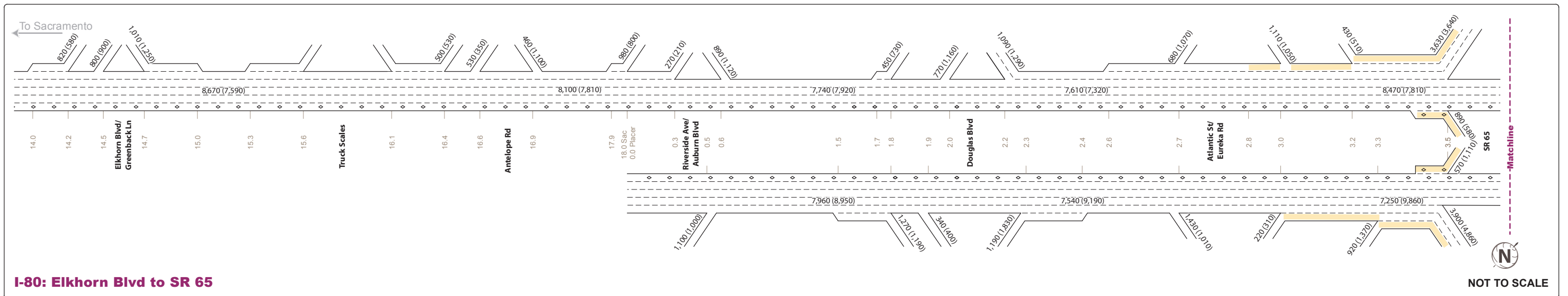
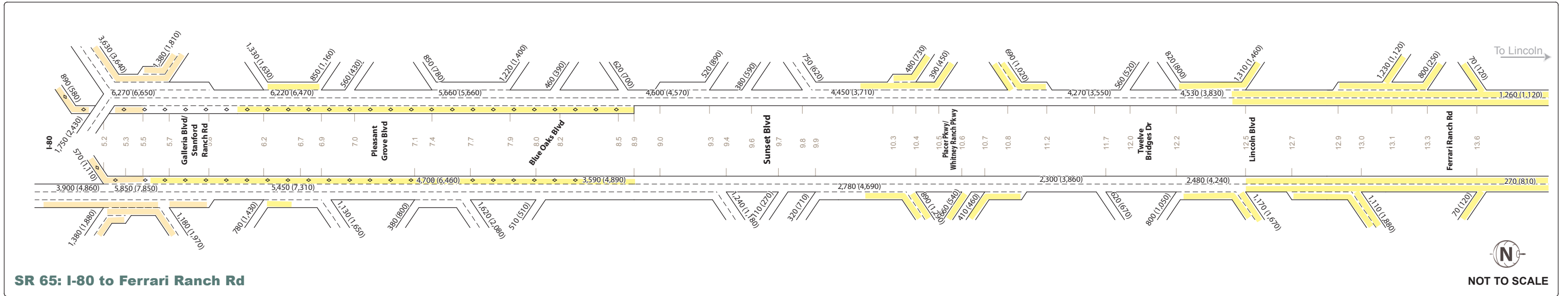
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- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Separate Planned Projects
 - No Taylor Alternative



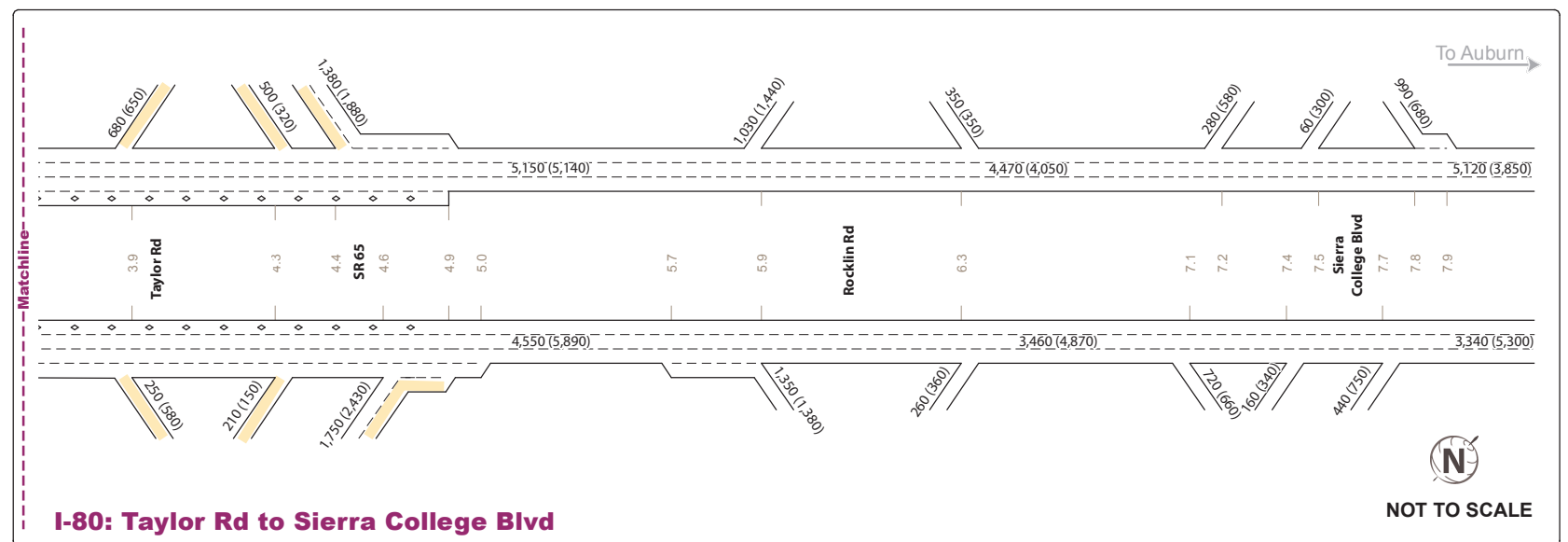


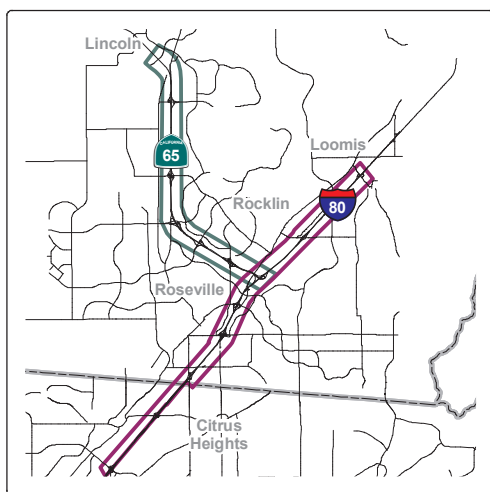
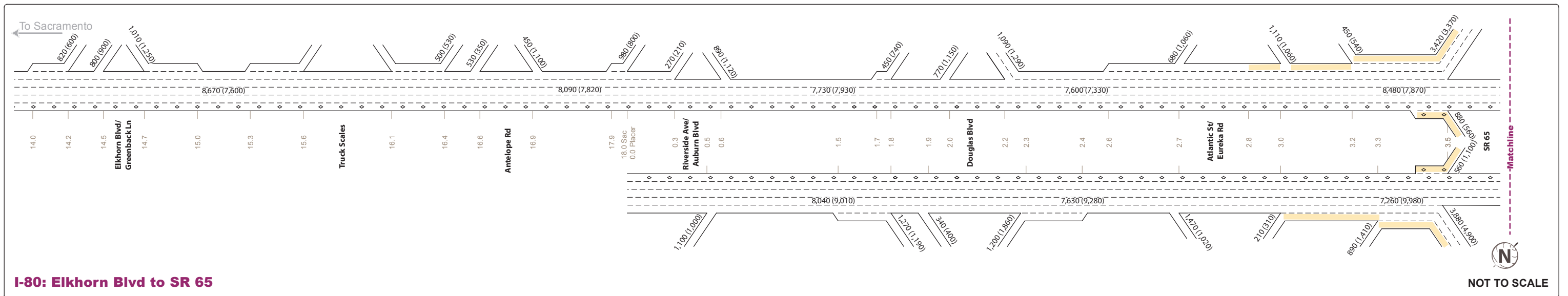
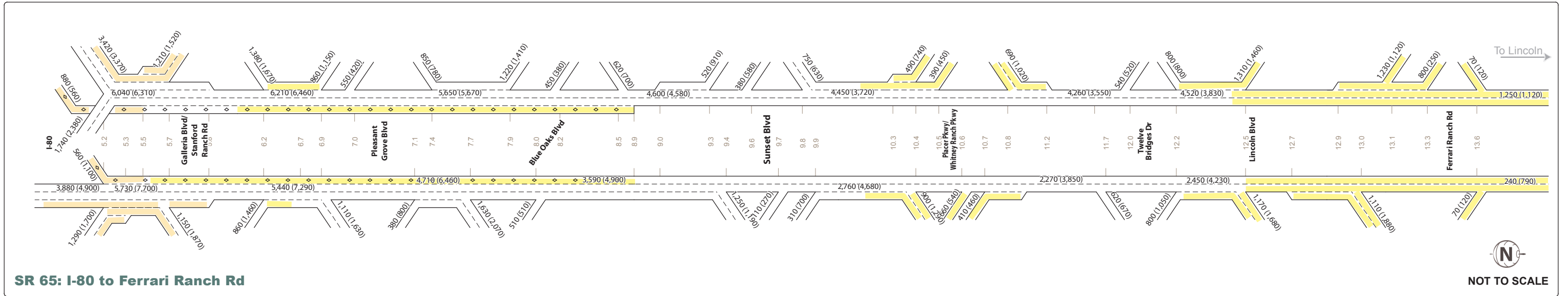
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: Half Taylor Alternative



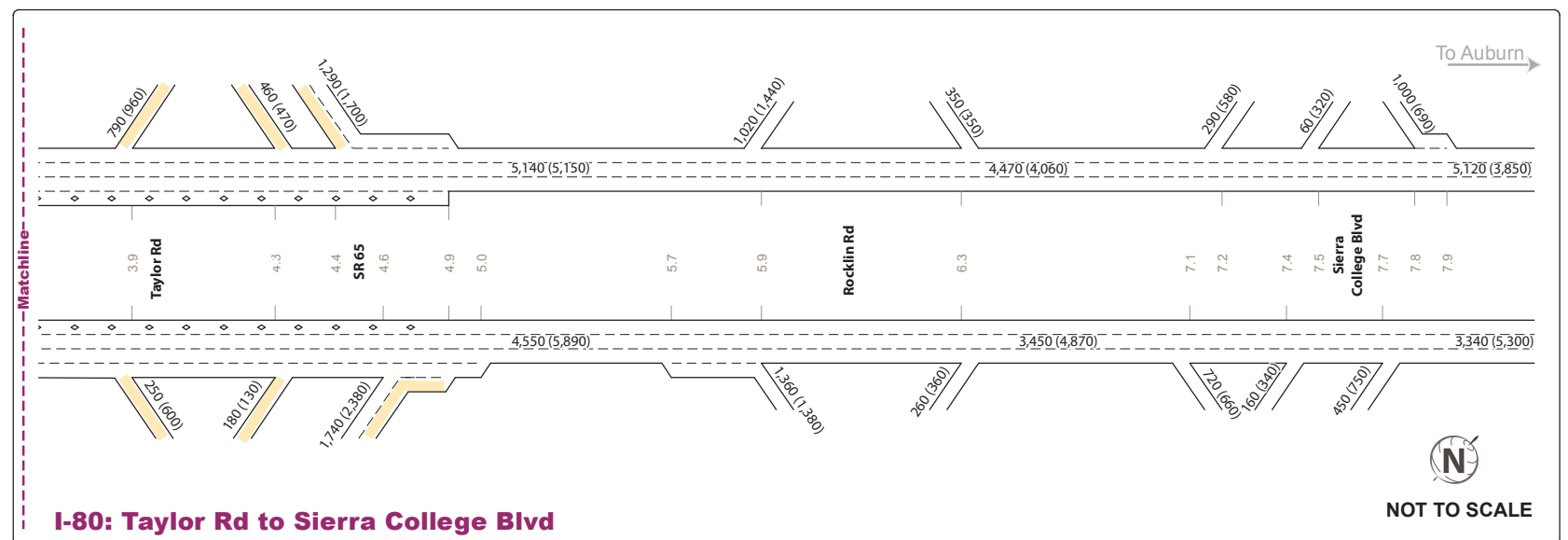


- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Separate Planned Projects
 - Full Taylor Alternative





- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: Full Taylor Alternative



I-80/SR 65 Interchange Improvements

**Existing Conditions Operations Model Calibration and
Validation Memorandum,
July 2012**

MEMORANDUM

Date: July 3, 2012

To: Jim Calkins, Caltrans District 3

From: David Stanek & Katie Jackson, Fehr & Peers

Subject: *I-80/SR-65 Interchange –Existing Conditions Operations Model Calibration and Validation – REVISED*

RS11-2872

Fehr & Peers is preparing the traffic report for the Interstate 80 (I-80) / State Route 65 (SR-65) Interchange project in Placer County. This technical memorandum documents the existing (2012) conditions traffic operations analysis for the project as an interim submittal for review and comment. Input is desired at this time because the existing conditions model serves as the base for all future year and alternatives models. After reviewing this memorandum, we would like to opportunity to discuss finalizing the model calibration and validation.

The I-80/SR-65 project proposes to increase capacity for the freeway-to-freeway connectors and add median HOV-only connectors between I-80 to the west and SR-65. Due to the regional significance of the project location, the study area for the traffic analysis is extensive as shown in Figure 1).

Freeway and arterial traffic operations within the study area were analyzed using a VISSIM simulation model. This memorandum describes the development of the simulation model and calibration and validation process while also summarizing the existing conditions traffic operations analysis results.

MODEL DEVELOPMENT PROCESS

The development of the VISSIM model included three basic components: (1) setup, (2) calibration, and (3) validation. The analysis assumptions and methodology were previously described in a January 6, 2012 memorandum. The revised version of this memorandum that includes changes based on reviewer comments is attached to this memorandum.

The VISSIM model was constructed by drawing the roadway network using aerial photography as a background. The number of lanes, turning restrictions, and the location of lane additions and drops were confirmed by field observations. Intersection and ramp meter signal operation (i.e., cycle lengths and timing plans) were specified. Driver behavior parameters were adjusted based on field observations. The distribution of vehicle types was also calibrated to local conditions so that the percentage of trucks and high-occupancy vehicles (HOVs) match the traffic counts.

Since micro-simulation models like VISSIM rely on the random arrival of vehicles, multiple runs are needed to provide a reasonable level of statistical accuracy and validity. Therefore, the results of ten separate runs (each using a different random seed number) were averaged to determine the final results.

The VISSIM model was validated to existing conditions using the criteria suggested in *Guidelines for Applying Traffic Microsimulation Modeling Software* (California Department of Transportation, 2002) and additional criteria developed by Fehr & Peers. A number of iterations were required to successively adjust the default VISSIM parameters for geometrics and driver behavior until the model was validated to observed conditions.

The calibrated and validated model is used to generate performance measures that are consistent with the *Highway Capacity Manual* (HCM) (Transportation Research Board, 2011). The validated VISSIM model will serve as the basis for future conditions models.

MODEL SET-UP

The model setup required the input of geometric, traffic control, and traffic flow data, each of which is described below.

Geometric Data

Roadway geometric data was gathered using aerial photographs, design plans (for the I-80 HOV lane project), and field observations. The lane configurations that were taken initially from aerial photographs were confirmed or revised based on field observations.

Traffic Control Data

The Caltrans Traffic Operations Sacramento Area office provided timing information for the ramp meters that were operating when the traffic counts were collected. The posted speed limits for the freeways and ramps were collected during field observations.

For signalized intersections, signal timing plans were provided by Caltrans, the City of Roseville, and the City of Rocklin. Traffic signals are modeled as either free operation or coordinated according to the control plans specified in the controller. Traffic control at unsignalized intersections were taken from aerial photographs and confirmed during field observations. Posted speed limits for the arterials were also collected.

Traffic Flow Data

Freeway and intersection traffic counts were collected in 15-minute intervals for the 6 to 10 AM and 3 to 7 PM peak periods. The traffic counts for the freeway mainline include vehicle classification by number of occupants for passenger cars and type of vehicle (see Attachment A). At intersections, cars, trucks, bicycles, and pedestrians were counted by turning movement. The 15-minute interval volume data was entered into the VISSIM model as gateway volumes. Table 1 shows the hourly HOV and truck percentages at the freeway gateway locations from the traffic counts.

Hour	Eastbound I-80 at Riverside Ave		Westbound I-80 at Sierra College Blvd		Southbound SR-65 at Twelve Bridges Dr	
	HOV	Truck	HOV	Truck	HOV	Truck
6 to 7 AM	12.4%	7.9%	11.6%	3.8%	13.1%	1.8%
7 to 8 AM	13.7%	3.7%	10.7%	3.8%	10.5%	1.4%
8 to 9 AM	15.6%	4.0%	13.9%	5.2%	14.8%	1.1%
9 to 10 AM	18.3%	5.3%	18.1%	5.9%	19.0%	2.2%
3 to 4 PM	20.0%	3.2%	24.3%	7.5%	31.1%	1.7%
4 to 5 PM	19.2%	2.6%	24.5%	5.1%	26.6%	0.9%
5 to 6 PM	13.9%	2.2%	18.8%	5.1%	31.0%	1.0%
6 to 7 PM	12.7%	2.8%	17.1%	5.2%	29.5%	1.5%

Source: Fehr & Peers, 2012

An origin-destination matrix was estimated for use in the traffic operations analysis model using a seed matrix derived from cell phone data collected in October 2010. In previous studies, the base year travel demand forecasting (TDF) model has been used to generate the seed matrix. The TDF model is based on a limited sample of household surveys that rely on self-reporting. Cell phone sighting data are actual records of travel patterns of (anonymous) cell phone owners. The cell phone data is both a larger sample size and provides hourly travel patterns (the TDF model is only peak hour or peak period data). Using VISUM's origin-destination estimator, a separate matrix was developed for each hour within the four-hour AM and PM peak periods. These matrices were divided into single-occupant vehicle (SOV), HOV, and truck modes based on the mode split in the travel demand forecasting (SACMET) base year model. The resulting matrices were used to route traffic through the study area network.

As noted above, HOV volumes were collected for the mainline freeway counts. For all other locations, the HOV percentage was assumed to be 18 percent based on the overall HOV percentage from the base year TDF model. Spot surveys of HOV percentage at freeway on-ramps were conducted in June 2012 at the I-80/Douglas Boulevard, I-80/Eureka Road, and SR-65/Galleria Boulevard interchanges. The measured HOV percentage ranged from 9 to 25 percent during the AM peak hour and 14 to 36 percent during the PM peak hour. The AM and PM peak hour averages of 16 and 24 percent from these samples were generally similar to the SACMET value of 18 percent.

Truck volumes were collected at all count locations. For modeled driveways that are used for volume balancing, the truck volumes were estimated using a typical value of 2 percent.

MODEL CALIBRATION

VISSIM build version 5.40-02 was used for the analysis. Adjustments to the VISSIM model focus on the model components related to driver behavior, driver performance, vehicle fleet mix, and vehicle performance. The following VISSIM model parameters are subject to adjustment.

- Vehicle fleet composition (passenger cars, pickup trucks, sport-utility vehicles (SUVs), HOV-lane eligible vehicles, heavy trucks, etc.)
- Vehicle headways
- Distance between stopped vehicles (standstill distance)
- Driver behavior when changing lanes
- Driver behavior at ramp junctions (i.e., weaving sections, ramp merges, etc.)

The VISSIM model calibration process started by replacing the default values with the values as shown in Table 2.

The default VISSIM input parameter values did not represent study-area conditions. The calibrated values in Table 2 represent field observation and our experiences with similar projects elsewhere in California (such as the I-5 Bus/Carpool Lanes and I-5/I-80 Interchange projects). The default vehicle composition contains only standard sedans. However, a significant portion of vehicles in the Sacramento area (and most U.S. metropolitan areas) are SUVs (including light trucks). As a result, the traffic composition has been revised to reflect this condition. The distance at which vehicles become aware of off-ramps was increased to 1,500 feet since advanced signs are used on freeways to direct traffic. The changes to freeway and arterial driving behavior were found to better model the one-to-one merging that occurs at on-ramps and lane drops. The default driving behavior tended to have merging vehicles wait for a gap in through traffic before changing lanes.

Further calibration refinements were made during the validation process to specific locations. The parameters affecting the capacity were adjusted so that the observed traffic conditions (speed and queuing) were replicated in the VISSIM models. Table 3 lists the fine tuning adjustments made to VISSIM model parameters for specific locations.

For the AM peak period, the stand still distance and average headway was increased to replicate operating conditions on southbound SR-65 between Pleasant Grove Boulevard and Galleria Boulevard where congestion occurs at ramp merges and diverges. At merge junctions with short acceleration lanes (<400 feet), the safety distance reduction factor, advanced merging and cooperative lane change attributes were edited to allow for more aggressive driver behavior. The standstill distance and headway times were adjusted to create larger or smaller distances between vehicles based on field observations.

TABLE 2: CALIBRATION ADJUSTMENTS			
Category	Parameter	Default Value	Adjusted Value
Vehicle Fleet Composition	SOV/HOV Vehicle Type – Sedans	100%	45%
	SOV/HOV Vehicle Type – SUVs	0%	45%
	SOV/HOV Vehicle Type – Sports Cars	0%	10%
	Truck Vehicle Type – 2 Axles	0%	67%
	Truck Vehicle Type – 3 or More Axles	100%	33%
Freeway Off-Ramp Connectors	Lane Change – Emergency Stop	16.4 ft	50 ft
	Lane Change – Lane Change	656.2 ft	1,500 ft
Arterial Driving Behavior	Following – Average Standstill Distance	6.56 ft	5.0 ft
Freeway Driving Behavior	Following – Max Look Ahead	820.21 ft	1,500 ft
	Following – Standstill Distance	4.92 ft	5.0 ft
	Following – Threshold for Entering	-8.0	-30.0
	Lane Change – Maximum Deceleration for Own Vehicle	-13.12 ft/s ²	-12.30 ft/s ²
	Lane Change – -1 ft/s ² Per Distance for Own / Trailing Vehicle	200 ft / 200 ft	100 ft / 66.7 ft
	Lane Change – Accepted Deceleration for Trailing	-1.64 ft/s ²	-0.82 ft/s ²
Arterial and Freeway Driving Behavior	Lane Change – Waiting Time Before Diffusion	60 sec	120 sec
	Lane Change – Safety Distance Reduction Factor	0.60	0.10
	Lane Change – Maximum Deceleration for Braking	-9.84 ft/s ²	-29.53 ft/s ²
Source: Fehr & Peers, 2012			

Adjustments were made to both peak period models (using partial routing decisions) to keep I-80 through freeway traffic in the left lanes, which replicates actual driving behavior. That is, drivers tend to stay in the left lanes to allow on-ramp traffic to merge in. The lane change distance for many off-ramps on I-80 and SR-65 was increased to values between 1,500 and 5,000 feet so that exiting vehicles changed lanes far enough upstream to reach an off-ramp and so that through vehicles would avoid using auxiliary lanes.

TABLE 3: VALIDATION ADJUSTMENTS			
Category	Parameter	Default Value	Adjusted Value
Freeway Driving Behavior for Southbound SR-65 (AM Peak Hour)	Following – Standstill Distance	4.92 ft	6.00 ft
	Following – Headway Time	0.90 s	1.10 s
Freeway Off-Ramp Connectors (Both Peak Hours)	Lane Change – Emergency Stop	16.4 ft	50 ft
	Lane Change – Lane Change	656.2 ft	1,500 – 5,000 ft
Freeway On-Ramp Merge Behavior at short merge junctions (Both Peak Hours)	Lane Change – Safety distance reduction factor	0.10	0.05
	Lane Change – Advanced Merging	Off	On
	Lane Change – Cooperative Lane Change	Off	On
Freeway Driving Behavior for Eastbound I-80 between Eureka Road and SR 65 (PM Peak Hour)	Following – Standstill Distance	4.92 ft	6.99 ft
	Following – Headway Time	0.90 s	1.30 s
Freeway Driving Behavior for connector ramp from Eastbound I-80 to Northbound SR 65 (PM Peak Hour)	Following – Standstill Distance	4.92 ft	4.00 ft
	Following – Headway Time	0.90 s	0.80 s
	Lane Change – Advanced Merging	Off	On
	Lane Change – Cooperative Lane Change	Off	On
	Lane Change – Safety distance reduction factor	0.10	0.05
Freeway On-Ramp Behavior on Northbound SR 65 at the on-ramp from Westbound I-80 (PM Peak Hour)	Following – Standstill Distance	4.92 ft	3.51 ft
	Following – Headway Time	0.90 s	0.80 s
	Lane Change – Maximum Deceleration for Own /Trailing Vehicle	-13.12 ft/s ² / -9.84 ft/s ²	-13.12 ft/s ² / -13.02 ft/s ²
	Lane Change – -1 ft/s ² Per Distance for Own / Trailing Vehicle	200 ft / 200 ft	200 ft / 75 ft
	Lane Change – Advanced Merging	Off	On
	Lane Change – Cooperative Lane Change	Off	On
Source: Fehr & Peers, 2012			

MODEL VALIDATION

During validation, the VISSIM model estimates are compared against observed data to measure the model’s accuracy. FHWA suggests the following validation criteria (*Traffic Analysis Toolbox Volume III - Guidelines for Applying Traffic Microsimulation Modeling Software*, Federal Highway Administration, 2003).

- Link volumes for more than 85 percent of cases meet the following criteria:
 - For volumes less than 700 vph, within 100 vph
 - For volumes between 700 and 2,700 vph, within 15 percent
 - For volumes greater than 2,700, within 400 vph
- Link volumes for more than 85 percent of cases have a GEH statistic (a measure of goodness of fit) less than 5
- Sum of link volumes within 5 percent
- Sum of link volumes have a GEH statistic less than 4
- Average travel times within 15 percent (or one minute, if higher) for more than 85 percent of cases
- Individual link speeds have a visually acceptable speed-flow relationship
- Bottlenecks create visually acceptable queuing

Based on our previous experience, Fehr & Peers has developed the following additional validation criterion, which has a narrower tolerance for intersection and interchange volumes (which are aggregated link volumes) than the criteria suggested by FHWA.

- Peak-hour volumes at intersections and interchanges within 5 percent of traffic counts

Table 4 shows how the results for the existing conditions VISSIM models compared to the validation criteria thresholds recommended in the FHWA guidelines.

The volumes for all freeway mainline and ramp links meet the criteria threshold for both peak periods. Aggregations of link volumes for the total network and for the study interchanges meet the 5 percent tolerance. The overall GEH statistic threshold was not met for the AM peak period. The PM model does not meet the criteria for travel time validation; this is discussed in more detail below. Despite this, the total modeled volume is within 0.6 percent of the total demand volume for both peak periods. The peak period travel times met the validation criteria. The speed-flow relationship at bottlenecks were visually inspected and found to be acceptable.

The both peak period models meet the link volume GEH statistic and visual inspection of queuing. As a result, both the AM and PM peak period models are found to be validated.

TABLE 4: VALIDATION CRITERIA THRESHOLDS COMPARISON						
Criteria	Threshold	% Met Target	AM Peak Period		PM Peak Period	
			% Met	Pass/Fail	% Met	Pass/Fail
<i>Link Volumes</i>						
< 700 vph	100 vph	> 85%	95%	Pass	96%	Pass
Between 700 & 2,700 vph	15%	> 85%	96%	Pass	96%	Pass
> 2,700 vph	400 vph	> 85%	90%	Pass	100%	Pass
GEH Statistic	5	> 85%	90%	Pass	86%	Pass
<i>Sum of Link Volumes</i>						
Sum of All Links	5%	-	99%	Pass	99%	Pass
GEH Statistic	4	-	7	Fail	1	Pass
<i>Aggregated Volumes</i>						
Intersections	5%	> 85%	86%	Pass	93%	Pass
Interchanges	5%	> 85%	100%	Pass	100%	Pass
<i>Travel Time</i>						
Travel Paths	15%	> 85%	87%	Pass	84%	Fail
<i>Visual Inspection</i>						
Travel Speeds	Match observations		Yes	Pass	Yes	Pass
Queuing	Match observations		Yes	Pass	Yes	Pass
Source: Fehr & Peers, 2012						

Table 5 shows the differences between the existing counted volume and the model volume at the freeway interchanges. The modeled volume at all interchanges for both peak periods varies by no more than 3 percent from the counted volume.

Tables 6 and 7 compares the measured travel time and the modeled travel time for selected network paths during the AM and PM peak periods, respectively.

Thirteen out of the fifteen travel time measurements for the AM peak period are within the 15 percent validation threshold. One of the modeled travel time measurements is 19 percent less than the measured value for the same time period; the other is 17 percent higher than the measured travel time. For the PM peak period, 16 out of the 19 travel time measurements are within the 15 percent validation threshold. The modeled travel time is based on an average of all vehicles within the time interval, while the measured travel time is from one or two probe vehicles. However, the modeled travel time does show the increase and decrease in travel time over the peak period that was observed in the measured travel times. Matching the observed travel times is not a definitive endorsement of the model's accuracy, but instead should be used as a basis for reasonableness checking the model. Overall, the model matches the travel

time amounts and patterns reasonably well and any limitations of the model with respect to travel time forecasting will be noted in subsequent reports.

TABLE 5: INTERCHANGE VOLUME VALIDATION RESULTS							
Freeway	Interchange	AM Peak Period			PM Peak Period		
		Count Volume	Model Volume	Percent Served	Count Volume	Model Volume	Percent Served
I-80 Eastbound	Riverside Ave	20,764	20,926	101%	26,898	26,877	100%
	Douglas Blvd	23,745	23,807	100%	31,339	31,287	100%
	Eureka Rd	20,721	20,668	100%	29,482	29,560	100%
	Taylor Rd	17,149	16,887	98%	25,695	25,870	101%
	SR-65	20,006	19,653	98%	29,693	29,872	101%
	Rocklin Rd	12,294	12,516	102%	17,974	18,399	102%
	Sierra College Blvd	9,872	9,941	101%	15,992	16,147	101%
I-80 Westbound	Sierra College Blvd	15,003	15,098	101%	12,683	12,743	100%
	Rocklin Rd	15,416	15,581	101%	14,677	14,889	101%
	SR-65	25,983	26,072	100%	23,176	23,396	101%
	Taylor Rd	23,955	23,495	98%	20,131	19,849	99%
	Eureka Rd	26,337	26,139	99%	23,487	23,758	101%
	Douglas Blvd	26,432	26,140	99%	25,364	25,216	99%
	Riverside Ave	28,161	28,111	100%	25,763	25,906	101%
	Antelope Rd	29,837	29,949	100%	25,304	25,580	101%
	Elkhorn Blvd	34,348	34,547	101%	26,770	27,086	101%
SR-65 Northbound	Galleria Blvd	13,901	13,425	97%	20,949	20,762	99%
	Pleasant Grove Blvd	12,400	11,972	97%	18,351	17,960	98%
	Blue Oaks Blvd	11,403	11,095	97%	16,114	15,652	97%
	Sunset Blvd	7,323	7,162	98%	11,660	11,708	100%
	Twelve Bridges Dr	5,192	5,063	98%	10,982	10,880	99%
SR-65 Southbound	Twelve Bridges Dr	10,237	10,202	100%	8,085	8,234	102%
	Sunset Blvd	11,671	11,578	99%	11,311	11,444	101%
	Blue Oaks Blvd	15,023	14,650	98%	15,198	14,773	97%
	Pleasant Grove Blvd	16,750	16,234	97%	16,734	16,469	97%
	Galleria Blvd	17,598	17,213	98%	18,430	18,144	98%

Notes: Bold and underline font indicate a modeled volume more than 5% different from the counted volume.
 1. Volumes reported for these interchanges are westbound only.
 Source: Fehr & Peers, 2012

TABLE 6: AM PEAK PERIOD TRAVEL TIME VALIDATION RESULTS				
Path	Interval	Travel Time (minutes)		Percent Difference
		Measured	Modeled	
SB SR-65 at Blue Oaks Blvd to WB I-80 at Antelope Rd	7:15 – 7:30 AM	10.27	8.40	<u>-18.2%</u>
	7:45 – 8:00 AM	10.80	10.38	-3.9%
	8:15 – 8:30 AM	8.05	8.50	5.6%
EB I-80 at Auburn Blvd to NB SR-65 at Blue Oaks Blvd	7:00 – 7:15 AM	6.69	6.79	1.5%
	7:45 – 8:00 AM	7.28	7.46	2.5%
	8:15 – 8:30 AM	6.99	6.89	-1.5%
	8:45 – 9:00 AM	6.93	6.89	-0.6%
WB I-80 at Sierra College Blvd to WB I-80 at Antelope Rd	7:00 – 7:15 AM	7.98	9.34	<u>17.0%</u>
	7:30 – 7:45 AM	8.25	8.46	2.5%
	8:00 – 8:15 AM	7.83	8.48	8.2%
	8:30 – 8:45 AM	7.73	8.33	7.7%
EB I-80 at Auburn Blvd to EB I-80 at Sierra College Blvd	7:15 – 7:30 AM	5.93	6.58	10.9%
	7:45 – 8:00 AM	6.13	6.71	9.5%
	8:30 – 8:45 AM	5.91	6.55	10.9%
	8:45 – 9:00 AM	6.16	6.55	6.4%
Note: Bold and underline font indicates a modeled travel time that is more the 15% difference from the measured travel time. Source: Fehr & Peers, 2012				

The modeled queues were compared to observed conditions for the AM and PM peak periods. For the AM peak period, the travel time runs showed congestion on southbound SR-65 between Blue Oaks Boulevard and Galleria Boulevard, and the model shows similar congested conditions. The model also shows slowing on westbound I-80 near Douglas Boulevard, similar to observed congestion. For eastbound I-80 and northbound SR-65, the model is consistent with observed conditions – no congestion occurs.

For the PM peak period, slowing occurs on northbound SR-65 at the on-ramp from westbound I-80. This congestion was observed to cause slowing on I-80 in both directions. Although this congestion was replicated in the VISSIM model, the modeled travel time is 25 percent lower than the observed travel time for the peak 15-minute interval. The modeled queue extends to Eureka Road on eastbound I-80.

TABLE 7: PM PEAK PERIOD TRAVEL TIME VALIDATION RESULTS				
Path	Interval	Travel Time (minutes)		Percent Difference
		Measured	Modeled	
SB SR-65 at Blue Oaks Blvd to WB I-80 at Antelope Rd	4:00 – 4:15 PM	8.17	8.29	1.5%
	4:30 – 4:45 PM	8.03	8.38	4.4%
	5:00 – 5:15 PM	8.27	8.44	2.2%
	5:45 – 6:00 PM	9.03	8.21	-9.2%
	6:15 – 6:30 PM	8.05	8.05	0.0%
EB I-80 at Auburn Blvd to NB SR-65 at Blue Oaks Blvd	3:45 – 4:00 PM	7.39	9.51	<u>28.6%</u>
	4:15 – 4:30 PM	8.06	9.00	11.7%
	4:45 – 5:00 PM	8.61	9.74	13.1%
	5:15 – 5:30 PM	12.21	9.12	<u>-25.3%</u>
	6:00 – 6:15 PM	9.04	8.11	-10.4%
WB I-80 at Sierra College Blvd to WB I-80 at Antelope Rd	4:00 – 4:15 PM	8.75	8.08	-7.7%
	5:00 – 5:15 PM	8.50	8.22	-3.3%
	5:30 – 5:45 PM	7.30	8.08	10.7%
	6:00 – 6:15 PM	7.77	7.99	2.8%
	6:30 – 6:45 PM	7.68	7.94	3.4%
EB I-80 at Auburn Blvd to EB I-80 at Sierra College Blvd	4:15 – 4:30 PM	5.84	6.80	<u>16.3%</u>
	4:45 – 5:00 PM	6.08	6.92	13.8%
	5:15 – 5:30 PM	6.26	6.54	4.4%
	5:45 – 6:00 PM	7.06	6.41	-9.3%
Note: Bold and underline font indicates a modeled travel time that is more the 15% difference from the measured travel time. Source: Fehr & Peers, 2012				

EXISTING CONDITIONS ANALYSIS

Using the validated VISSIM models for the AM and PM peak periods, the peak hour traffic operations were analyzed. The analysis results include a descriptive term known as level of service (LOS). LOS is a measure of traffic operating conditions, which varies from LOS A (the best) to LOS F (the worst). Tables 8 and 9 describe the LOS thresholds from the HCM for freeway sections and signalized intersections, respectively.

TABLE 8: FREEWAY LOS THRESHOLDS			
LOS	Average Density (vplpm)		Description
	Basic Sections	Ramp Junction & Weave Sections	
A	< 11	< 10	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver.
B	> 11 to 18	> 10 to 20	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.
C	> 18 to 26	> 20 to 28	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.
D	> 26 to 35	> 28 to 35	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.
E	> 35 to 45	> 35 to 43	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.
F	> 45	> 43	Represents a breakdown in flow.

Source: Fehr & Peers, 2012

TABLE 9: SIGNALIZED INTERSECTION LOS THRESHOLDS		
LOS	Average Delay (sec/veh)	Description
A	< 10	Very low delay occurs with favorable progression and/or short cycle length.
B	> 10 to 20	Low delay occurs with good progression and/or short cycle lengths.
C	> 20 to 35	Average delays result from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.
D	> 35 to 55	Longer delays occur due to a combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop and individual cycle failures are noticeable.
E	> 55 to 80	High delay values indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.
F	> 80	Delays are unacceptable to most drivers due to over-saturation, poor progression, or very long cycle lengths.

Source: Fehr & Peers, 2012

Table 10 shows the LOS and average density at key freeway ramp junctions and mainline sections under existing conditions. See Attachment A for detailed results for all study locations.

TABLE 10: SELECTED FREEWAY OPERATIONS RESULTS

Freeway	Location	Type	AM Peak Hour	PM Peak Hour
Eastbound I-80	Eureka Rd Off-ramp	Diverge	C / 26	C / 26
	Eureka Rd Off to On-ramp	Basic	C / 21	C / 23
	Eureka Rd EB On-ramp	Merge	B / 19	C / 25
	Eureka Rd to Taylor Rd	Weave	C / 23	E / 37
	Taylor Rd to SR-65	Basic	D / 27	E / 37
	SR-65 Off-ramp	Diverge	C / 28	<u>F / 43</u>
Westbound I-80	Douglas Blvd Off-ramp	Diverge	B / 19	B / 17
	Douglas Blvd Off to On-ramp	Basic	D / 30	C / 25
	Douglas Blvd WB On-ramp	Merge	E / 36	D / 32
	Douglas Blvd EB On-ramp	Merge	E / 42	D / 36
	Douglas Blvd to Riverside Ave	Basic	D / 33	D / 32
	Riverside Ave Off-ramp	Diverge	E / 40	E / 40
Northbound SR-65	I-80 WB On-ramp	Merge	<u>F / 53</u>	<u>F / 93</u>
	I-80 to Stanford Ranch Rd	Basic	D / 32	<u>F / 75</u>
	Stanford Ranch Rd Off-ramp	Diverge	D / 33	<u>F / 63</u>
Southbound SR-65	Blue Oaks Blvd WB On-ramp	Merge	<u>F / 60</u>	B / 20
	Blue Oaks Blvd to Pleasant Grove Blvd	Weave	<u>F / 75</u>	C / 21
	Pleasant Grove Blvd Off to On-ramp	Basic	<u>F / 89</u>	C / 25
	Pleasant Grove Blvd WB On-ramp	Merge	<u>F / 72</u>	D / 30
	Pleasant Grove Blvd EB On-ramp	Merge	<u>F / 53</u>	E / 39
	Pleasant Grove Blvd to Galleria Blvd	Basic	E / 35	D / 32
	Galleria Blvd Off-ramp	Diverge	E / 35	D / 32
Note: Bold and underline font indicate LOS F conditions. The level of service and average density for the study segment are reported. Source: Fehr & Peers, 2012				

During the AM peak hour, congested LOS F conditions occur on northbound SR-65 at the westbound I-80 on-ramp and southbound SR-65 between Blue Oaks Boulevard and Pleasant Grove Boulevard. On northbound SR-65, the merging of the I-80 on-ramps causes congestion. For southbound SR-65, the constraint is the high demand from the mainline combined with the Pleasant Grove Boulevard on-ramp volume.

Multiple other locations have LOS D and E conditions during the AM peak hour, which may indicate future potential bottlenecks. LOS D conditions occur on eastbound I-80 between Auburn Boulevard and Douglas Boulevard due to the high volume of exiting traffic. LOS E conditions occur on westbound I-80 at

the Eureka Road loop off-ramp due to high exiting traffic. On westbound I-80 at Douglas Boulevard, the lane drop to the off-ramp combined with the on-ramp volume creates LOS E conditions. Most of the facilities on westbound I-80 between Antelope Road and Elkhorn Boulevard operate at LOS E or F. On southbound SR-65 between Sunset Boulevard and Blue Oaks Boulevard, LOS D conditions also occur due to the high on-ramp volume from Sunset Boulevard.

During the PM peak hour, the primary bottleneck is northbound SR-65 at the on-ramp from westbound I-80. This bottleneck results in LOS F conditions on eastbound I-80 at the SR-65 off-ramp. LOS E conditions exist from Taylor Road to Eureka Road (drivers typically allow more space between vehicles in this area, which results in lower density). The eastbound I-80 off-ramp to Eureka Road has LOS D conditions during the PM peak hour but experiences recurrent queues from the ramp terminal intersection that can extend back to the mainline. Westbound I-80 has LOS F conditions at the SR-65 off-ramp due to the same bottleneck. LOS D conditions also occur further north between Stanford Ranch Road and Pleasant Grove Boulevard. This suggests that if the bottleneck at I-80 were relieved, this section may become congested.

Westbound I-80 has LOS D/E conditions between Douglas Boulevard and Riverside Avenue and at the Antelope Road off-ramp. While the recent addition of the HOV lane has reduced congestion during the PM peak hour, these results indicate that congestion could return when volumes increase. Also on westbound I-80, exiting traffic causes LOS D conditions between Riverside Avenue and Antelope Road. Eastbound I-80 has LOS D/E conditions between Auburn Boulevard and Douglas Boulevard, which is another potential bottleneck. Finally, the section between SR-65 and Rocklin Road has LOS D conditions. If the upstream congestion at the SR-65 interchange were improved, the peak hour volume at this location would increase and may lead to a worsening of operations.

Table 11 shows the LOS and average delay at key study intersections under existing conditions. See Attachment A for detailed results for all study intersections.

The AM peak hour intersection LOS results indicate all intersections operate at LOS C or better, except for the Roseville Parkway / Sunrise Avenue and Blue Oaks Boulevard / Washington Boulevard intersections which operate at LOS D. The first LOS D intersection operates with split phasing to accommodate the hospital driveway, which leads to less efficient operations. The Blue Oaks Boulevard intersection serves both inbound (employees) and outbound (residents) commuters for west Roseville.

During the PM peak hour, six intersections operate at LOS D:

- Galleria Boulevard / Roseville Parkway
- Sunrise Avenue / Roseville Parkway
- Eureka Road / Taylor Road / I-80 Eastbound Ramps
- Eureka Road / Sunrise Avenue
- Sunrise Avenue / Douglas Boulevard
- Rocklin Road / Granite Drive

Like the Blue Oaks Boulevard intersection in the AM peak hour, the Roseville Parkway, Eureka Road, Douglas Boulevard and Rocklin Road corridors serve both inbound (residents and shoppers) and outbound (employees) commuters. Additionally, congestion occurs on eastbound Eureka Road approaching the I-80 on-ramp. A project to widen eastbound Eureka Road is under construction. All other intersections operate at LOS C or better during the PM peak hour.

TABLE 11: SELECTED INTERSECTION OPERATIONS RESULTS		
Intersection	AM Peak Hour	PM Peak Hour
10. Stanford Ranch Rd / Five Star Blvd	B / 19	C / 31
11. Stanford Ranch Rd / SR-65 NB Ramps	A / 9	B / 13
12. Galleria Blvd / SR-65 SB Ramps	B / 13	B / 19
13. Galleria Blvd / Antelope Creek Dr	B / 10	C / 24
14. Galleria Blvd / Roseville Pkwy	C / 30	D / 36
15. Roseville Pkwy / Creekside Ridge Dr	A / 6	B / 18
16. Roseville Pkwy / Taylor Rd	C / 30	C / 29
17. Roseville Pkwy / Sunrise Ave	D / 37	D / 37
18. Atlantic St / Wills Rd	B / 10	B / 13
19. Atlantic St / I-80 WB Ramps	A / 7	A / 9
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	C / 26	D / 48
21. Eureka Rd / Sunrise Ave	C / 24	D / 36
28. Pacific St / Sunset Blvd	B / 18	C / 29
29. Rocklin Rd / Granite Dr	B / 15	D / 36
30. Rocklin Rd / I-80 WB Ramps	C / 21	B / 17
31. Rocklin Rd / I-80 EB Ramps	B / 17	B / 20
32. Rocklin Rd / Aguilar Rd	A / 8	B / 13
Note: The LOS and average delay in seconds per vehicle are reported. Source: Fehr & Peers, 2012		

I-80/SR 65 Interchange Improvements

**Draft Transportation Analysis Report,
February 2013**



I-80/SR-65 Interchange Improvements Project

Transportation Analysis Report

Placer County, CA

03-PLA-80-PM 1.9 to 6.1
03-PLA-65-PM R4.8 to R7.3

EA 03-4E3200
Project ID 0300000696

February 2013



Transportation Analysis Report

I-80/SR-65 Interchange Improvements Project

03-PLA-80-PM 1.9 to 6.1
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Project ID 0300000696

February 2013

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Phone Number _____
Office Name _____
District/Region _____

Traffic Operations

Approved By: _____ Date: _____
Name, Title _____
Phone Number _____
Office Name _____
District/Region _____

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Chapter 1. Introduction

This transportation analysis report was prepared for the Interstate 80 (I-80)/State Route 65 (SR-65) interchange improvements project. The summary report contains an overview of the results and findings of the traffic forecasts and traffic operation analysis, while the detailed analysis calculations are compiled in the separately bound Technical Appendix.

1.1. Purpose of the Transportation Analysis Report

The purpose of this report is to analyze project design alternatives and their effects on the highway and arterial transportation network. The report focuses on a comparison of alternatives that are each designed to improve future traffic operations and safety at the I-80/SR-65 interchange consistent with the purpose and need statement. Portions of the analysis results will also be used to comply with environmental impact analysis requirements for the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA).


1.2. Project Description

The proposed project is located at the I-80/SR-65 freeway-to-freeway interchange in Placer County. Figure 1 shows the project vicinity and location map. The project would increase capacity at the interchange with the following actions.

- Replace the eastbound (EB) I-80 to northbound (NB) SR-65 two-lane loop off-ramp with a three-lane direct flyover ramp.
- Construct new median direct connectors from EB I-80 to NB SR-65 and from southbound (SB) SR-65 to westbound (WB) I-80. The median connectors would be restricted to high occupancy vehicles (HOVs) – vehicles with two or more occupants, motorcycles, or registered “Clean Air Vehicles” – during the AM and PM peak periods (weekdays 6:00 to 10:00 AM and 3:00 to 7:00 PM) to conform to HOV lane operation elsewhere in the Sacramento region. During off-peak times, the HOV lane would be available to all vehicles (except commercial trucks, which are restricted to the outside lanes).
- Widen the SB SR-65 connector to WB I-80 to three lanes, widen the SB SR-65 connector to EB I-80 to two lanes, and widen the WB I-80 connector to NB SR-65 to two lanes.
- Eliminate the Taylor Road partial interchange or replace it with a full interchange.

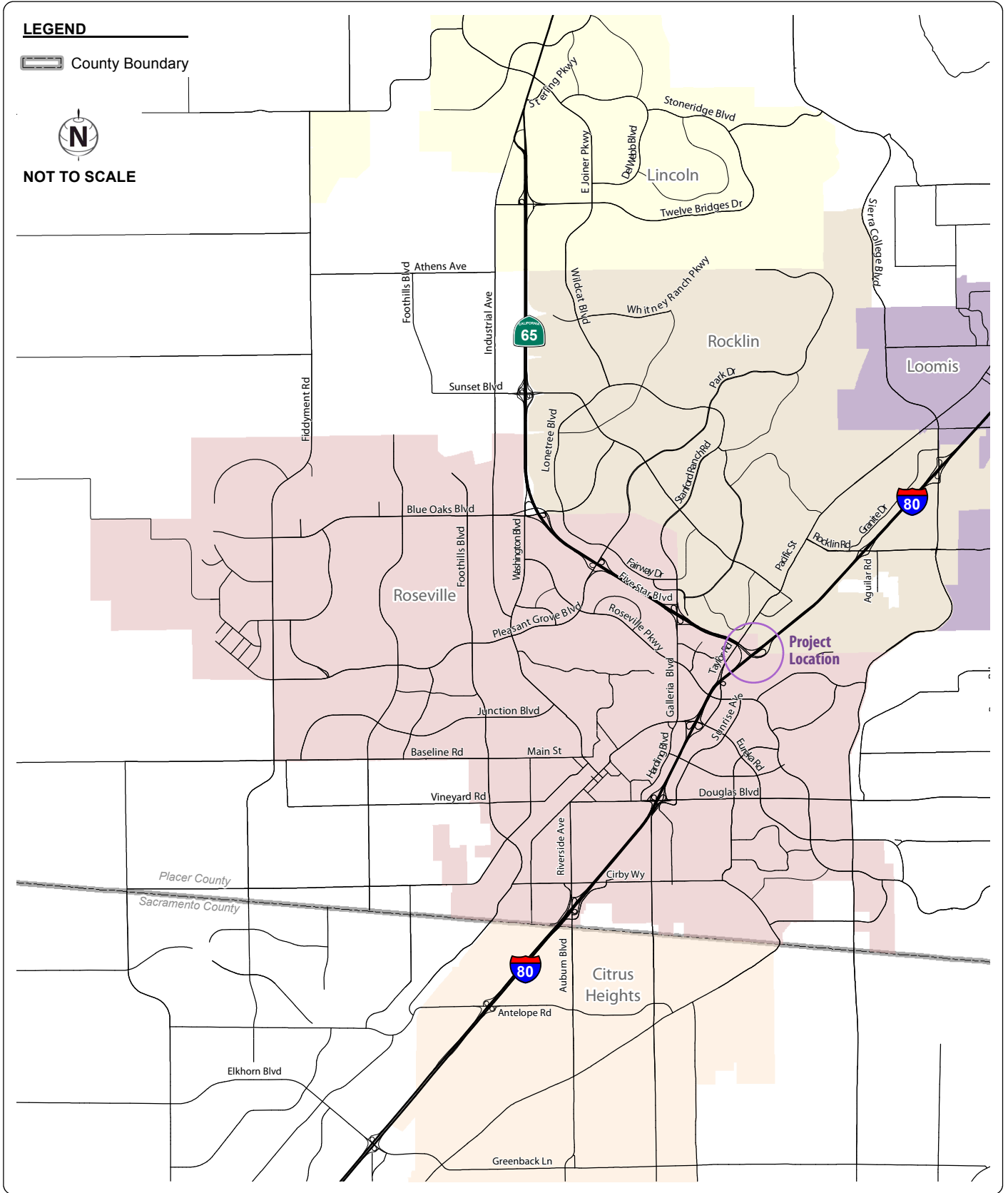
Widening or expansion of the adjacent freeway mainline segments and interchanges would be needed to facilitate some of these changes.

LEGEND

 County Boundary



NOT TO SCALE



1.3. Project Purpose and Need

According to the Code of Federal Regulations (40 CFR 1502.13), all federally-funded Environmental Impact Statements (EISs) must contain a statement briefly specifying the underlying purpose and need (P&N) to which the agency is responding in proposing the alternatives including the proposed action. The current P&N statement for the I-80/SR-65 interchange improvements project is provided below.

The project is needed for the following reasons:

- Recurring morning and evening peak period demand exceeds the current design capacity of the I-80/SR-65 interchange and adjacent transportation facilities, which creates traffic operations and safety issues. These issues result in high delays, wasted fuel, and excessive air pollution and greenhouse gas emissions, which will be exacerbated by traffic from future population and employment growth.
- Interchange design features do not comply with current Caltrans design standards for safe and efficient traffic operations and limit existing community access to nearby uses.
- Travel choices are limited in the project because the transportation network does not include facilities for all modes and users consistent with the complete streets policies of Caltrans and local agencies.

The project objectives are listed as follows:

- Upgrade the I-80/SR-65 interchange and adjacent transportation facilities to reduce no build traffic congestion.
- Upgrade the I-80/SR-65 interchange and adjacent transportation facilities to comply with current Caltrans and local agency design standards for safer and more efficient traffic operations while maintaining and, if feasible, improving the current level of community access, at a minimum.
- Consider all travel modes and users in developing project alternatives.

1.3.1. Logical Termini and Independent Utility

According to 23 CFR 711.111(f)(1), actions evaluated in an EIS or Finding of No Significant Impact (FONSI) shall connect logical termini and be of sufficient length to address environmental matters on a broad scope. Project limits for proposed improvements were developed through an iterative process involving engineering design and traffic operations analysis. Preliminary design concepts

were tested with the traffic operations analysis model to evaluate how lane transitions and weaving influenced peak hour conditions. Refinements were made to ensure that mainline lane balance was logical and that transitions did not cause unacceptable traffic operations such as extensive queuing or slow speeds.

1.4. Project Alternatives

The initial concept presented in the PSR replaced the eastbound to northbound loop ramp with a flyover ramp and added median HOV ramps from eastbound to northbound and southbound to westbound. Through an alternative generation and screening process, the PDT developed the seven alternatives listed below and shown in Figure 2.

- Concept 1 – Taylor Road Access Shifted
- Concept 2 – Taylor Road Full Access (Diamond Shape Interchange)
- Concept 3 – Taylor Road Full Access (Trumpet Shape Interchange)
- Concept 4 – Antelope Creek Connection
- Concept 5 – Taylor Road Interchange Eliminated
- Concept 6 – Transportation System Management (TSM)
- Concept 7 – No Build

The transportation analysis focused on four of these concepts for detailed traffic operations analysis as described below.

- **Concept 7 – No Build** – Under the No Build alternative, no improvements would be made at the I-80/SR-65 interchange. However, numerous transportation capacity expansion projects are planned to be constructed within the study area under construction year (2020) and design year (2040) conditions as displayed in Figures 3 and 4, respectively. All of these projects are assumed to be in place under the No Build alternative as well as the build alternatives listed below.
- **Concept 6 – TSM** – The TSM alternative would add operational enhancements to the planned transportation network. A detailed drawing of this alternative is shown in Figure 5. These enhancements include auxiliary lanes, increased ramp meter storage, signal coordination, and greater access control.

CONCEPT 1

Initial Concept with Taylor Road Access Shifted

Benefits include:

- Improves interchange spacing
- Improves I-80 weaving
- Maintains local access to Taylor Road

Concerns:

- Taylor Road is a partial interchange (undesirable)
- Limited access to local traffic



CONCEPT 2

Initial Concept with Full Access for Taylor Road with a Diamond Shape Interchange

Benefits:

- Improves interchange spacing
- Improves I-80 weaving
- Provides full I-80 access at Taylor Road

Concerns:

- Requires Caltrans/FHWA approval
- Addresses driver expectation
- Involves combined local-system interchange ramps



CONCEPT 3

Initial Concept with Full Access for Taylor Road with a Trumpet Shape Interchange

Benefits:

- Improves interchange spacing
- Improves I-80 weaving
- Provides full I-80 access at Taylor Road

Concerns:

- Requires Caltrans/FHWA approval
- Addresses driver expectation
- Involves combined local-system interchange ramps



CONCEPT 4

Concept 3 with Antelope Creek Connection

Benefits:

- Adds parallel capacity on local street

Concerns:

- May change local traffic circulation patterns
- May impact local landfill and UPRR properties



CONCEPT 5

Initial Concept with Taylor Road Interchange Eliminated

Benefits:

- Improves interchange spacing
- Improves I-80 weaving
- Minimizes freeway access points

Concerns:

- Shifts traffic volumes to Eureka Road interchange and surrounding interchanges
- Less direct access to businesses on Taylor Road
- Requires a westbound I-80 auxiliary lane to Douglas Blvd.



OTHERS:

CONCEPT 6

Transportation System Management








- Add Southbound SR-65 Connector Ramp Metering
- Add Local Interchange Ramps

CONCEPT 7 – No Build

Source: CH2M Hill

LEGEND

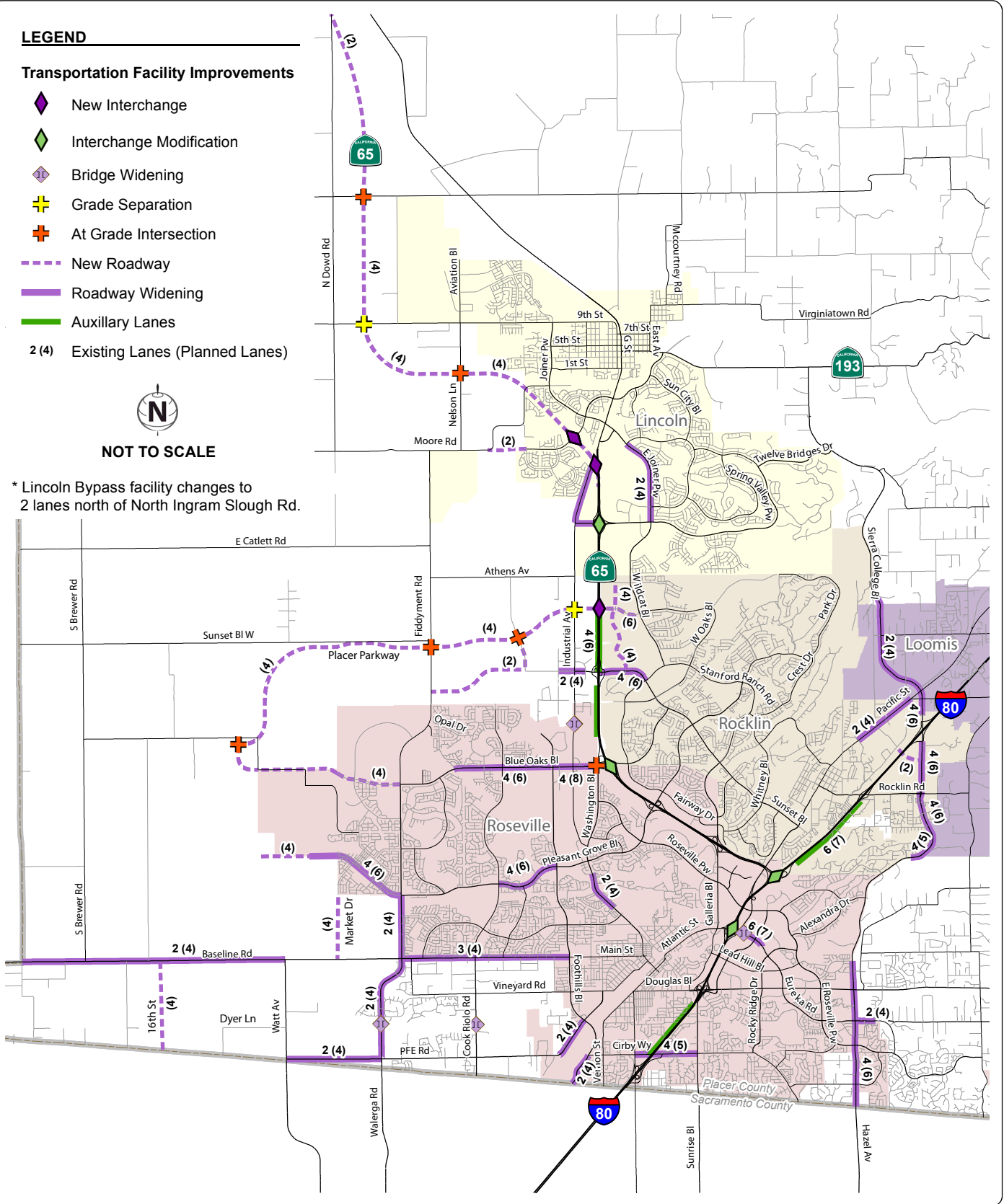
Transportation Facility Improvements

-  New Interchange
-  Interchange Modification
-  Bridge Widening
-  Grade Separation
-  At Grade Intersection
-  New Roadway
-  Roadway Widening
-  Auxillary Lanes
- 2 (4) Existing Lanes (Planned Lanes)












NOT TO SCALE

* Lincoln Bypass facility changes to 2 lanes north of North Ingram Slough Rd.



LEGEND

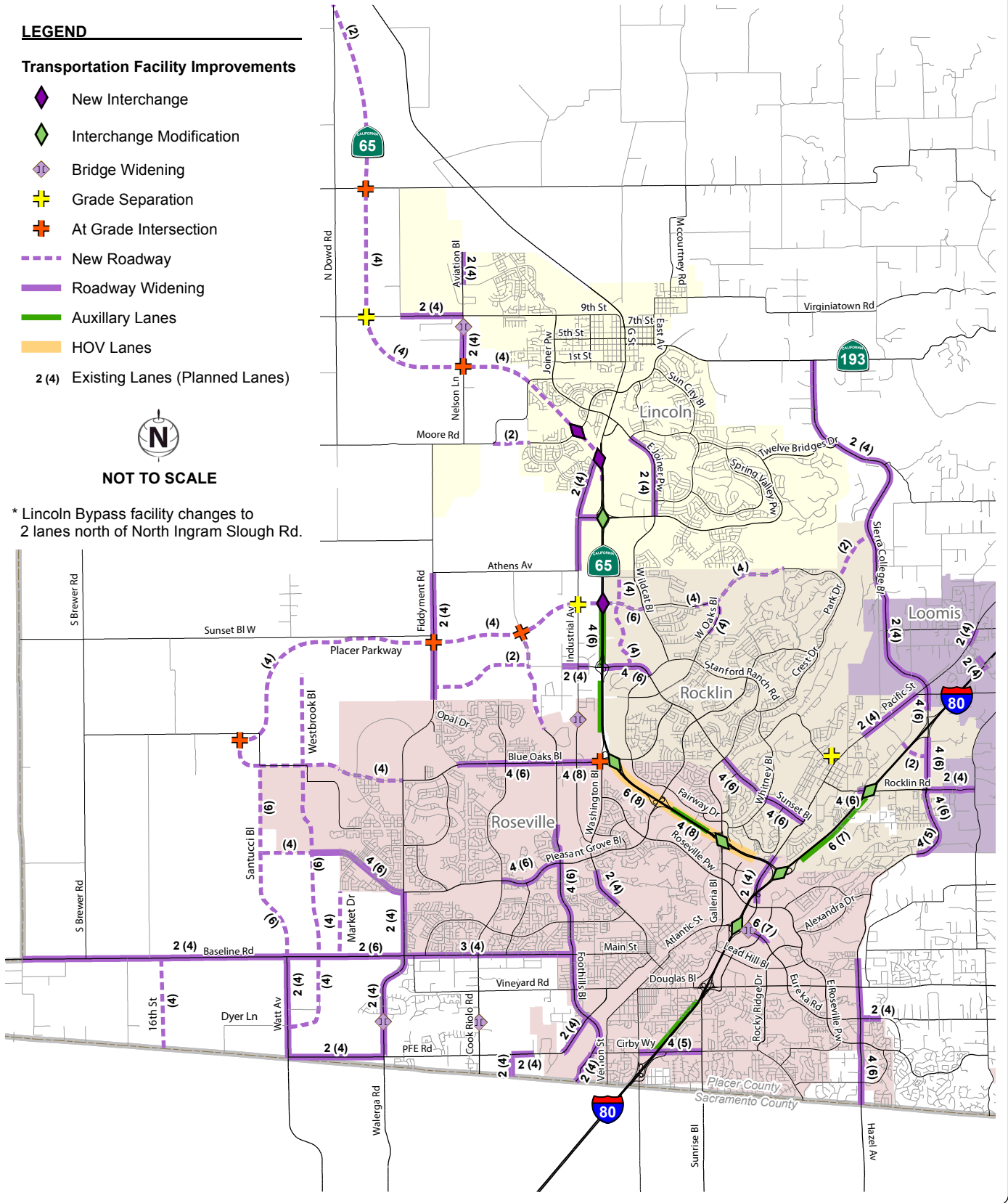
Transportation Facility Improvements

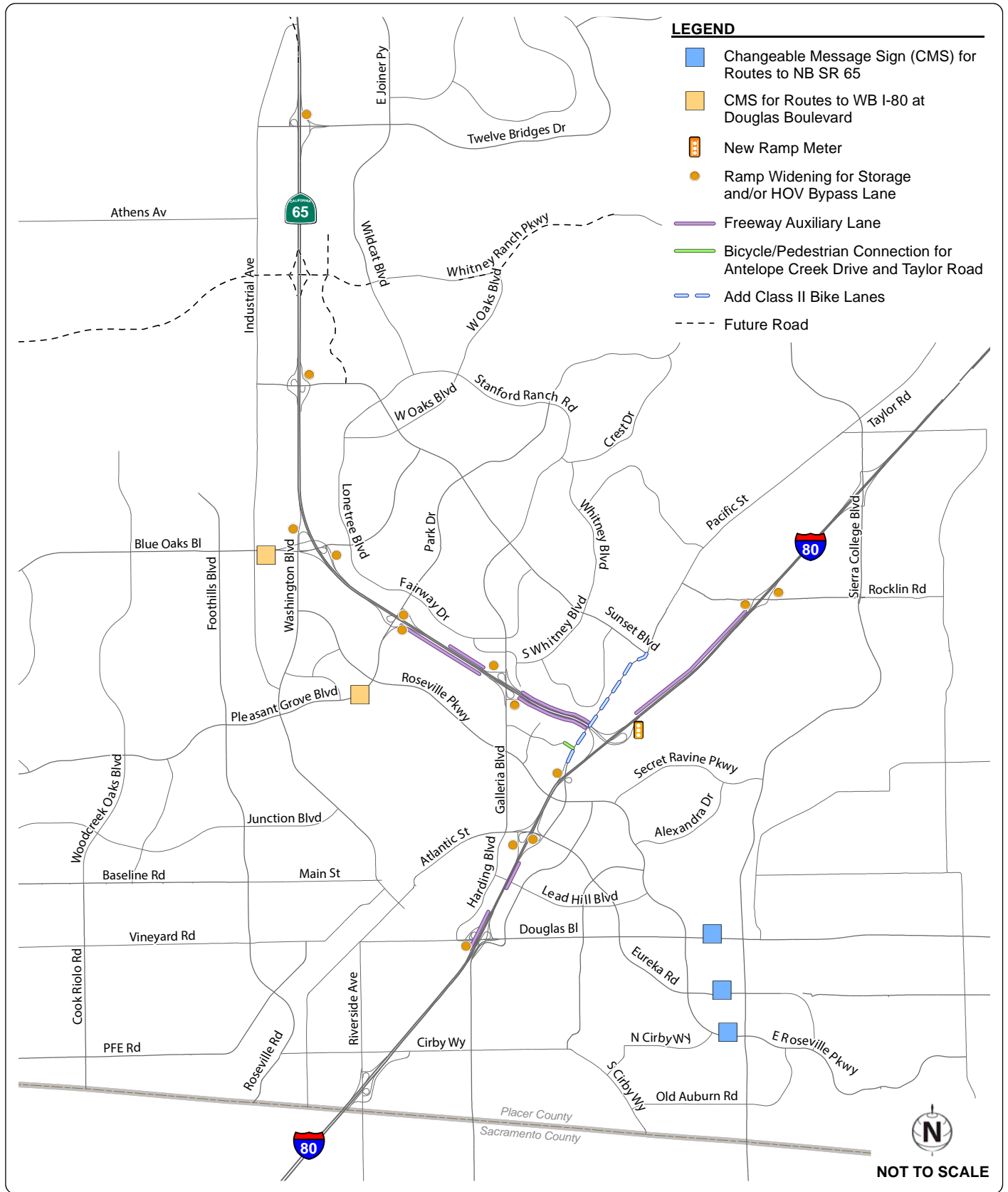
-  New Interchange
-  Interchange Modification
-  Bridge Widening
-  Grade Separation
-  At Grade Intersection
-  New Roadway
-  Roadway Widening
-  Auxillary Lanes
-  HOV Lanes
- 2 (4) Existing Lanes (Planned Lanes)



NOT TO SCALE

* Lincoln Bypass facility changes to 2 lanes north of North Ingram Slough Rd.





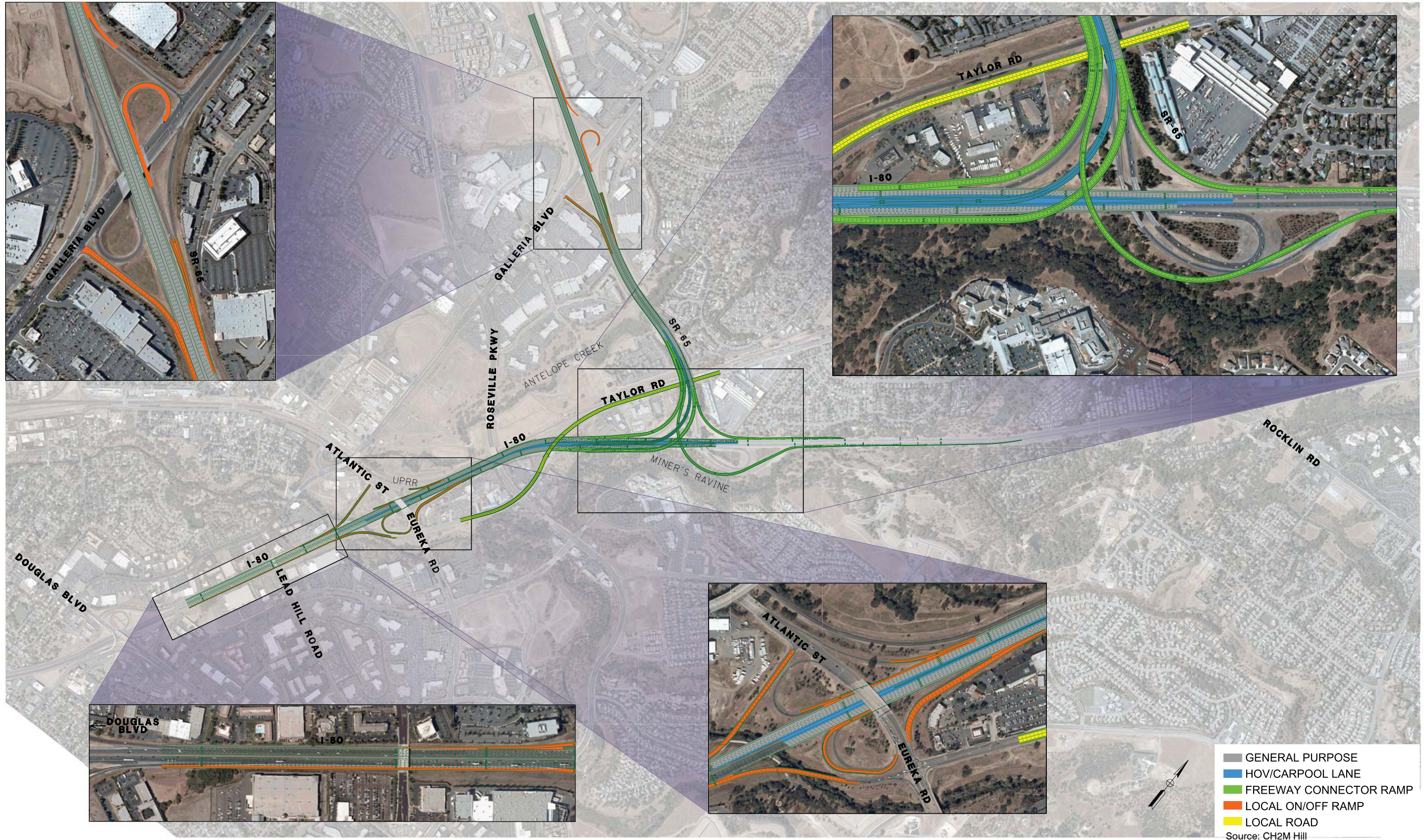
- **Concept 5 – Taylor Road Interchange Eliminated** – The ‘No Taylor’ alternative includes the I-80/SR-65 interchange expansion described above while eliminating the existing Taylor Road ramps. A detailed drawing of this alternative is shown in Figure 6. This alternative reduces weaving movements on I-80 between Eureka Road and SR-65 through access reduction.
- **Concept 2 – Taylor Road Full Access (Diamond Shape Interchange)** – The ‘Full Taylor’ alternative includes the I-80/SR-65 interchange expansion with a new Taylor Road interchange that has all four movements to and from I-80. A detailed drawing of this alternative is shown in Figure 7. The Taylor Road interchange would be co-located with the I-80/SR-65 interchange and have a Tight Diamond configuration. Preliminary traffic operations analysis revealed that the Trumpet Shape Interchange (Concept 3) resulted in almost identical traffic conditions, so only the Tight Diamond results are presented in this report.

The remaining two alternatives (Concepts 1 and 4) were partially evaluated. A preliminary assessment of Concept 4 found that the Antelope Creek Drive connection to Taylor Road would improve the efficiency of local circulation and access (e.g., reduce VMT), but would not provide substantial congestion relief to the I-80 and SR-65 freeway mainline beyond that of the build alternatives. This concept would also be more costly and its alignment was shown to conflict with a recently approved development. For these reasons, this alternative was not justified for detailed analysis, but it can be pursued as a separate local project. The Antelope Creek Drive extension is feasible to construct in addition to any of the build alternatives.

Concept 1, which shifted the existing Taylor Road partial interchange further east and co-located with the I-80/SR-65 interchange, failed to meet a number of Federal Highway Administration (FHWA) and Caltrans design requirements as required by the purpose and need statement. In addition, this alternative did not perform as well as the other build alternatives.

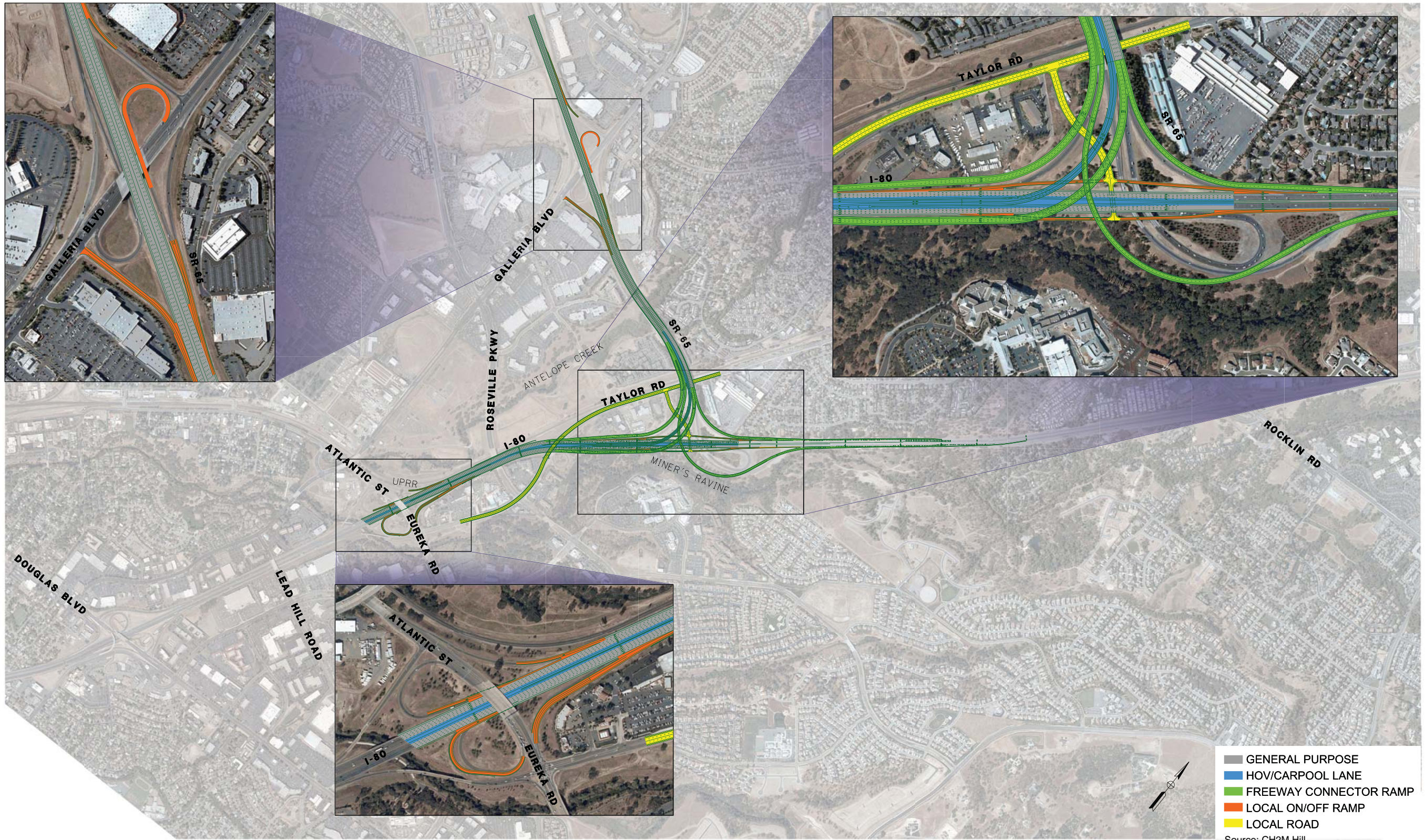
A ramp meter on the SB SR-65 connector to WB I-80 was evaluated for all alternatives. A three-lane ramp meter would serve about 900 vehicles per hour per lane assuming the typical operation of two cars per green for high volume on-ramps. The demand volumes of the build alternatives range up to 3,720 vehicles per hour during the peak hour. With a metered flow rate of 2,700 vehicles per hour, this would result in a queue of approximately 1,020 vehicles, or 1.6 miles long during the peak hour. The ramp meter would cause severe queuing that would block all movements on SB SR-65. The queuing would have substantial impacts to the interchange operations at Galleria Boulevard, Pleasant Grove Boulevard, and Blue Oaks Boulevard.

Operations with three cars per green may provide up to 1,500 vehicles per hour per lane. Although not currently used in the Sacramento area, "three cars per green" operation is used on freeway connector ramp meters in Los Angeles (for example, I-105 to northbound I-405). With a higher throughput, the queues for SB SR-65 could be managed such that upstream interchanges were not significantly affected.



- GENERAL PURPOSE
 - HOV/CARPOOL LANE
 - FREEWAY CONNECTOR RAMP
 - LOCAL ON/OFF RAMP
 - LOCAL ROAD
- Source: CH2M Hill


 NOT TO SCALE



Chapter 2. Analysis Methodology

2.1. Study Area

The project study area for transportation analysis extends beyond the immediate vicinity of the I-80/SR-65 interchange as shown in Figure 8. The larger study area for transportation analysis purposes was based on two key factors.

1. The area needed to be large enough to capture the influence of potential changes at the I-80/SR-65 interchange. This was determined through field observations and travel forecasting analysis that assessed traffic volume changes associated with the project's mixed-flow and HOV lane changes. This information revealed peak period traffic operations at the I-80/SR-65 interchange influence upstream and downstream conditions through multiple local interchanges.
2. The Placer County Transportation Planning Agency (PCTPA) wanted to develop travel forecasting and traffic operations model that would cover an area large enough for anticipated future projects such as Placer Parkway and the SR-65 mainline widening project between Lincoln and I-80.

Depending on the analysis scenario, up to 155 individual analysis locations are included in the study area. These locations consist of freeway mainline segments, freeway ramp junctions, freeway weaving areas, ramp meters, and signalized intersections. For a complete listing of all analysis locations refer to the Technical Appendix.

2.2. Data Collection Methods

This section describes the data that were collected for use in the traffic analysis.

2.2.1. Geometric Data

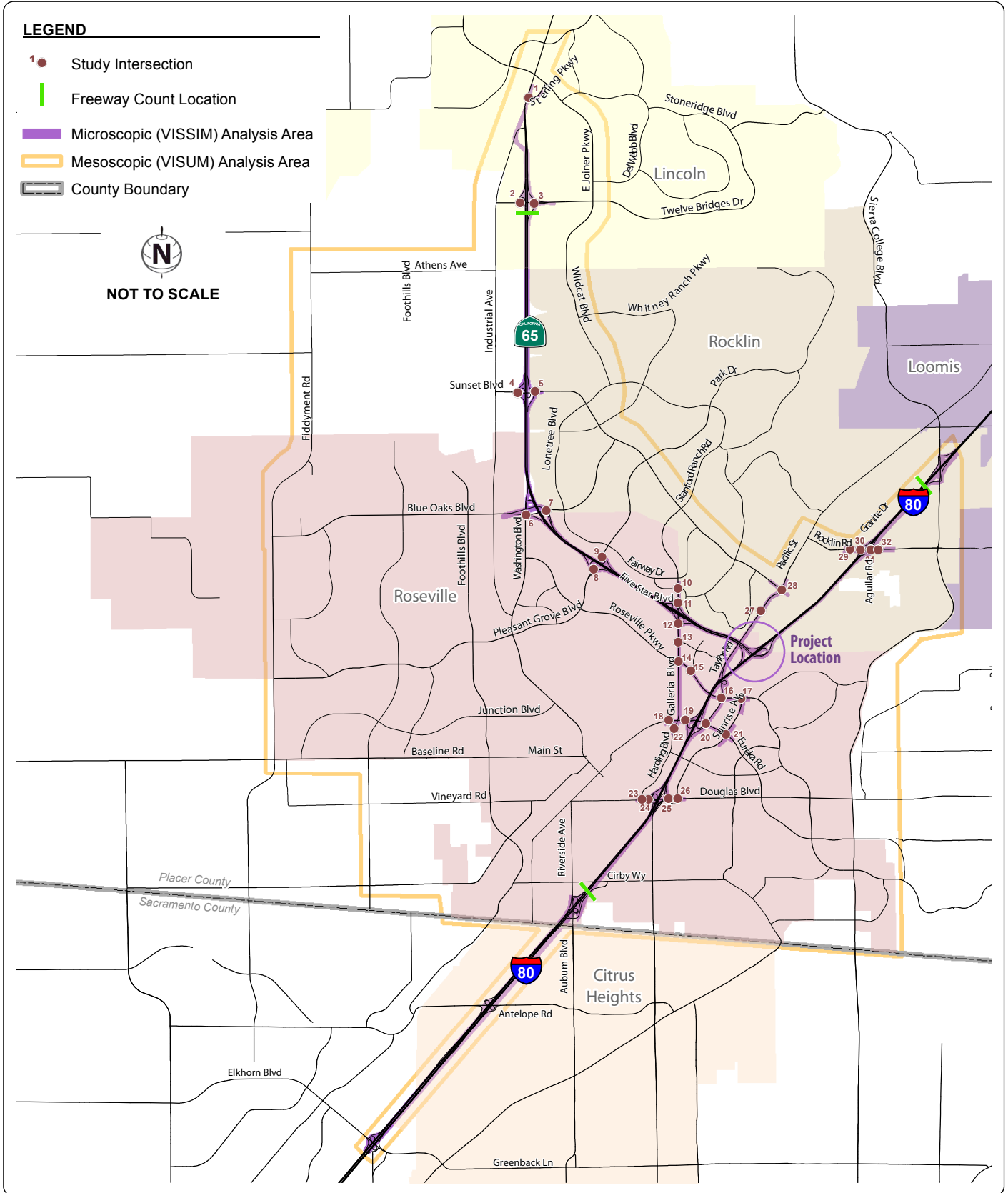
Roadway geometric data were gathered using aerial photographs, design plans (for the I-80 HOV lane project), and field observations. The lane configurations that were taken initially from aerial photographs were confirmed or revised based on field observations.

LEGEND

- 1 ● Study Intersection
- █ Freeway Count Location
- ▭ Microscopic (VISSIM) Analysis Area
- ▭ Mesoscopic (VISUM) Analysis Area
- ▭ County Boundary



NOT TO SCALE



2.2.2. Traffic Control Data

Traffic control data (i.e., signal phasing/timings) were provided by the responsible operating agencies including Caltrans, the City of Roseville, the City of Rocklin, and Placer County. The Caltrans Traffic Operations Sacramento Area office provided timing information for the ramp meters that were operating when the traffic counts were collected. The posted speed limits for the network were collected during field observations.

Traffic signals are modeled as either free operation or coordinated according to the control plans specified in the controller. Traffic control at unsignalized intersections were taken from aerial photographs and confirmed during field observations.

2.2.3. Traffic Flow Data

Freeway and intersection traffic counts were collected in 15-minute intervals for the 6 to 10 AM and 3 to 7 PM peak periods during January and February of 2012. At intersections, cars, trucks, bicycles, and pedestrians were counted by turning movement. For freeways, traffic counts include vehicle classification by number of occupants for passenger cars and type of vehicle. Table 1 contains the hourly HOV and truck percentages at the freeway gateway locations from the traffic counts (complete traffic count data are contained in the Technical Appendix).

Hour	EB I-80 at Riverside Ave		WB I-80 at Sierra College Blvd		SB SR-65 at Twelve Bridges Dr	
	HOV	Truck	HOV	Truck	HOV	Truck
6 to 7 AM	12.4%	7.9%	11.6%	3.8%	13.1%	1.8%
7 to 8 AM	13.7%	3.7%	10.7%	3.8%	10.5%	1.4%
8 to 9 AM	15.6%	4.0%	13.9%	5.2%	14.8%	1.1%
9 to 10 AM	18.3%	5.3%	18.1%	5.9%	19.0%	2.2%
3 to 4 PM	20.0%	3.2%	24.3%	7.5%	31.1%	1.7%
4 to 5 PM	19.2%	2.6%	24.5%	5.1%	26.6%	0.9%
5 to 6 PM	13.9%	2.2%	18.8%	5.1%	31.0%	1.0%
6 to 7 PM	12.7%	2.8%	17.1%	5.2%	29.5%	1.5%

Source: Fehr & Peers, 2013

2.2.4. Travel Time Data

Travel time surveys were conducted during the same day of the mainline counts using GPS (global positioning system) units. The following routes were traveled for a minimum of every 15 minutes during the morning and evening peak periods.

- SB SR-65 at Blue Oaks Boulevard to WB I-80 at Elkhorn Boulevard
- EB I-80 at Elkhorn Boulevard to NB SR-65 at Blue Oaks Boulevard
- WB I-80 from Sierra College Boulevard to Elkhorn Boulevard
- EB I-80 from Elkhorn Boulevard to Sierra College Boulevard

2.3. Travel Forecasting Methodology

The transportation analysis for the I-80/SR-65 Interchange project used an integrated modeling approach that has three different levels of detail: macro, meso, and micro. At the macro level, the regional travel forecasting model (SACMET) is used to forecast peak period origin-destination (OD) traffic volume flows between traffic analysis zones both internal and external to the study area. At the meso level, the peak period OD flows are divided into four one-hour trip tables and disaggregated into three modes – single occupant vehicle (SOV), HOV, and truck – and then assigned to the sub-area roadway network using the VISUM software. The assignment process is based on congested travel times that reflect roadway link speeds and capacity. At the micro level, the traffic volumes are converted to individual vehicles that are assigned to the operational study area using the VISSIM software that contains detailed inputs governing traffic controls (signal timings), geometrics (lane configurations), and driver behavior.

The traffic forecasts were developed using the first two modeling platforms (macro and meso). The first platform is a modified version of the regional SACMET model developed by the Sacramento Area Council of Governments (SACOG) for the Metropolitan Transportation Plan (MTP)/Sustainable Communities Strategy (SCS). The second platform is the VISUM sub-area trip assignment model, which was used to assign the trips generated from the SACMET model to a detailed roadway network within the study area. Figure 8 above displays the mesoscopic and microscopic analysis areas.

The SACMET and VISUM models were calibrated and validated according to the *2010 California Regional Transportation Guidelines* (California Transportation Commission, 2010) and criteria approved by the project development team (PDT). Both models passed applicable static and dynamic validation tests. The detailed validation results are contained in Chapter 4.

Traffic volume forecasts were developed for construction year (2020) and design year (2040) conditions. The forecasts relied on modified inputs to the MTP/SCS SACMET model based on PDT refinements to land use projections and the planned roadway network as explained below.

2.3.1. Socioeconomic Forecasts

The traffic volume forecasts are derived from future socioeconomic projections that started with regional socioeconomic projections developed by SACOG for the regional MTP/SCS. These were reviewed by the PDT and modified to better reflect local plans. Figure 9 displays the final growth projections within the study area. Socioeconomic projections are the largest single influence on traffic volume forecasts, so they will affect volume projections to a greater extent than the roadway network changes or any other modeling component. If these forecasts vary in reality, it will have a direct effect on future traffic volumes.

2.3.2. Planned Transportation Network

The traffic volume forecasts are also influenced by modifications to the existing transportation network according to improvement projects anticipated to be constructed by the construction and design years (refer to Figures 3 and 4). These projects are based on the financially constrained project list contained in the MTP/SCS, but also consider projects the PDT agreed would likely be constructed by the design year. The rationale for adding projects to the MTP/SCS list was that the design year is five years beyond the 2035 horizon of the MTP/SCS. This creates a longer timeframe for revenue to accumulate. Further, the additional socioeconomic growth added to the model would also be contributing to transportation revenue to help pay for these improvements. A list of the planned projects is provided in Table 2.


TABLE 2: PLANNED SEPARATE PROJECTS

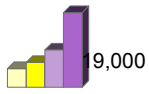
Category	Project
Complete by 2020 (Construction Year)	<ul style="list-style-type: none"> • Atkinson St: widen from 2 to 4 lanes from Foothills Blvd to south of Dry Creek • Baseline Rd: widen from 3 to 4 lanes from Brady Ln to Fiddymment Rd • Baseline Rd: widen from 2 to 4 lanes from Fiddymment Rd to Watt Ave • Baseline Rd: widen from 2 to 4 lanes from Watt Ave to (future) 16th St • Baseline Rd: widen from 2 to 4 lanes from (future) 16th St to county line • Blue Oaks Blvd: construct 4 lanes from Fiddymment Rd to Hayden Pkwy and 2 lanes from Hayden Pkwy to Westbrook Blvd • Blue Oaks Blvd: widen from 2 to 4 lanes from Hayden Pkwy to Westbrook Blvd and construct 4 lanes from Westbrook Blvd to Santucci Blvd • Cirby Way: widen from 4 to 5 lanes from Riverside Ave to Regency Ave • Cook Riolo Rd: widen from 1 to 2 lanes Dry Creek Bridge • Domiguez Rd: construct 2 lanes from Granite Dr to Sierra College Blvd • East Joiner Pkwy: widen from 2 to 4 lanes from Del Webb Pkwy to Twelve Bridges Dr • Eureka Rd: widen from 2 to 4 lanes from Sierra College Blvd to city limits • Ferrari Ranch Rd: construct 2 lanes from city limit to Moore Rd • Fiddymment Rd: widen to 4 lanes from Pleasant Grove Blvd to Baseline Rd • I-80 from SR-65 to Rocklin Rd: add an eastbound auxiliary lane • I-80/Eureka Rd On-ramp Improvements • Industrial Ave: widen from 2 to 4 lanes from SR-65 to Twelve Bridges Dr • Industrial Ave: replace 2 lane bridge at Pleasant Grove Creek • Market St: construct 2 lanes from Baseline Road to Pleasant Grove Blvd • Pacific St: widen to 4 lanes from Sierra Meadows Dr to Loomis town limits • PFE Rd: widen from 2 to 4 lanes from Watt Ave to Walerga Rd • Placer Pkwy: construct 4-lane expressway from SR-65 to Santucci Blvd • Pleasant Grove Blvd: widen from 4 to 6 lanes from Foothills Blvd to Woodcreek Oaks Blvd • Pleasant Grove Blvd: widen from 2 to 4 lanes from Fiddymment Road to Santucci Blvd • Rocklin Rd: widen from 4 to 6 lanes from Granite Dr to I-80 Westbound Ramps • Roseville Rd: widen from 2 to 4 lanes from city limits to Cirby Way • Santucci Blvd: construct 4 lanes from Baseline Road to Blue Oaks Blvd • Sierra College Blvd: widen to 6 lanes from county line to Olympus Dr • Sierra College Blvd: widen from 4 to 5 lanes from Nightwatch Dr to Aguilar Tributary • Sierra College Blvd: widen from 4 to 6 lanes from Aguilar Tributary to I-80 • Sierra College Blvd: widen from 4 to 6 lanes from Granite Dr to Bankhead Rd • Sierra College Blvd: widen from 2 to 4 lanes from Taylor Rd to north town limits • SR-65 Lincoln Bypass – Phase 1 & 2A • SR-65/Ferrari Ranch Rd Interchange • SR-65/Whitney Ranch Pkwy: construct interchange • Sunset Blvd: construct 2 lanes from Fiddymment Rd to Foothills Blvd • Sunset Blvd: widen from 2 to 4 lanes from Cincinnati Ave to SR-65 • Sunset Blvd: widen to 6 lanes from SR-65 to West Stanford Ranch Rd • Twelve Bridges Dr: widen from 2 to 4 lanes from Industrial Ave to SR-65 including interchange • University Ave: construct 4 lanes from Whitney Ranch Pkwy to Ranch View Dr • University Ave: construct 4 lanes from Sunset Blvd to Whitney Ranch Pkwy • Walerga Rd: widen from 2 to 4 lanes from Baseline Rd to county line • Washington Blvd: widen to 4 lanes from Sawtell Rd to Pleasant Grove Blvd • Whitney Ranch Pkwy: construct 6 lanes from SR-65 to east of Wildcat Blvd





TABLE 2: PLANNED SEPARATE PROJECTS

Category	Project
Complete by 2035	<ul style="list-style-type: none"> • Aviation Blvd: widen from 2 to 4 lanes from Venture Dr to 0.5 mi north of Venture Dr • Dyer Ln: construct 4 lanes from Watt Ave to Baseline Rd • Fiddymt Rd: widen from 2 to 4 lanes from Roseville city limits to Athens Rd • Foothills Blvd: construct 2 lanes from Roseville city limits to Sunset Blvd • I-80/Horseshoe Bar Rd Interchange: widen overcrossing from 2 to 4 lanes • I-80/Rocklin Rd Interchange improvements • Industrial Ave: widen from 2 to 4 lanes from Twelve Bridges Dr to Athens Ave • Nicolaus Rd: widen from 2 to 4 lanes from Airport Rd to Aviation Blvd • Midas Ave: construct grade separation at UPRR • Rocklin Rd: widen from 2 to 4 lanes from Sierra College Blvd to Loomis town limits • Rocklin Rd: widen from 2 to 4 lanes from west Loomis town limits to Barton Rd • North Antelope Rd: widen from 2 to 4 lanes from county line to PFE Rd • Sierra College Blvd: widen from 2 to 4 lanes from SR-193 to Loomis town limits • Sierra College Blvd: widen to 4 lanes from (future) Valley View Pkwy to Loomis town limits • SR-65/Galleria Blvd Interchange Improvements (Phase II) • Sunset Blvd: widen from 4 to 6 lanes from Stanford Ranch Rd to Topaz Ave • Sunset Blvd: widen from 4 to 6 lanes from Topaz Ave to Whitney Blvd • Sunset Blvd: widen from 4 to 6 lanes from Whitney Blvd to Pacific St • Taylor Rd: widen from 2 to 4 lanes from Horseshoe Bar Rd to King Rd • Valley View Pkwy: construct 2 lanes from Park Dr to Sierra College Blvd • West Oaks Blvd: construct 4 lanes from terminus to (future) Whitney Ranch Pkwy • Whitney Ranch Pkwy: construct 4 lanes from terminus to Whitney Oaks Dr • Watt Ave: widen from 2 to 4 lanes from Baseline Rd to county line
Assumed to be Complete by 2040 (Design Year)	<ul style="list-style-type: none"> • Baseline Rd: widen from 4 to 6 lanes from Fiddymt Rd to Watt Ave • Blue Oaks Blvd: widen to 6 lanes from Crocker Ranch Rd to Foothills Blvd • Blue Oaks Blvd: widen to 8 lanes from Foothills Blvd to Washington Blvd • Foothills Blvd: widen to 6 lanes from Cirby Way to Misty Wood Dr • I-80 from Douglas Blvd to Riverside Ave: add a westbound auxiliary lane • Nelson Ln: widen from 2 to 4 lanes from SR-65 (Lincoln Bypass) to Nicolaus Rd • PFE Rd: widen from 2 to 4 lanes from North Antelope Rd to Roseville city limits • Santucci Blvd: construct 6 lanes from Baseline Road to Blue Oaks Blvd • SR-65 Capacity and Operational Improvements: I-80 to Blue Oaks Blvd • Taylor Rd: widen from 2 to 4 lanes from Roseville Pkwy to I-80 • Taylor Rd: widen from 2 to 4 lanes from I-80 to city limits • Westbrook Blvd: construct new road from Baseline Rd to Pleasant Grove Blvd • Westbrook Blvd: construct new road from Pleasant Grove Blvd to Blue Oaks Blvd • Westbrook Blvd: construct new road from Blue Oaks Blvd to city limits
Sources: SACOG, 2012 and Fehr & Peers, 2013	

LEGEND

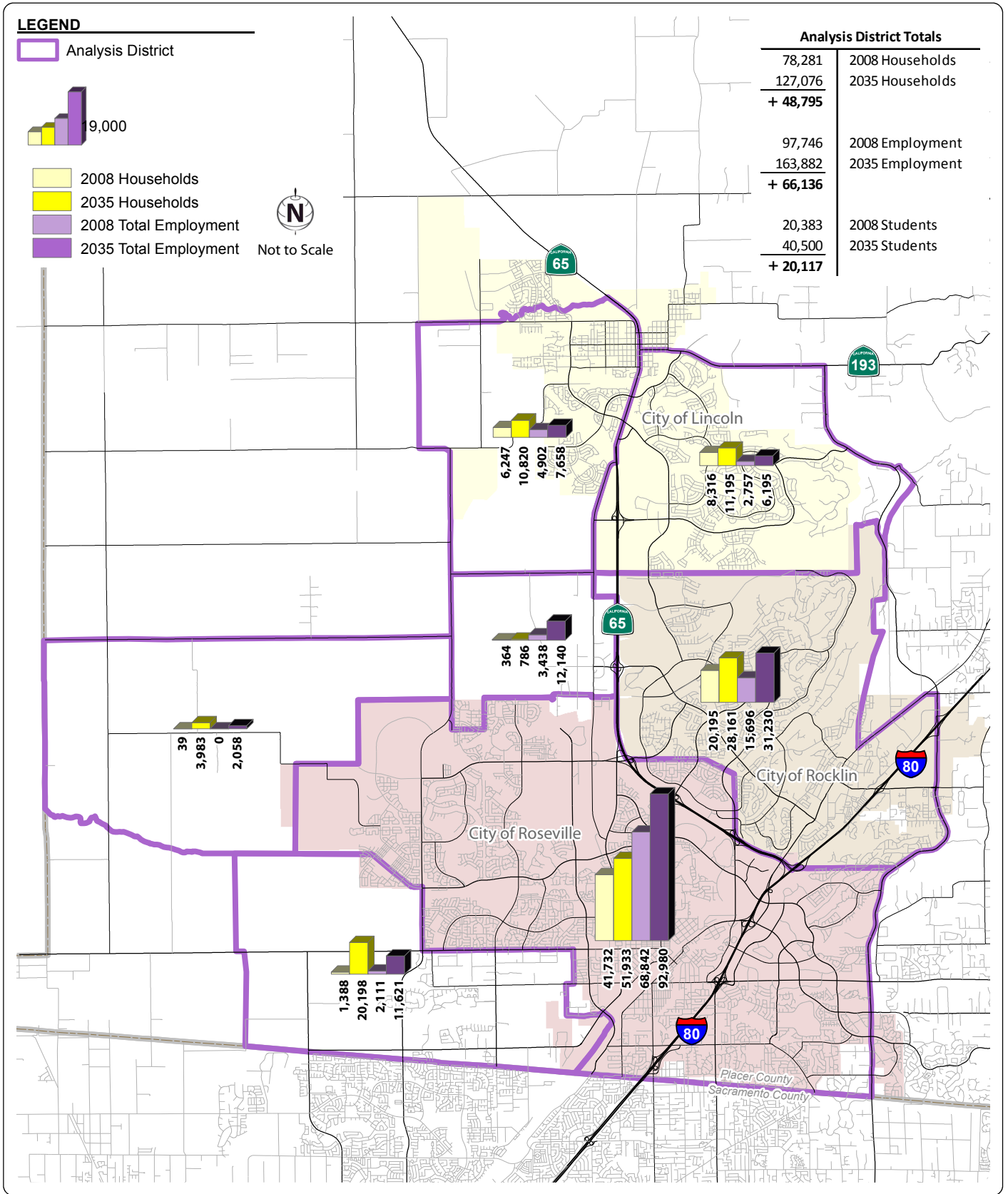
 Analysis District

 9,000

-  2008 Households
-  2035 Households
-  2008 Total Employment
-  2035 Total Employment

 Not to Scale

Analysis District Totals	
78,281	2008 Households
127,076	2035 Households
+ 48,795	
97,746	2008 Employment
163,882	2035 Employment
+ 66,136	
20,383	2008 Students
40,500	2035 Students
+ 20,117	



2.4. Traffic Operations Analysis Methodology

Because the study area already experiences peak period congestion, which is forecast to worsen, the traffic operations analysis required the use of simulation-based analysis. A congested network is very sensitive to any change in capacity or demand and the analysis tools need to be able to capture how changes in one location of the network affect the overall performance. Therefore, a VISSIM traffic simulation model was developed as follows.

- The model was constructed from roadway network (lane configuration), traffic volume (traffic counts), and traffic control (traffic signals and ramp meters) data.
- Additional detail was incorporated into the VISSIM network (posted speed limits, grades, etc.) to reflect observed field conditions.
- Driver behavior parameters were adjusted based on field observations.
- The distribution of vehicle types was calibrated to local conditions so that the percentages of trucks and HOVs match the traffic counts.

The VISSIM model was validated to existing conditions using the criteria contained in *Traffic Analysis Toolbox Volume III: Guidelines for Applying Traffic Microsimulation Modeling Software* (Federal Highway Administration, 2004). The default VISSIM parameters for geometrics and driver behavior were iteratively adjusted until the model was validated to observed conditions (refer to the Technical Appendix for a complete summary of the VISSIM model validation). Since microsimulation models, like VISSIM, rely on the random arrival of vehicles, multiple runs are needed to provide a reasonable level of statistical accuracy and validity. Therefore, the results of 10 separate runs (each using a different random seed number) were averaged to determine the final results.

The calibrated and validated model was used to generate a variety of traffic operations performance measures including person throughput, vehicle throughput, vehicle delay, passenger car density, travel time, speed, and percent demand served. Some of these measures were used to determine level of service (LOS) values for analysis locations consistent with the methodology contained in the *Highway Capacity Manual* (HCM) (Transportation Research Board, 2011).

The HCM methods use quantitative performance measures to determine LOS for analysis locations under AM and PM peak hour conditions. LOS is a qualitative measure of traffic operations from a driver's perspective, which varies from LOS A (the best) to LOS F (the worst), and is one of the main

evaluation criteria for this study. Tables 3 and 4 describe the LOS thresholds from the HCM for freeway sections and signalized intersections, respectively.

TABLE 3: FREEWAY LOS THRESHOLDS			
LOS	Average Density (vplpm)		Description
	Basic Sections	Ramp Junction & Weave Sections	
A	< 11	< 10	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver.
B	> 11 to 18	> 10 to 20	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.
C	> 18 to 26	> 20 to 28	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.
D	> 26 to 35	> 28 to 35	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.
E	> 35 to 45	> 35 to 43	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.
F	> 45	> 43	Represents a breakdown in flow.
Notes: vplpm = vehicles per lane per mile.			
Source: Fehr & Peers, 2013			

TABLE 4: SIGNALIZED INTERSECTION LOS THRESHOLDS		
LOS	Average Delay (sec/veh)	Description
A	< 10	Very low delay occurs with favorable progression and/or short cycle length.
B	> 10 to 20	Low delay occurs with good progression and/or short cycle lengths.
C	> 20 to 35	Average delays result from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.
D	> 35 to 55	Longer delays occur due to a combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop and individual cycle failures are noticeable.
E	> 55 to 80	High delay values indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.
F	> 80	Delays are unacceptable to most drivers due to over-saturation, poor progression, or very long cycle lengths.
Notes: sec/veh = seconds per vehicle		
Source: Fehr & Peers, 2013		

2.5. Evaluation Criteria

The analysis evaluation criteria were developed in collaboration with the PDT because the project has the potential to affect traffic operations across multiple jurisdictions. The main criteria used for this study is LOS as described below since each affected agency has established policies and thresholds related to LOS expectations.

According to the *Interstate 80 and Capital City Freeway Corridor System Management Plan* and the *State Route 65 Corridor System Management Plan* (Caltrans District 3, May 2009), Caltrans has identified the route concept LOS for the following segments.

- LOS F for I-80 from Riverside Avenue/Auburn Boulevard to Sierra College Boulevard
- LOS F for SR-65 from I-80 to Blue Oaks Boulevard
- LOS E for SR-65 from Blue Oaks Boulevard to Industrial Avenue (Lincoln Boulevard)

LOS E conditions are desired when feasible but LOS F conditions are likely to occur in the study area under no build conditions as recognized by the concept LOS thresholds. The LOS E threshold will be used to identify minimum acceptable operations and potential impacts to State highway

mainline segments, ramp junctions, weaving segments, and ramp terminal intersections. For locations with LOS F under the no build condition, an impact would occur if the project alternatives would worsen the LOS F condition based on the quantitative performance measure associated with the specific type of analysis.

For study intersections within the City of Lincoln, the City of Lincoln General Plan (Adopted March 2008) contains the following LOS policies:

- Strive to maintain a LOS C at all signalized intersections in the City during the PM peak hours.
- The City shall coordinate with Caltrans in order to strive to maintain a minimum LOS "D" for SR-65 and SR-193.

With the recent construction of the SR-65 bypass, the analysis locations in Lincoln are local intersections. As a result, LOS C will serve as the minimum acceptable LOS for intersections in the City of Lincoln for both AM and PM peak hours.

For study intersections within the City of Roseville, the City of Roseville General Plan (Adopted May 5, 2010) LOS policy states:

- Maintain a level of service (LOS) "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the PM peak hours.

Some of the study intersections are shown in the General Plan to operate at worse than LOS C under 2025 conditions. For this project, the following criteria are proposed.

- For intersections shown to be operating at LOS C or better in the General Plan under 2025 conditions, LOS C will be used as the minimum acceptable LOS.
- For intersections shown to be operating at LOS D in the General Plan under 2025 conditions, LOS D will be used as the minimum acceptable LOS.
- For intersections shown to be operating at LOS E in the General Plan under 2025 conditions, LOS E will be used as the minimum acceptable LOS.
- For intersections shown to be operating at LOS F in the General Plan under 2025 conditions, LOS F and the corresponding v/c ratio will be used as the minimum acceptable LOS.

These thresholds will be used for both the AM and PM peak hours in both the construction and design year analysis.

For study intersections within the City of Rocklin, the City of Rocklin General Plan (Adopted April 3, 1991), Section C Policy 13 (Circulation) states:

- To maintain a minimum traffic level of service "C" for all streets and intersections, except for intersections located within ½ mile from direct access to an interstate freeway where a level of service "D" will be acceptable. Exceptions may be made for peak hour traffic where not all movements exceed the acceptable level of service.

Based on these standards and for the purposes of this study, LOS C is the minimum acceptable LOS for the Pacific Street intersections at Woodside Drive and Sunset Boulevard. LOS D is the minimum acceptable LOS for the Rocklin Road intersections since they are less than one-half mile from I-80.

Chapter 3. Existing (2012) Conditions

The existing conditions analysis includes meso-scale network performance, micro-scale traffic operations, and traffic safety. The meso-scale network performance evaluates the entire network within the meso-scale study area based on vehicle miles of travel (VMT), vehicle hours of travel (VHT), vehicle hours of delay (VHD), and freeway VHD. VHD includes all hours of travel below the free-flow speed. Freeway VHD includes only hours of travel below 35 miles per hour (mph). The operations analysis is more detailed and analyzes individual facilities with separate discussions for freeways and arterial intersections, while the traffic safety evaluation focuses only on freeway facilities.

3.1. Meso-Scale Network Performance

Table 5 contains estimates of existing (2012) meso-scale study area VMT, VHT, VHD, and Freeway VHD for AM and PM peak period conditions. This information shows that the PM peak period has the highest level of travel with VHD equal to almost 35 percent of all VHT. The AM peak period also experiences congested conditions with a VHD at approximately 25 percent of all VHT.

Measure of Effectiveness	AM Peak Period (6:00 to 10:00)	PM Peak Period (3:00 to 7:00)
VMT	1,182,073	1,562,794
VHT	31,314	49,967
VHD	7,807	17,423
Freeway VHD	1,459	4,564

3.2. Traffic Operations

Traffic operations analysis was performed for existing (2012) conditions under AM and PM peak period and peak hour conditions. This analysis relied on the AM and PM four hour peak period VISSIM models from which peak hour results were extracted. The VISSIM model only includes the freeway network and the immediate arterial network around the I-80/SR-65 interchange. As a result, performance measures such as VMT and VHT reported from this model will contain much smaller values compared to the larger meso-scale network results presented in Table 5. Overall traffic operations performance of the micro-scale network is summarized in Table 6.

TABLE 6: PEAK PERIOD MICRO-SCALE NETWORK PERFORMANCE SUMMARY – EXISTING (2012) CONDITIONS		
Measure of Effectiveness	AM Peak Period (6:00 to 10:00)	PM Peak Period (3:00 to 7:00)
VMT	645,270	730,100
VHT	13,760	16,850
VHD	2,670	3,950
Average Travel Speed (mph)	46.9	43.3

Similar to the Table 5 results, the PM peak period has the highest level of travel and delay with the most congestion lasting up to three hours for select segments.

3.2.1. Freeway Operations

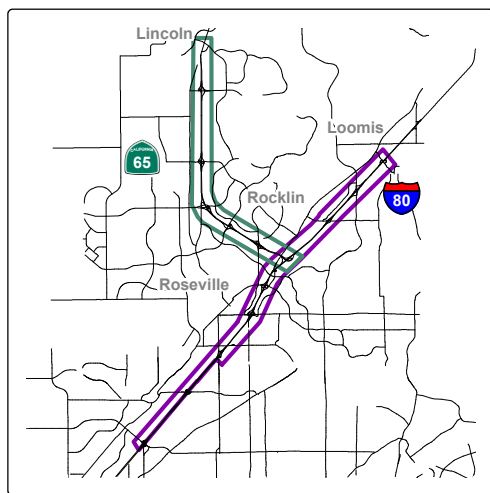
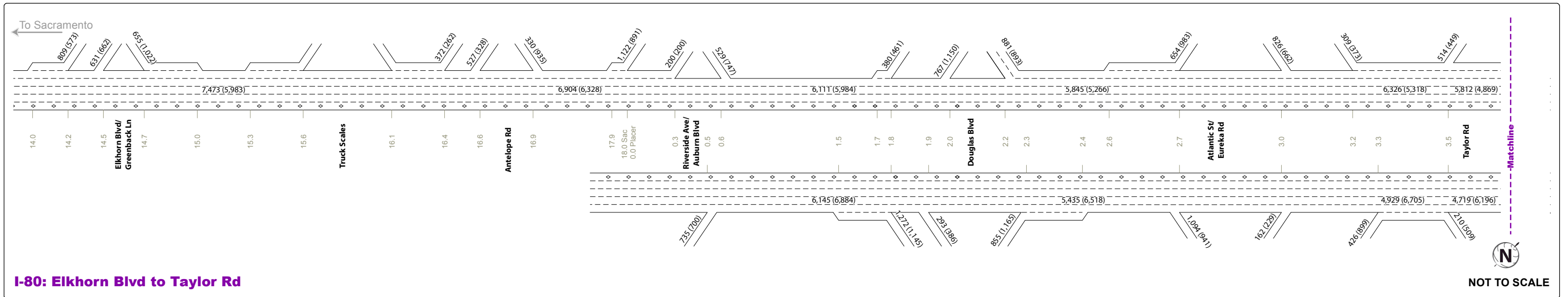
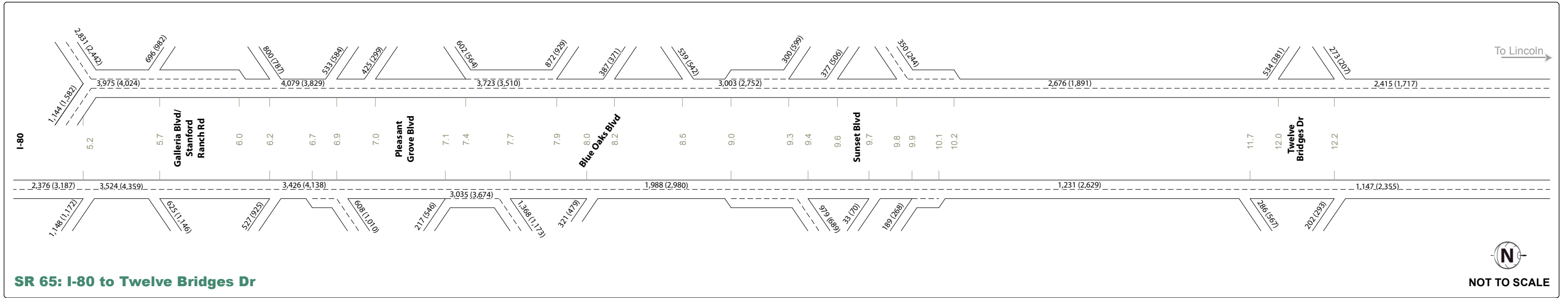
Detailed freeway operations analysis was completed for the entire four-hour AM and PM peak periods. The AM (7:30 to 8:30) and PM (4:30 to 5:30) peak hour results are reported in this section and reflect conditions based on estimates of peak hour freeway mainline and ramp traffic volumes for 2012 conditions shown in Figure 10. The existing conditions analysis confirmed field observations and provided some insight as to specific bottleneck locations, causes, and duration. Photos 1 and 2 below show the PM peak hour queue extending back from the WB I-80 on-ramp junction with the NB SR-65 connector.



Photo 1: EB I-80 from Taylor Road Overcrossing (PM Peak Hour)



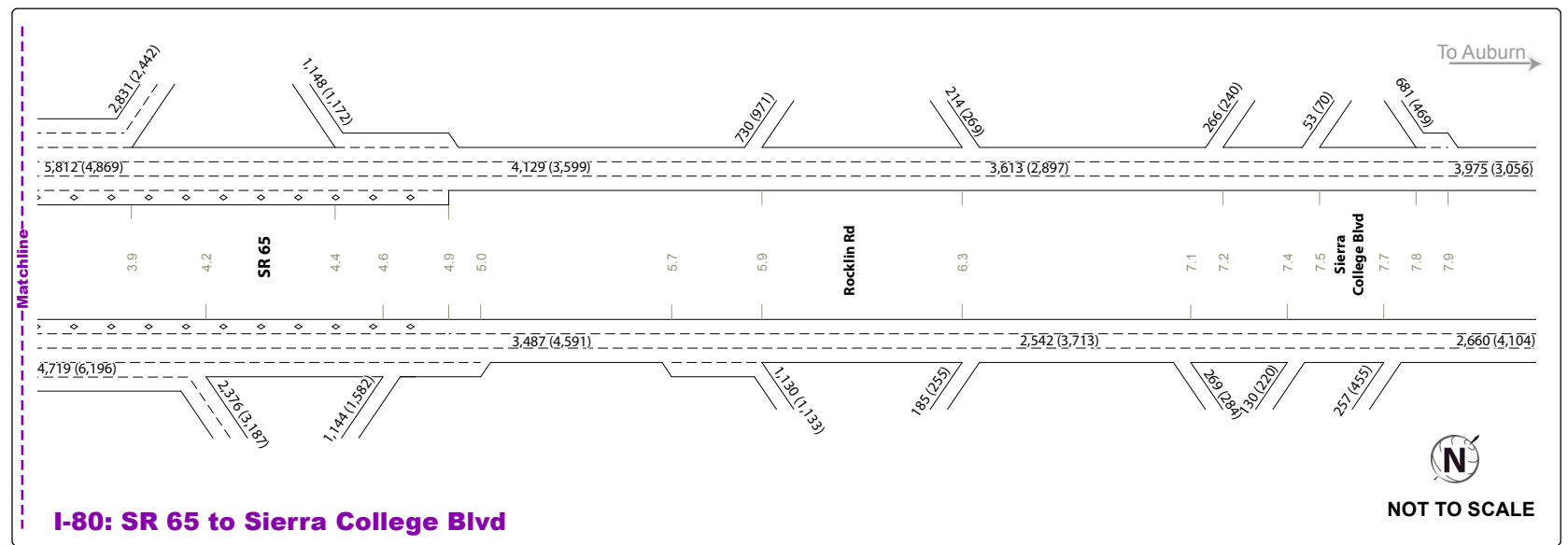
Photo 2: EB I-80 from Roseville Pkwy Overcrossing (PM Peak Hour)



LEGEND

AM (PM) Peak Hour Traffic Volume
 10.1 Postmile

NOTE: Traffic volumes collected in February 2012.



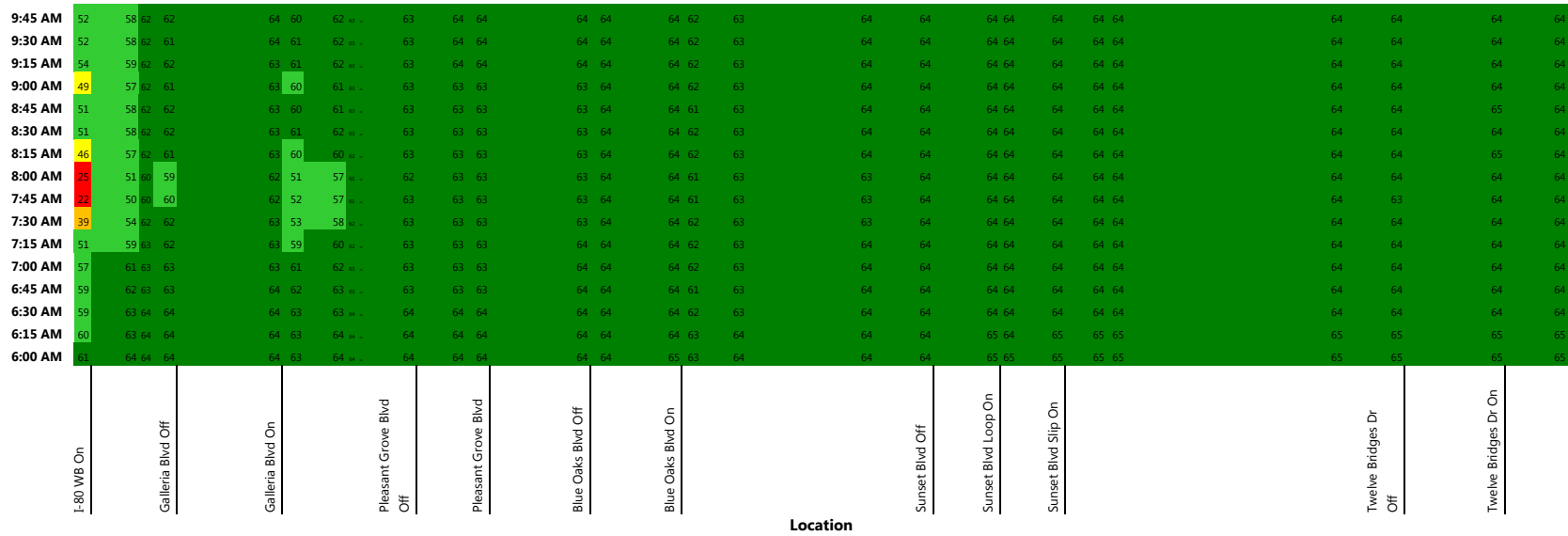
The existing (2012) conditions analysis of freeway and arterial performance matched observed conditions such as those shown in the photos above. Specific examples are listed below.

- Bottleneck areas have poor LOS results as highlighted in Table 7, which contains select LOS results for freeway operations. See the Technical Appendix for all study location results.
- The speed contour maps of the I-80 and SR-65 corridors produced from the VISSIM models show reduced speeds in bottleneck areas (see Figures 11 through 14 below).

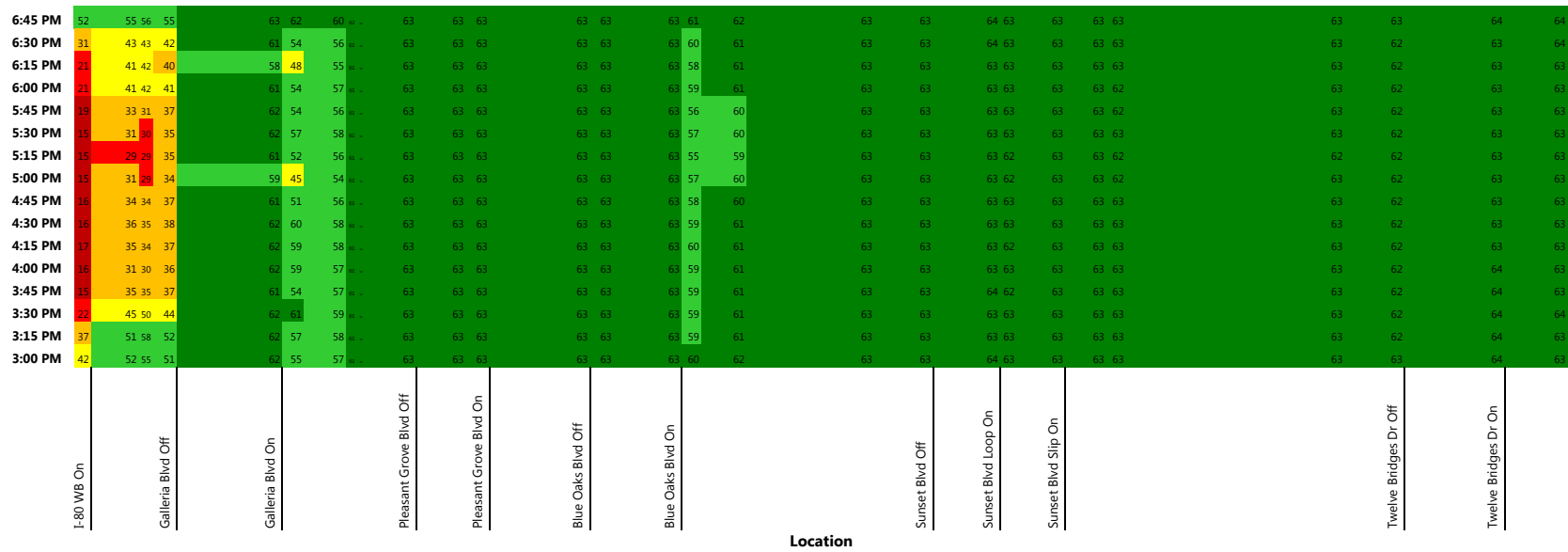
TABLE 7: SELECTED FREEWAY OPERATIONS RESULTS – EXISTING (2012) CONDITIONS				
Freeway	Location	Type	AM Peak Hour	PM Peak Hour
EB I-80	Eureka Rd Off-ramp	Diverge	C / 26	<u>F / 46</u>
	Eureka Rd Off to On-ramp	Basic	C / 21	C / 23
	Eureka Rd EB On-ramp	Merge	B / 19	B / 20
	Eureka Rd to Taylor Rd	Weave	C / 23	E / 39
	Taylor Rd to SR-65	Basic	D / 27	E / 40
	SR-65 Off-ramp	Diverge	C / 28	<u>F / 52</u>
WB I-80	SR-65 Off-ramp	Diverge	B / 18	<u>F / 46</u>
	Douglas Blvd Off-ramp	Diverge	B / 19	B / 18
	Douglas Blvd WB On-ramp	Merge	E / 36	D / 34
	Douglas Blvd EB On-ramp	Merge	E / 42	E / 37
	Douglas Blvd to Riverside Ave	Basic	D / 33	D / 31
	Riverside Ave Off-ramp	Diverge	E / 40	E / 36
NB SR-65	I-80 WB On-ramp	Merge	<u>F / 53</u>	<u>F / 95</u>
	I-80 to Stanford Ranch Rd	Basic	D / 32	<u>F / 77</u>
	Stanford Ranch Rd Off-ramp	Diverge	D / 33	<u>F / 62</u>
SB SR-65	Blue Oaks Blvd WB On-ramp	Merge	<u>F / 60</u>	B / 20
	Blue Oaks Blvd to Pleasant Grove Blvd	Weave	<u>F / 75</u>	C / 21
	Pleasant Grove Blvd Off to On-ramp	Basic	<u>F / 89</u>	C / 25
	Pleasant Grove Blvd WB On-ramp	Merge	<u>F / 72</u>	D / 31
	Pleasant Grove Blvd EB On-ramp	Merge	<u>F / 53</u>	E / 39
	Pleasant Grove Blvd to Galleria Blvd	Basic	E / 36	D / 32
	Galleria Blvd Off-ramp	Diverge	E / 35	D / 27
Note:	Bold and underline font indicate LOS F conditions. The level of service and average density for the study segment are reported.			
Source:	Fehr & Peers, 2013			

FIGURE 13 - SR-65 NORTHBOUND EXISTING CONDITIONS PEAK PERIOD SPEED CONTOUR MAP

AM PEAK PERIOD



PM PEAK PERIOD



During the AM peak hour, congested LOS F conditions occur on NB SR-65 at the I-80 on-ramp and SB SR-65 between Blue Oaks Boulevard and Pleasant Grove Boulevard. On NB SR-65, the merging of the WB I-80 on-ramp causes congestion. For SB SR-65, the constraint is the high demand from the mainline combined with the Pleasant Grove Boulevard on-ramp volume.

During the PM peak hour, the primary bottleneck is NB SR-65 at the on-ramp from WB I-80. This bottleneck results in LOS F conditions on EB I-80 at the SR-65 off-ramp. LOS E conditions exist from Taylor Road to Eureka Road, with the rightmost lanes mostly congested (queued from the SR-65 off-ramp) while the left lanes operate with higher speeds. The Eureka Road off-ramp has LOS F conditions due to queues spilling back from the ramp terminal intersection. WB I-80 has LOS F conditions at the SR-65 off-ramp due to the same bottleneck. LOS D/E conditions occur further north on NB SR-65 between Stanford Ranch Road and Pleasant Grove Boulevard. This suggests that if the bottleneck at I-80 were relieved, this section may become congested.

3.2.2. Arterial Intersection Operations

In general, arterial intersections operate better than freeway locations during the peak hours. Table 8 shows the LOS and average delay at key study intersections under existing (2012) conditions. Based on the evaluation criteria for this study, all of the study intersections operate acceptably. See the Technical Appendix for all study intersection results.

The AM peak hour intersection LOS results indicate all intersections operate at LOS C or better, except for the Roseville Parkway/Sunrise Avenue and Blue Oaks Boulevard/Washington Boulevard intersections which operate at LOS D. The Roseville Parkway/Sunrise Avenue intersection operates with split phasing to accommodate the hospital driveway, which leads to less efficient operations. The Blue Oaks Boulevard intersection experiences high peak period peak direction traffic flows because it serves both inbound (employees) and outbound (residents) commuters for west Roseville.

During the PM peak hour, four intersections operate at LOS D or E:

- Galleria Boulevard / Roseville Parkway
- Roseville Parkway / Sunrise Avenue
- Eureka Road / Taylor Road / I-80 EB Ramps
- Douglas Blvd / Sunrise Avenue
- Rocklin Road / Granite Drive

TABLE 8: SELECTED INTERSECTION OPERATIONS RESULTS – EXISTING (2012) CONDITIONS		
Intersection	AM Peak Hour	PM Peak Hour
6. Blue Oaks Blvd / Washington Blvd / SR-65 SB Ramps	D / 43	C / 33
10. Stanford Ranch Rd / Five Star Blvd	B / 19	C / 32
11. Stanford Ranch Rd / SR-65 NB Ramps	A / 9	B / 15
12. Galleria Blvd / SR-65 SB Ramps	B / 13	B / 19
13. Galleria Blvd / Antelope Creek Dr	B / 10	C / 24
14. Galleria Blvd / Roseville Pkwy	C / 30	D / 36
15. Roseville Pkwy / Creekside Ridge Dr	A / 6	B / 17
16. Roseville Pkwy / Taylor Rd	C / 30	C / 28
17. Roseville Pkwy / Sunrise Ave	D / 37	D / 37
18. Atlantic St / Wills Rd	B / 10	B / 12
19. Atlantic St / I-80 WB Ramps	A / 7	B / 11
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	C / 26	E / 61
21. Eureka Rd / Sunrise Ave	C / 24	C / 30
26. Douglas Blvd / Sunrise Ave	C / 26	D / 35
28. Pacific St / Sunset Blvd	B / 18	C / 29
29. Rocklin Rd / Granite Dr	B / 15	D / 37
30. Rocklin Rd / I-80 WB Ramps	C / 21	B / 17
31. Rocklin Rd / I-80 EB Ramps	B / 17	B / 20
32. Rocklin Rd / Aguilar Rd	A / 8	B / 13
Note: The LOS and average delay in seconds per vehicle are reported.		
Source: Fehr & Peers, 2013		

Like the Blue Oaks Boulevard intersection in the AM peak hour, the Roseville Parkway and Eureka Road corridors serve both inbound (residents and shoppers) and outbound (employees) commuters. Additionally, reduced speeds occur on EB Eureka Road approaching the I-80 interchange. A project to widen EB Eureka Road is under construction. All other intersections operate at LOS C or better during the PM peak hour.

3.3. Traffic Safety

Table 9 summarizes the traffic collision data compiled by Caltrans' Traffic Accident Surveillance and Analysis System (TASAS) for the mainline freeway sections adjacent to the I-80/SR-65 interchange. The data shown are for the three-year period between January 1, 2008 and December 31, 2010. Within the study area, 772 collisions occurred on the freeway sections in the three-year period.

Freeway Location/Section	Total Accidents	Total Fatalities	Actual Collision Rate ¹			Average Collision Rate ¹		
			F	F&I	Total	F	F&I	Total
EB I-80 (PM 1.9 to 6.3) Douglas Blvd Off to Rocklin Rd On	235	1	0.003	0.22	0.72	0.010	0.32	1.04
EB I-80 Off to NB SR-65 (PM 4.2)	23	0	0.000	0.20	0.76	0.004	0.21	0.75
EB I-80 On from SB SR-65 (PM 4.5)	3	0	0.000	0.19	0.29	0.004	0.15	0.45
WB I-80 (PM 1.9 to 6.3) Rocklin Rd Off to Douglas Blvd On	340	1	0.003	<u>0.33</u>	<u>1.05</u>	0.010	0.32	1.04
WB I-80 Off to NB SR-65 (PM 4.3)	4	1	<u>0.070</u>	0.28	0.28	0.005	0.15	0.42
WB I-80 On from SB SR-65 (PM 4.0)	15	0	0.000	<u>0.17</u>	<u>0.50</u>	0.003	0.11	0.35
NB SR-65 (PM 5.2 to 7.4) I-80 On to Pleasant Grove Blvd Off	54	0	0.000	0.15	0.46	0.011	0.36	1.12
SB SR-65 (PM 5.2 to 7.4) Pleasant Grove Blvd On to I-80 Off	98	0	0.000	0.26	0.84	0.011	0.36	1.12

Notes: Bold and underline font indicate actual accident rates that are higher than the statewide average for similar facilities.

¹ The accident rate is accidents per million vehicle-miles. "F" refers to the fatality rate, and "F&I" refers to the fatality and injury rate. Total number of accidents includes non-injury accidents, which are not included in the table.

Source: Caltrans District 3 TASAS Table B, January 1, 2008 to December 31, 2010

Collision rates were higher than statewide averages for one mainline section and two ramps as highlighted in the table. These locations experience some of the most severe congestion during peak periods and are more likely to experience excessive speed differentials. The congestion

contributes to certain types of collisions such as rear-end collisions as shown in Table 10. The build alternatives for this project would modify all these locations and reduce congestion in these locations.

Location	Head On	Side Swipe	Rear End	Broadside	Hit Object	Overturn	Auto-Ped	Other
EB I-80 (PM 1.9 to 6.3) Douglas Blvd Off to Rocklin Rd On	1	40	147	7	30	4	2	4
EB I-80 Off to NB SR-65 (PM 4.2)	4	4	5	1	7	2	0	0
EB I-80 On from SB SR-65 (PM 4.5)	0	0	2	0	1	0	0	0
WB I-80 (PM 1.9 to 6.3) Rocklin Rd Off to Douglas Blvd On	0	72	205	4	43	8	2	6
WB I-80 Off to NB SR-65 (PM 4.3)	0	0	2	0	1	1	0	0
WB I-80 On from SB SR-65 (PM 4.0)	0	5	1	0	9	0	0	0
NB SR-65 (PM 5.2 to 7.4) I-80 On to Pleasant Grove Blvd Off	0	6	29	1	14	2	0	2
SB SR-65 (PM 5.2 to 7.4) Pleasant Grove Blvd On to I-80 Off	0	16	71	2	9	0	0	0

Source: Caltrans District 3 TASAS- Table B, January 1, 2008 to December 31, 2010

Chapter 4. Travel Demand Forecasts

The travel demand forecasts for the project were developed using a validated sub-area model derived from the SACMET regional travel demand forecasting (TDF) model developed by SACOG¹. The approach to developing travel demand forecasts started with the recognition that regional travel demand models do not contain sufficient detail or sensitivity for local applications like developing directional freeway mainline and ramp volume forecasts. Instead, the regional model provides a starting point for creating a more detailed sub-area model along the freeway corridor. Having a valid sub-area model is a critical step in ensuring a high level of confidence in the traffic volume forecasts that will be used to evaluate the effects of improving the I-80/SR-65 interchange.

4.1. Sub-Area Model Development

SACMET is a four-step TDF model that was last calibrated and validated in 2008. This model represents the state of the practice for a metropolitan planning organization such as SACOG given the geographic area and population size covered by the model. Two advanced features of the model include a destination choice model for the home-based work purpose and a feedback loop between trip assignment and trip distribution. Issues or limitations of the model include the following.

- No feedback to land use projections – The model’s land use projections are developed independently of specific model runs and are not affected by congestion and accessibility. For corridors where significant roadway capacity expansion will occur (which makes land along those corridors more accessible), the model does not contain sufficient sensitivity to capture the full effects of induced traffic that occurs due to induced growth. This issue is not considered significant for the I-80/SR-65 interchange since the increase in capacity is not commensurate with the increase in land use growth. Therefore, the peak period traffic volume forecasts that are the basis for the operations analysis substantially exceed available capacity.
- No feedback to trip generation – The model is insensitive to congestion effects on trip making behavior since it uses the same fixed trip generation rates in base year and future year models. This limits the model’s sensitivity to congestion effects and likely results in higher traffic volume forecasts than are likely to occur in future years.

¹ The SACMET model used for this project was released in May 2011 and was developed to be consistent with the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy 2035.

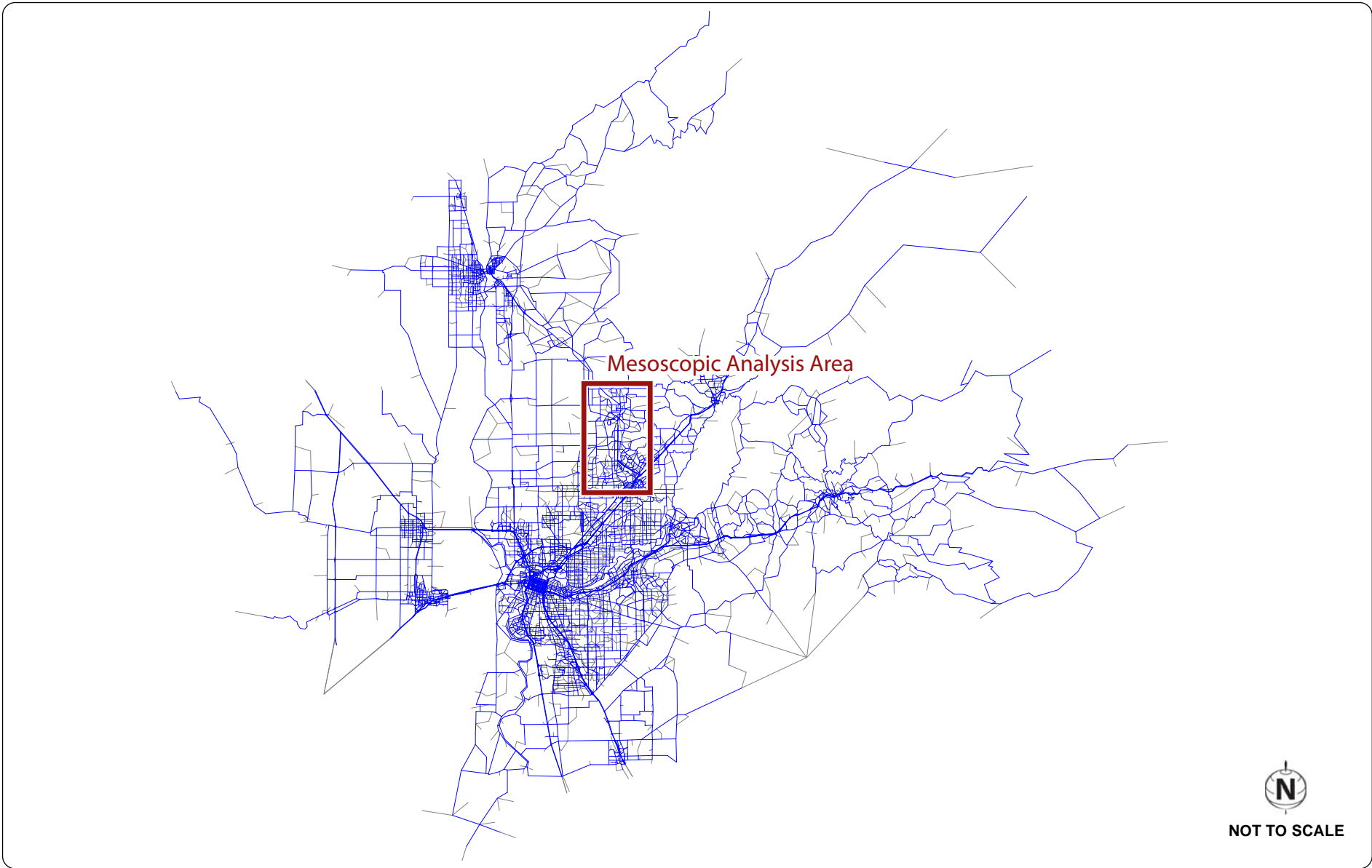
- Fixed peak period percentages – The model's forecasts of peak period traffic volumes are based on fixed percentages that are carried over from the base year model to the future year models. In reality, peak periods will spread as congestion worsens and the peak period percentages will change. The use of base year peak period percentages for the future year models will likely result in peak period traffic volumes that are higher than the roadway network could operationally support.

For the I-80/SR-65 interchange project, the last two issues were addressed through the integration of the sub-area travel demand forecasts with a meso-scale trip assignment model and a microsimulation traffic operations model (which were built using the VISUM 12.0 and VISSIM 5.4 software, respectively). Figure 15 displays the entire SACMET model network and highlights the portion that is the study area for the I-80/SR-65 project.

Key modifications to the SACMET model that were made within the sub-area are listed below.

- Updated base year land use estimates within the study area based on field observations, aerial photography, and input from Placer County and the Cities of Rocklin and Roseville.
- Updated base year roadway network to include greater detail and correct inconsistencies between model inputs and field observations.
- Added new traffic analysis zones (TAZs) in the study area to increase the level of detail and improve the loading of traffic from TAZs onto the network.

Figure 8 shows the VISUM mesoscopic model area and the VISSIM microscopic model area. Trip tables from the SACMET model were used to forecast peak period travel demand, and the mesoscopic VISUM model was used to refine the peak period temporal distribution into individual one hour assignments. In the final step, the VISUM trip tables and paths are imported to VISSIM where the final assignment occurs and the end result is a forecast of peak spreading and refined peak period traffic volume flows that are sensitive to the operational capacity constraints of the I-80/SR-65 network.



4.2. Model Validation

Validation compares model estimates of base year conditions to observed traffic counts and sensitivity tests are conducted to ensure the models respond in the correct direction and magnitude when changes to inputs are made. The comparison of model volumes to counts is referred to as static validation and involves statistical tests to measure how well the model volume estimates match the traffic counts. The sensitivity tests are called dynamic validation.

The base year for the SAMET model is 2008 so the static validation for the modified SACMET model and the VISUM model relied on available traffic counts from 2006 to 2009. This was necessary since a complete set of traffic counts was not available for 2008 alone. The static validation results should be viewed within this context because the model volumes are intended to represent 2008 conditions. Specific validation tests and thresholds were obtained from the *2010 California Regional Transportation Plan Guidelines* (California Transportation Commission, 2010). This document includes modeling guidelines for state, regional, and local agency projects.

4.2.1. Static Validation

After the changes noted above were completed, the modified SACMET model was validated within the project study area. Specific criteria have been established as target thresholds for the static tests. The static validation results for both models are compared to the target thresholds in Tables 11 and 12 below. As a regional model, the SACMET model performed well within the small sub-area. It passed all but one of the static tests (although it improved from its original off-the-shelf performance for this test). In general, the model generated volume estimates that closely matched freeway and ramp volumes. Differences tended to be larger on low volume roadways on the edge of the study area.

The VISUM model was developed just for the project study area and includes more network detail and a different approach to estimating and assigning trips. The VISUM model was developed using Airsage cell phone OD data and TomTom GPS speed data. The cell phone OD data were processed through a trip table estimation procedure to match 2008 traffic flows. The GPS speed data was used to set the link free-flow speed. As a result, the VISUM model static validation results in Table 12 show a close match to traffic counts.

TABLE 11: SACMET MODEL VALIDATION RESULTS

Measure	AM Peak Hour	PM Peak Hour	AM Four-Hour	PM Four-Hour	Threshold¹
Model/Count Ratio	0.98	1.01	1.05	0.97	
Percent Within Caltrans Maximum Deviation	71%	69%	77%	70%	> 75%
Percent Root Mean Square Error	30%	31%	28%	28%	< 40%
Correlation Coefficient	0.94	0.93	0.96	0.94	> 0.88

Note: ¹ 2010 California Regional Transportation Plan Guidelines, California Transportation Commission, 2010
Source: Fehr & Peers, 2013

TABLE 12: VISUM MODEL VALIDATION RESULTS

Measure	AM Peak Hour	PM Peak Hour	AM Four-Hour	PM Four-Hour	Threshold¹
Model/Count Ratio	1.01	1.01	1.01	1.01	
Percent Within Caltrans Maximum Deviation	100%	100%	100%	100%	> 75%
Percent Root Mean Square Error	11%	17%	16%	17%	< 40%
Correlation Coefficient	1.00	1.00	1.00	1.00	> 0.88

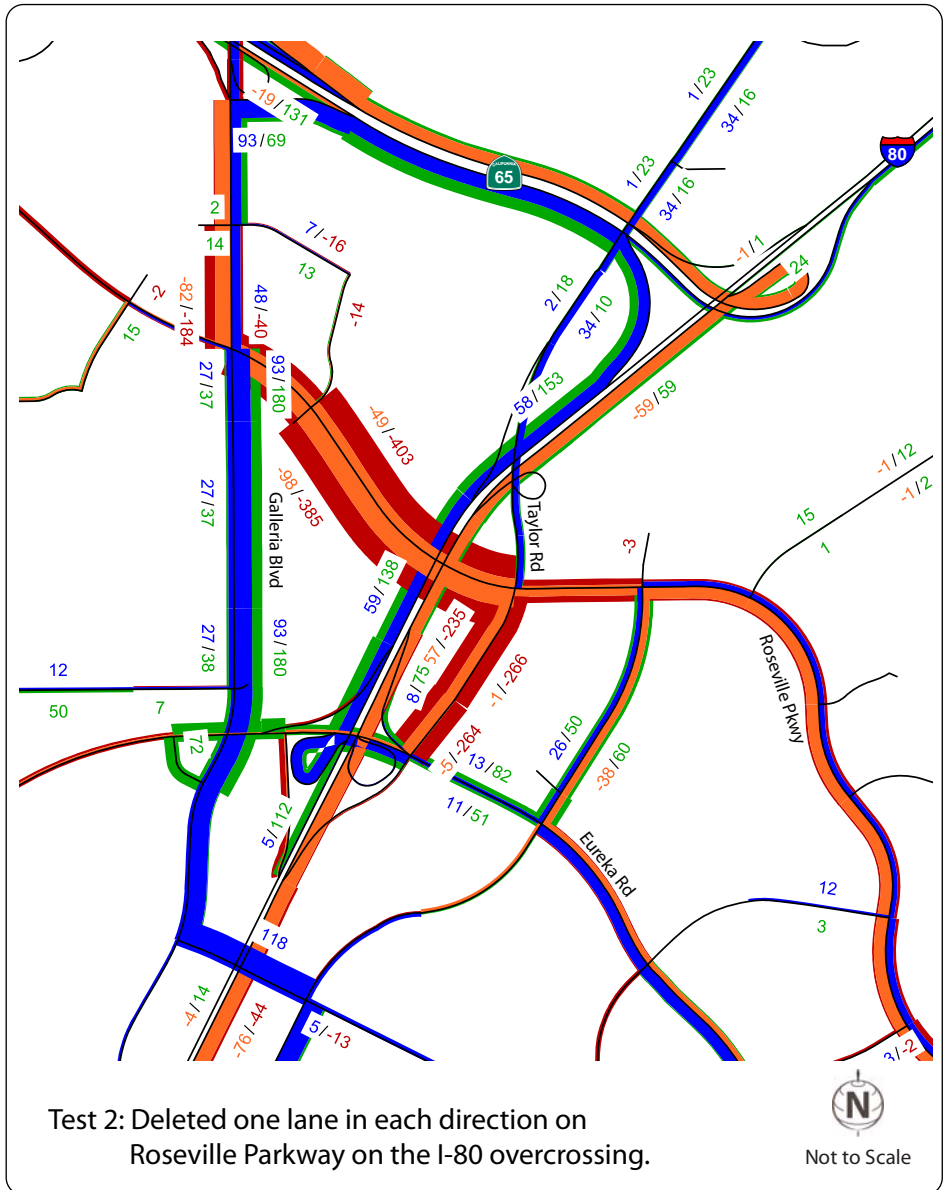
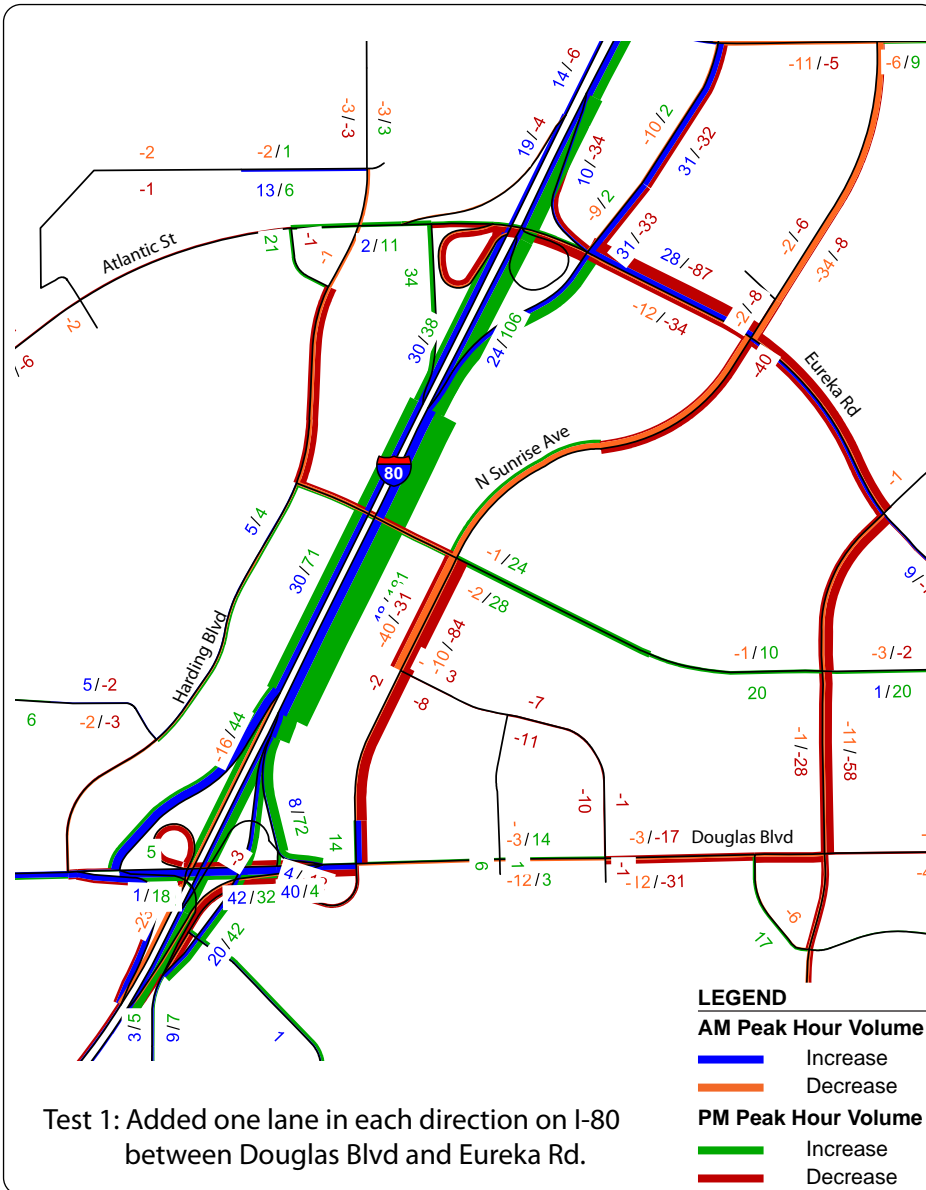
Note: ¹ 2010 California Regional Transportation Plan Guidelines, California Transportation Commission, 2010
Source: Fehr & Peers, 2013

4.2.2. Dynamic Validation

The SACMET and VISUM models were tested dynamically by deleting and adding links. Figure 16 displays two of the dynamic tests for illustrative purposes. The first test shows the change in peak hour traffic volumes when one lane is added in each direction on I-80 between Douglas Boulevard and Eureka Road. The second test shows the change in traffic levels when one lane in each direction is deleted from Roseville Parkway at the I-80 overcrossing.

In the first test, the model increased the I-80 volume as a result of adding a lane by shifting volume from the parallel roadways: Harding Boulevard, Sunrise Avenue, and Rocky Ridge Drive. In the second test, traffic volume on Roseville Parkway dropped with the reduction of a lane and volume was shifted to the parallel SR-65 and Atlantic Street/Eureka Road. Both models responded in the correct direction and magnitude when making changes to network inputs. The SACMET model also demonstrated appropriate responses in changes to land use inputs during the static validation process.

With the sub-area model validated, the next step was to use the model to generate future year forecasts.



4.3. Future Year Forecasts

Traffic forecasts for design and construction year analysis were developed for the following project alternatives (see Figure 2).

- No Build Alternative
- TSM Alternative
- No Taylor Alternative (or Taylor Road Interchange Eliminated)
- Half Taylor Alternative (or Taylor Road Access Shifted)
- Taylor Diamond Alternative (or Taylor Road Full Access Diamond Shape Interchange)
- Taylor Trumpet Alternative (or Taylor Road Full Access Trumpet Shape Interchange)

From a forecasting perspective, the last two alternatives are similar since the connection points for the proposed I-80/Taylor Road interchange occur at about the same location. Therefore, these two alternatives share one set of forecasts, called the “Full Taylor Alternative”.

Traffic forecasts were developed for one additional alternative: Full Taylor Alternative with Antelope Creek Drive Connection. In this alternative, Antelope Creek Drive is extended east across the railroad tracks to Taylor Road. While this alternative was dropped from consideration for more detailed analysis as explained previously, traffic forecasts were completed to aid in this decision and those results may prove useful in further developing or refining the Antelope Creek Drive connection as a future project. As such, this alternative is included in traffic forecasts summary.

4.3.1. Design Year Forecasts

From a macro perspective, the proposed project alternatives – modification at one interchange – would not change regional travel demand. A sensitivity test of the SACMET model showed almost no change in travel demand with a change in capacity of the congested freeway connector ramps. Instead, the most significant effects on future traffic volumes will occur in terms of trip routing within the meso-scale study area due to travel time differences caused by the alternatives. Therefore, the PDT agreed to use the same set of trip tables for all project alternatives, which means that volumes at the sub-area boundaries are the same across alternatives.

The volume forecast process began with isolating the incremental peak period volume growth (2008 to 2035) between traffic analysis zones (TAZs) in the sub-area using the modified SACMET

model (macro level). This incremental growth was then added to the base year VISUM trip table (meso level) that was derived from the Airsage cell phone data. The incremental SACMET growth was inspected to verify that the changes in origin-destination trips were commensurate with the location of socioeconomic growth. Individual origin-destination pair volumes were not allowed to decrease between base and cumulative years.

In the next step, the four-hour peak period trip tables were divided into hourly trip tables by mode: SOV, HOV, and truck. The conversion from peak period to hourly trip tables used the existing ratio of hourly traffic volume to peak period volume. The mode share for HOVs was based on the relative peak period mode share in the 2035 SACMET model. For the entire meso study area, the overall forecast HOV shares are 18 and 19 percent during the AM and PM peak periods, respectively. The truck share is assumed to increase from 2.7 and 1.4 percent under existing conditions to 3.0 and 2.0 percent under the design year for the AM and PM peak periods, respectively.

Some adjustments were made to the HOV shares for select locations based on previous comments from Caltrans about HOV forecasts being lower than observed conditions on I-80. Table 13 shows the AM and PM peak hour HOV percentages for the I-80 western gateway from the 2035 SACMET model, the 2012 traffic counts, and the proposed 2040 forecast values. The 2008 and 2035 SACMET model forecasts show similar values of 11 to 13 percent at this gateway. These values are lower than the traffic counts that were collected in 2012. The proposed 2040 HOV percentages use the 2012 traffic count percentages for the off-peak directions. In the peak direction, a five percentage point increase was assumed to compensate for the difference between model estimates and counts. Additionally, traffic congestion is expected to be more severe in the design year, which would encourage the formation of carpools.

Direction	2035 SACMET		2012 Counts		2040 Forecast	
	AM	PM	AM	PM	AM	PM
EB	11%	13%	15%	17%	15%	22%
WB ¹	13%	13%	14%	18%	19%	18%

Note: 1. The count location was at the Riverside Ave/Auburn Blvd overcrossing, but the WB study area gateway is between Elkhorn Blvd and Madison Ave.

Source: Fehr & Peers, 2013

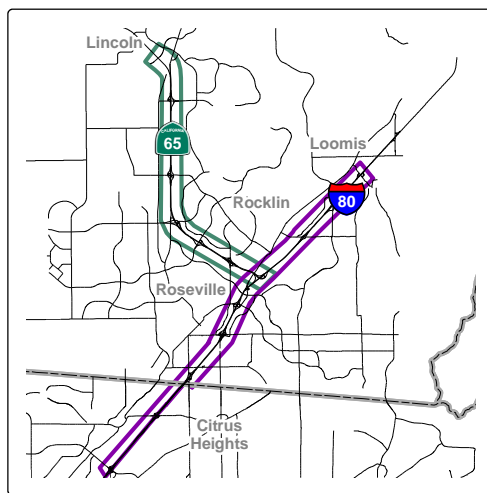
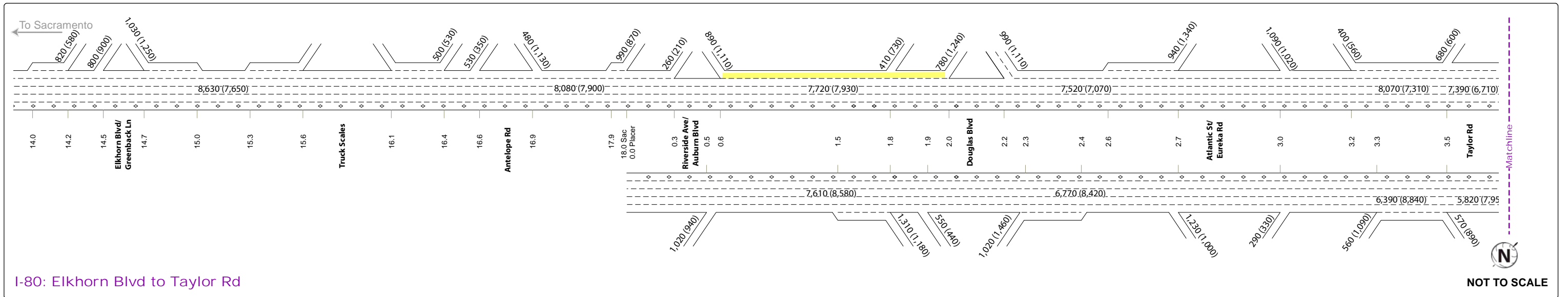
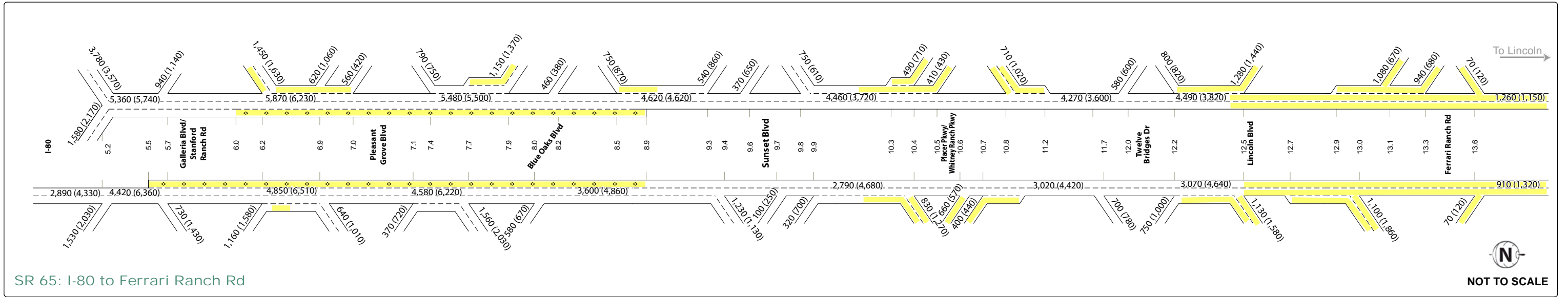
The five percentage point increase was also validated based on a June 2012 sampling of traffic volumes at the I-80/Douglas Boulevard, I-80/Eureka Road, and SR-65/Galleria Boulevard on-ramps, which found HOV percentages ranging from 9 to 25 percent for the AM peak hour and 14 to 36 percent for the PM peak hour. The AM and PM peak hour averages of 16 and 24 percent from these samples are generally similar to the 2035 SACMET forecasts of 18 and 19 percent, respectively. However, peak direction HOV percentages were some of the largest values observed. The adjustments noted in Table 13 result in HOV volume forecasts that are at or near the HOV lane operating capacity under design year conditions, so they were considered reasonable for purposes of this study.

The future year VISUM trip tables were then assigned to each project alternative network. These networks included all the planned transportation improvements shown in Figures 3 and 4 plus unique features of each alternative. The preliminary forecasts from this step were reviewed and adjusted for anomalies such as unexpected decreases in traffic volumes when compared to existing conditions. The expected decreases that occurred are noted below.

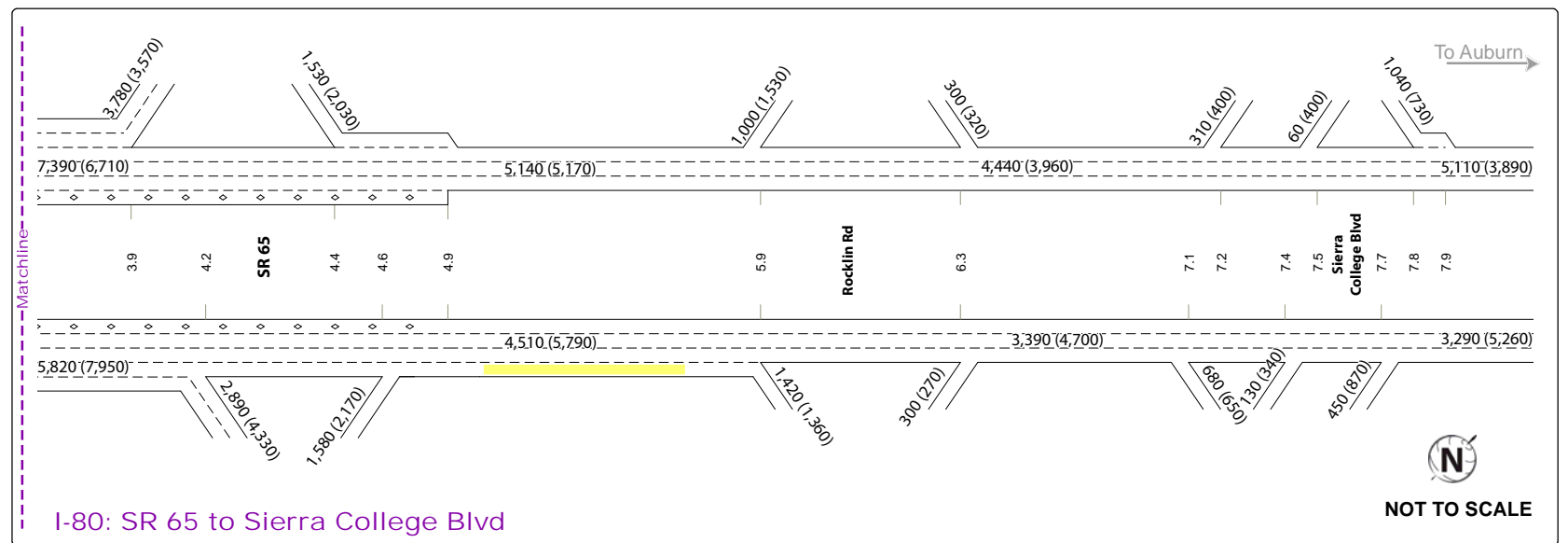
- Riverside Avenue slip on-ramp to WB I-80 – This ramp shows a decrease over existing volumes. This decrease is allowed since the cumulative roadway network includes several projects that increase parallel capacity between west Roseville and Sacramento County (widening Baseline Road/Riego Road between SR-99 and Foothills Boulevard, widening Watt Avenue, etc.). These capacity enhancements redistribute some existing long-distance trips from Placer County to Sacramento County to alternative routes.
- Sunset Boulevard loop on-ramp to SB SR-65 – The construction of the SR-65/Whitney Ranch Parkway interchange provides an alternate route so that the demand at SR-65/Sunset Boulevard is lower.

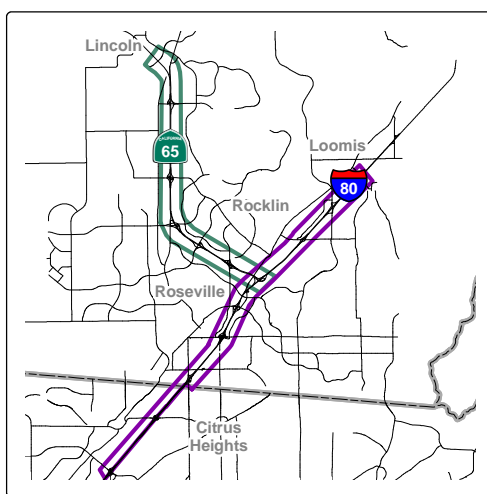
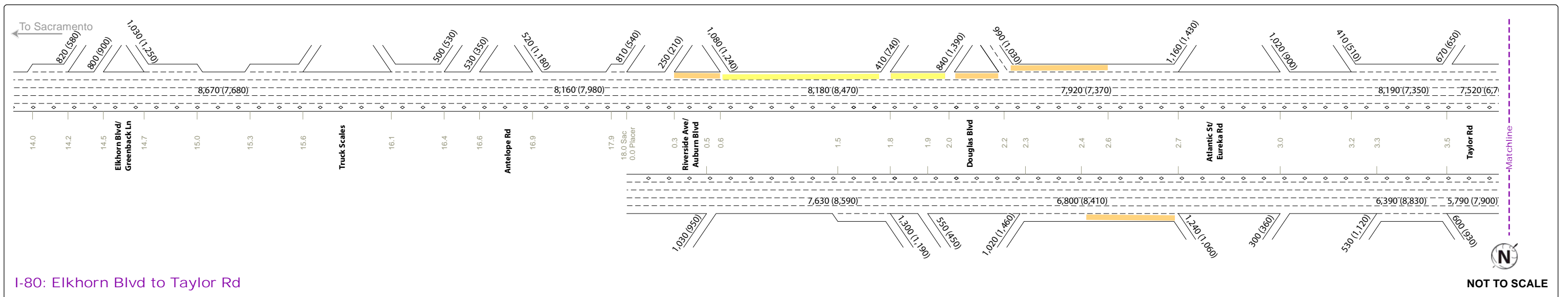
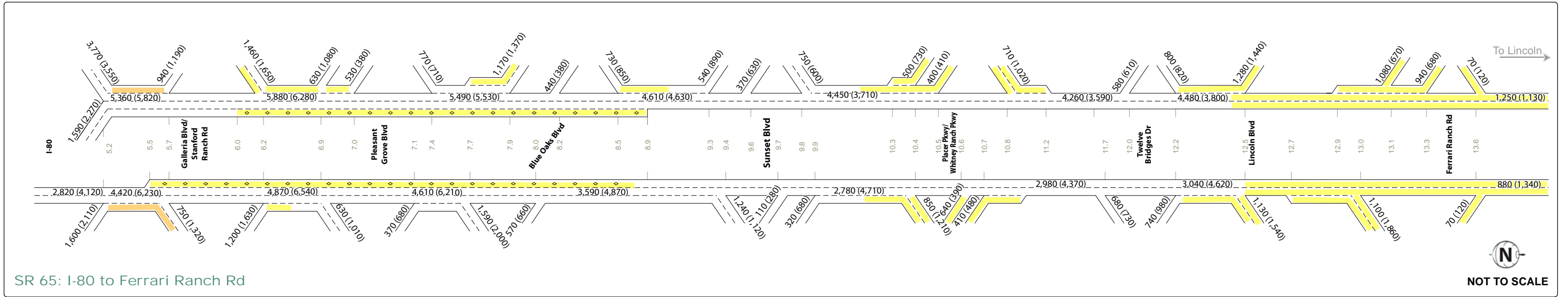
- Taylor Road off-ramp from EB I-80 for the Half and Full Taylor Alternatives – With the widening of the EB to NB freeway connector, traffic destined to Rocklin can use SR-65 to Stanford Ranch Road rather than the more indirect route of Taylor Road and Pacific Street to Sunset Boulevard.

The final trip tables and the associated travel paths from the VISUM assignment were transferred to VISSIM for final assignment and analysis. Figures 17 through 22 display the specific freeway lane configurations associated with each alternative, along with the AM and PM peak hour traffic volume forecasts. These volumes represent traffic demand that may not be fully accommodated during the peak hour, which is determined as part of the VISSIM analysis. The traffic forecasts for the study intersections are provided in the Technical Appendix.

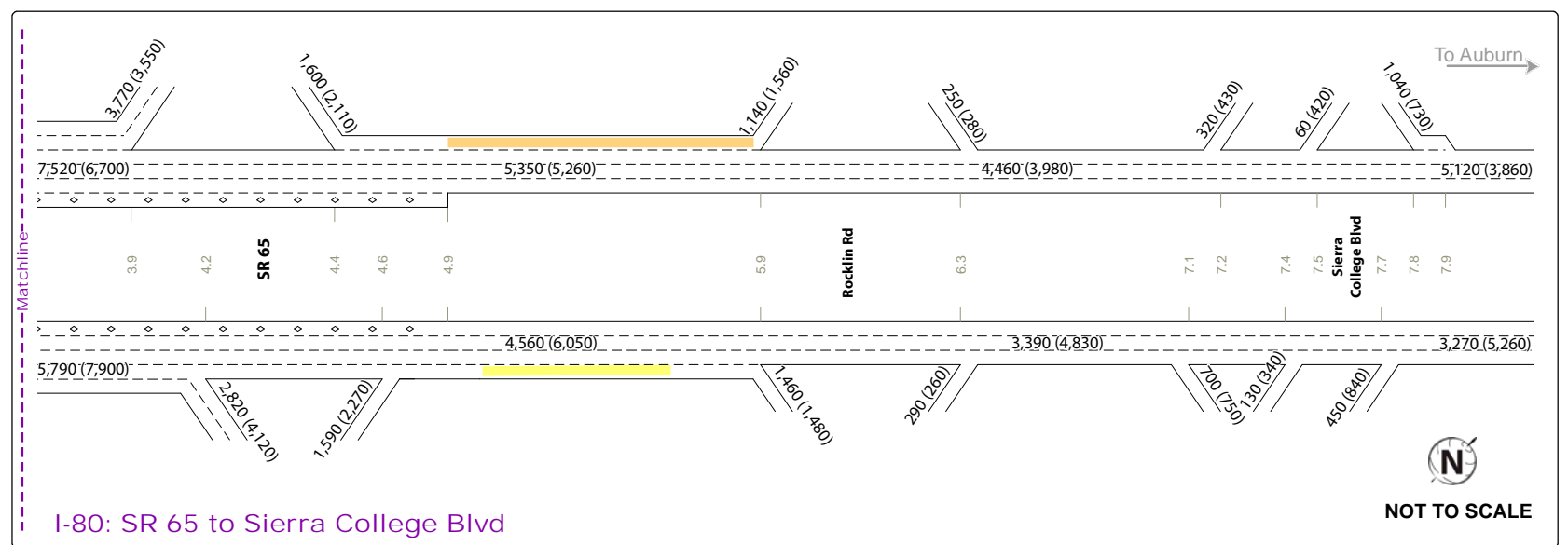


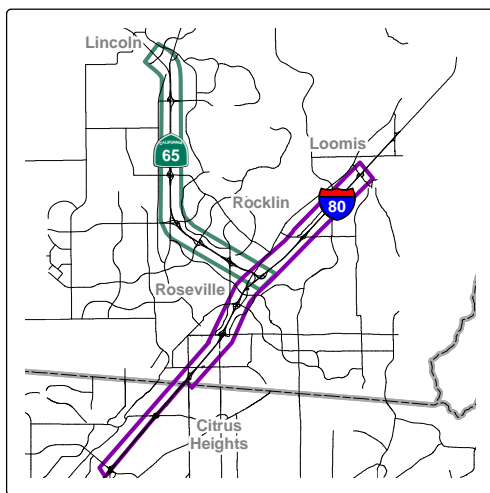
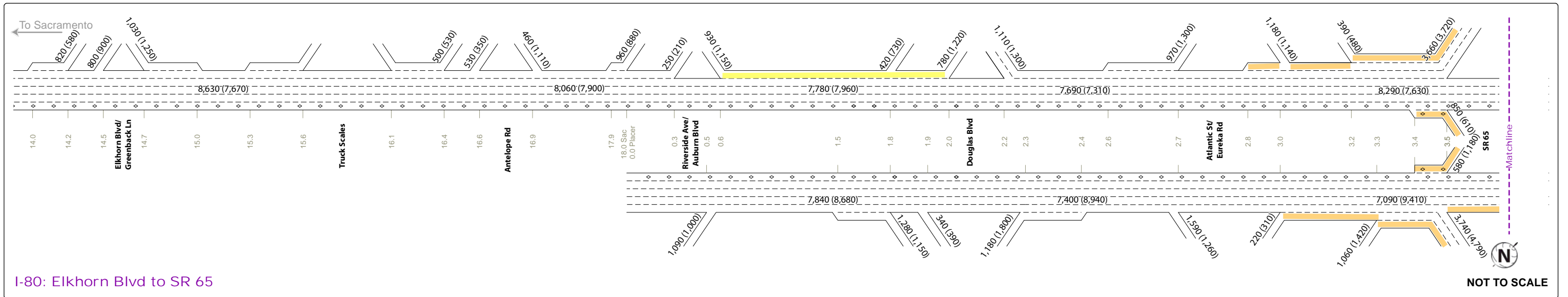
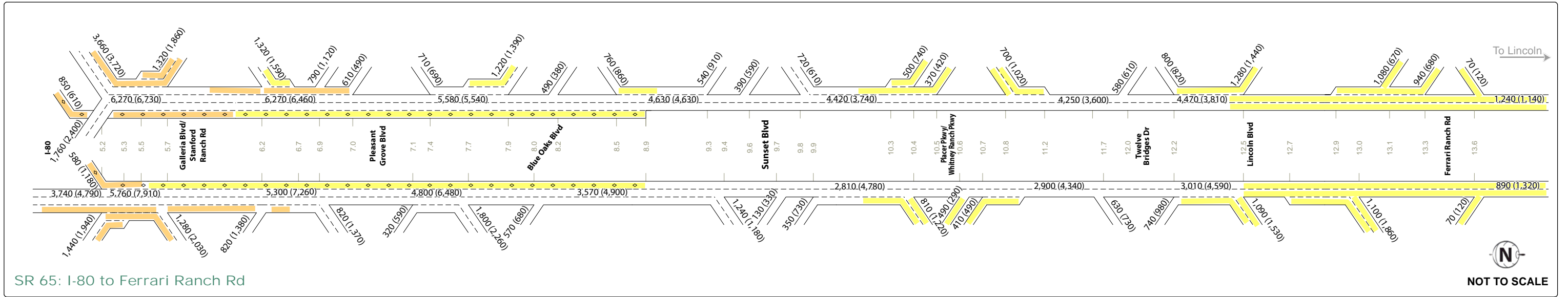
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Separate Planned Projects



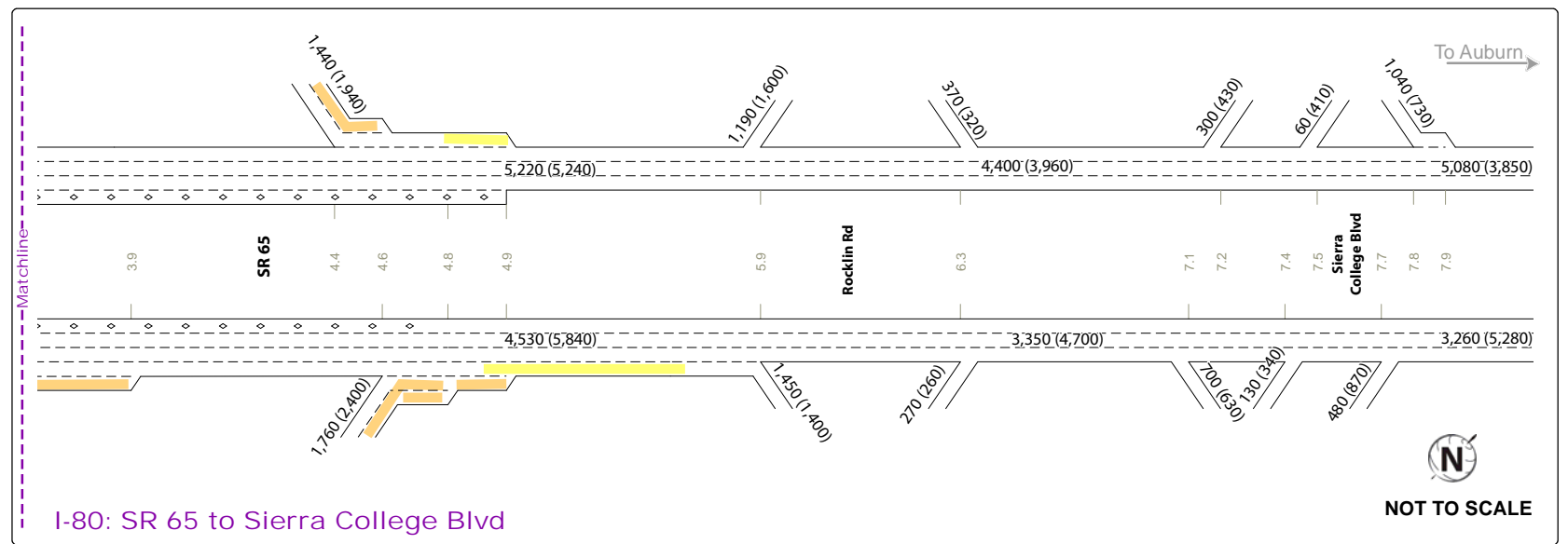


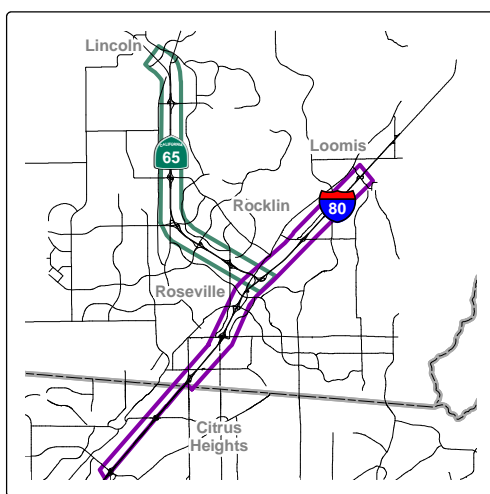
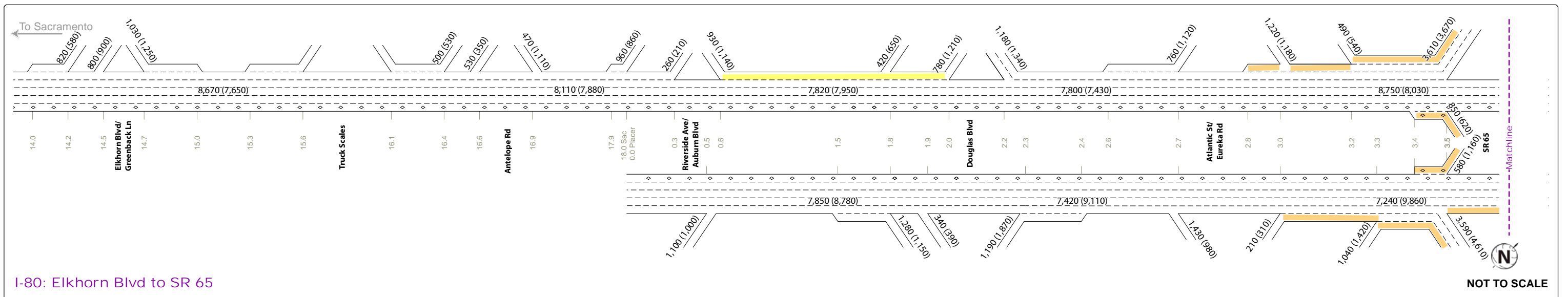
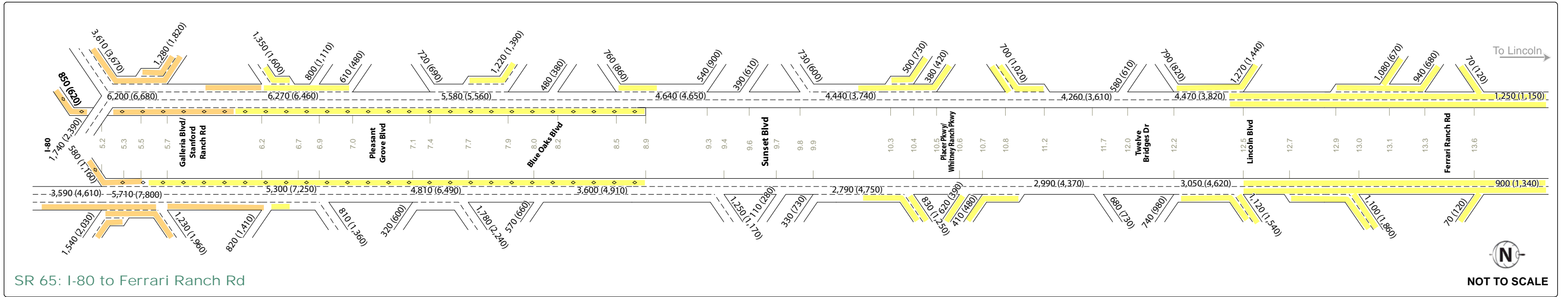
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: TSM Alternative



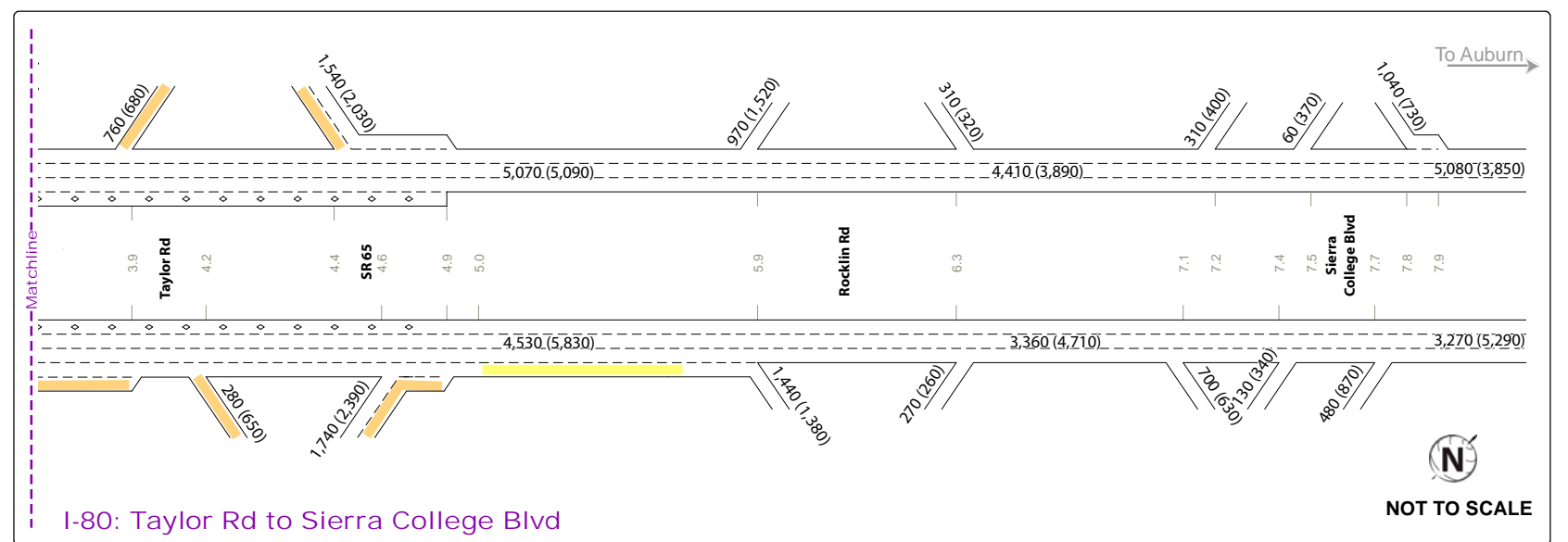


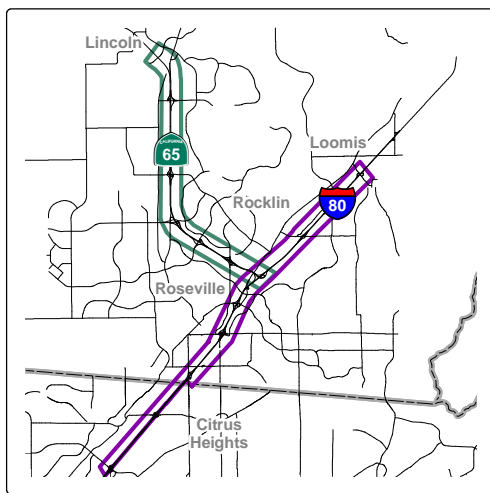
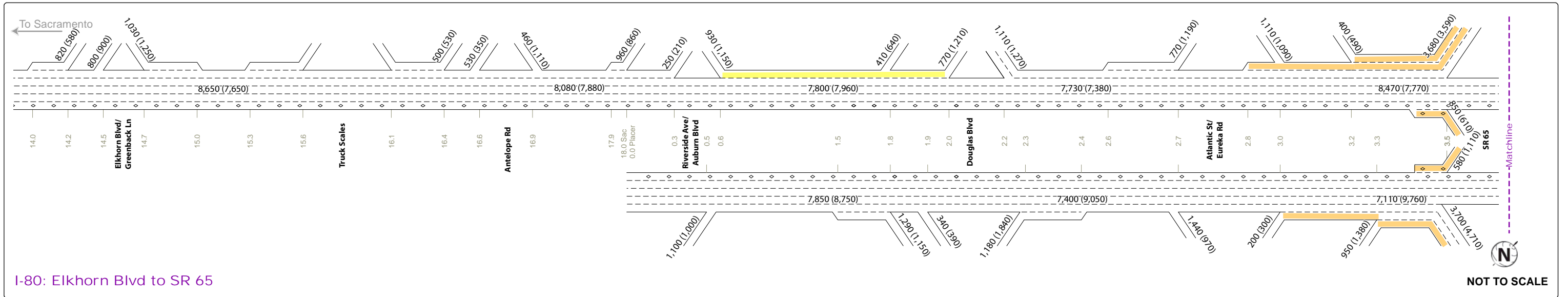
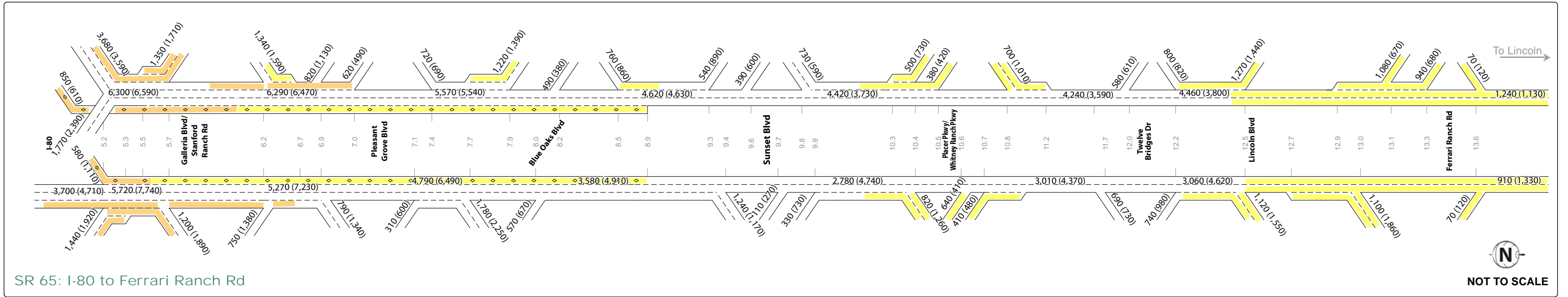
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- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Separate Planned Projects
 - No Taylor Alternative



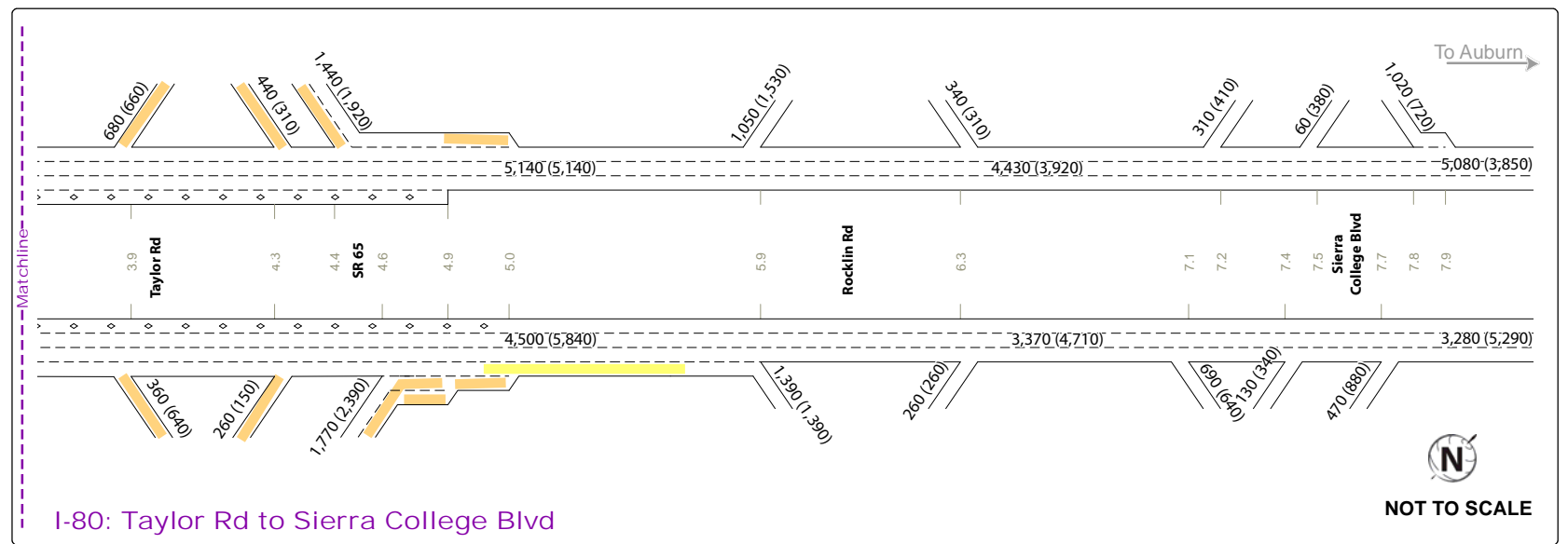


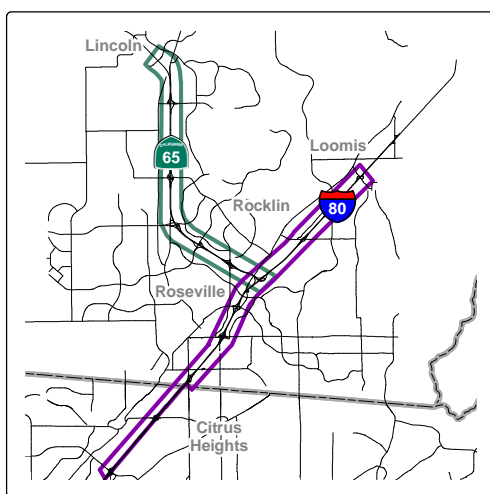
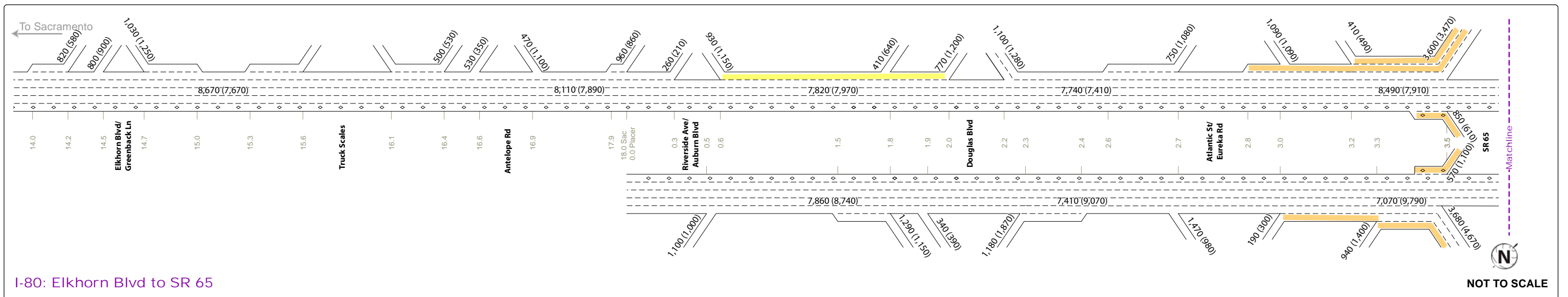
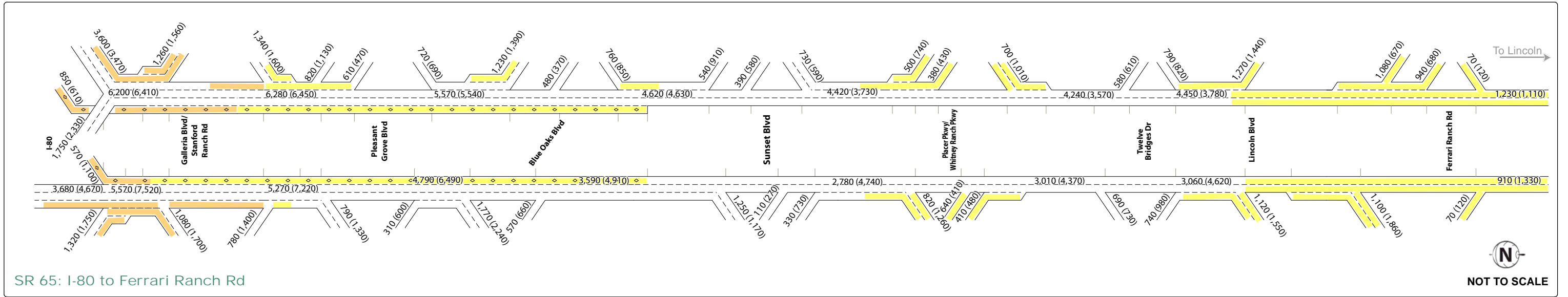
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- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: Half Taylor Alternative



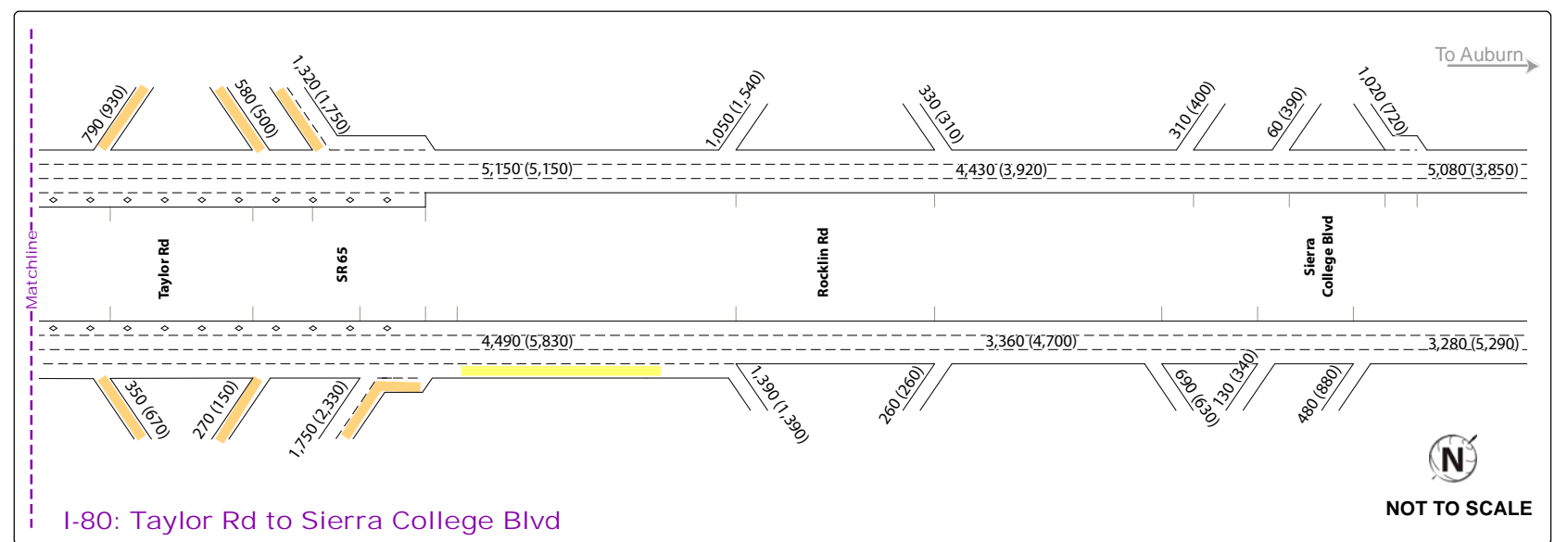


- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: Full Taylor Alternative





- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2040 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: Full Taylor Alternative



Exhibits 1 through 4 show volume comparison plots between project alternatives. The orange and red colors indicate a volume decrease for the AM and PM peak hours, respectively. The blue and green colors indicate a volume increase for the AM and PM peak hours, respectively.

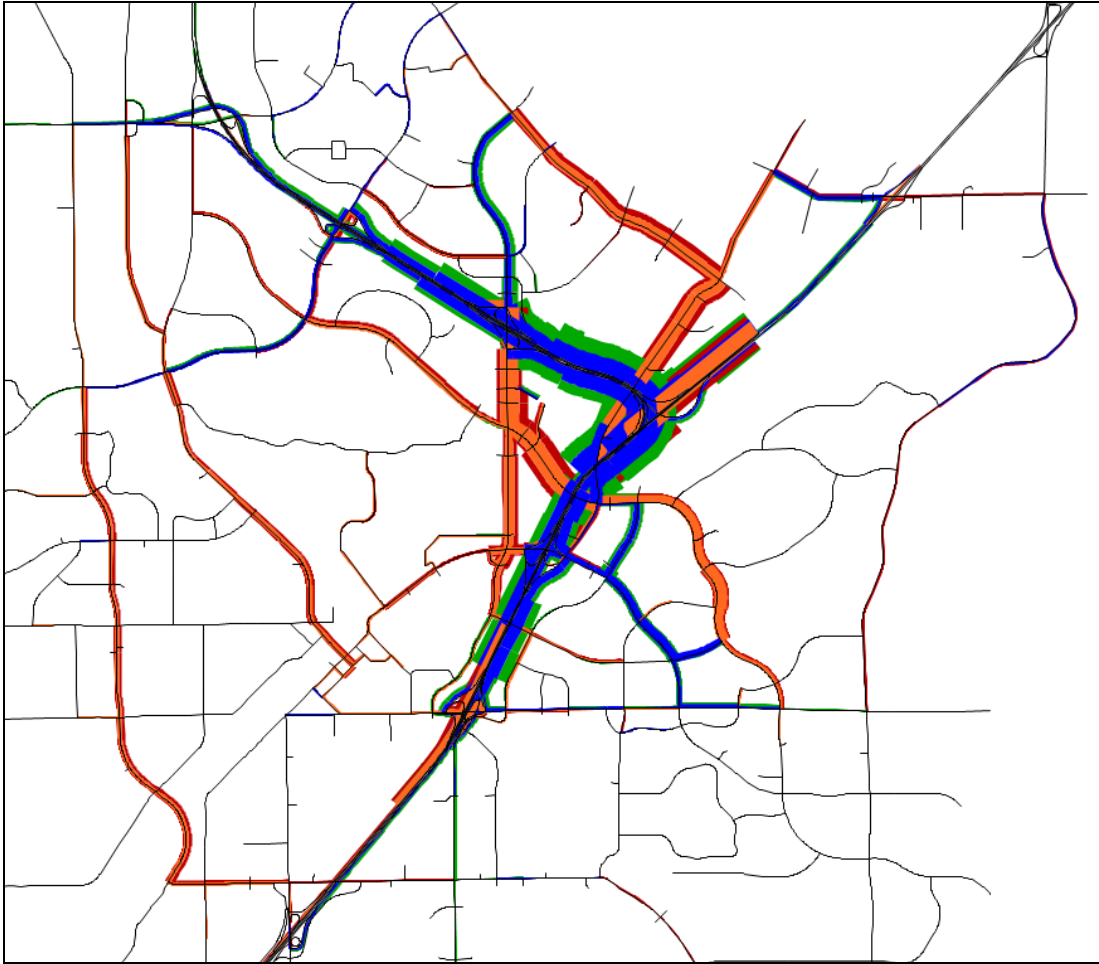


Exhibit 1: Volume Comparison of No Build and No Taylor Alternatives

Exhibit 1 shows a comparison of the No Taylor and No Build alternatives. With the additional capacity at the I-80/SR-65 interchange, volumes are higher from Douglas Boulevard on I-80 to Blue Oaks Boulevard on SR-65 under the No Taylor alternative. Volume increases also occur on arterials that access the north and south ends of this freeway segment: Eureka Road east of I-80, Stanford Ranch Road north of SR-65, and Pleasant Grove Boulevard and Blue Oaks Boulevard west of SR-65. Routes parallel to the freeway segment show decreases: Foothill Boulevard, Washington Boulevard, Roseville Parkway, and Galleria Boulevard/Harding Boulevard. Removing the I-80/Taylor Road interchange shifts traffic from Taylor Road and Sunset Boulevard to SR-65 and Stanford Ranch Road. The differences between the No Build alternative and the other freeway reconstruction alternatives (Half and Full Taylor) are similar.

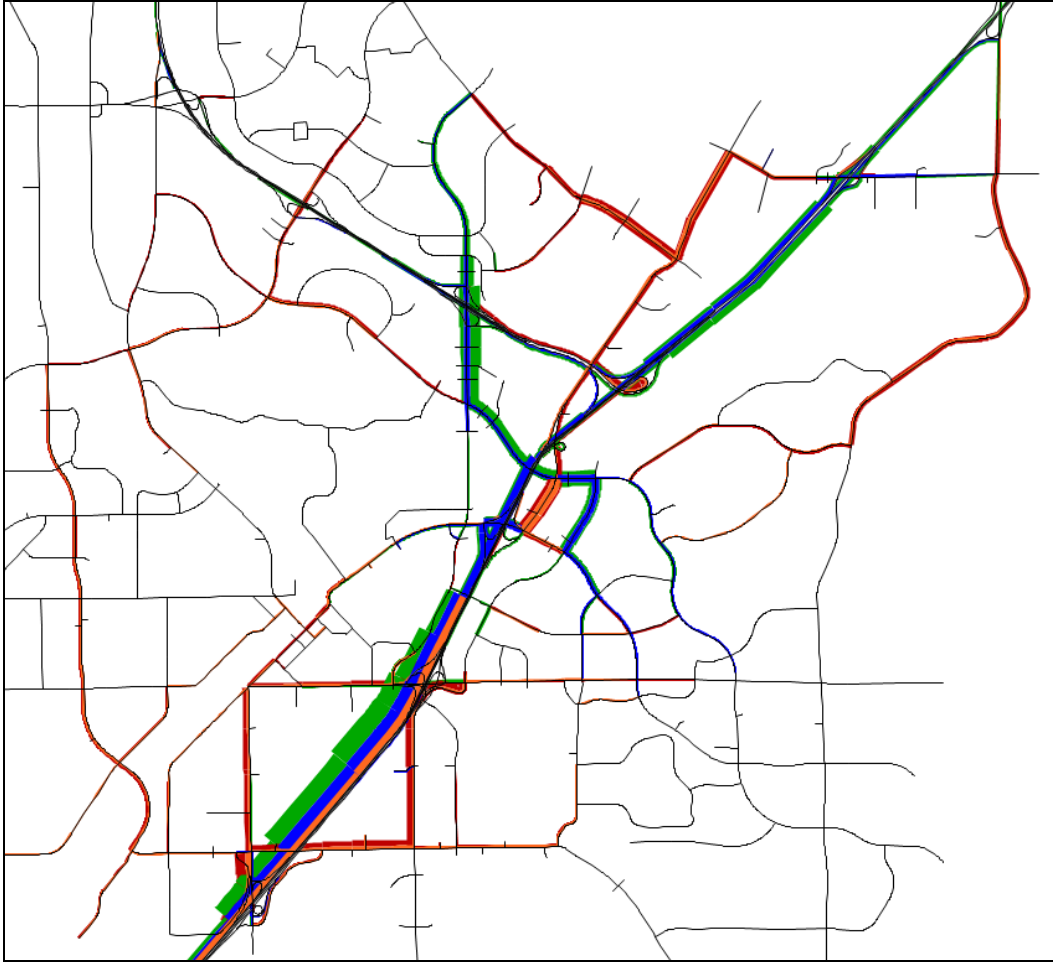


Exhibit 2: Volume Comparison of No Build and TSM Alternatives

Exhibit 2 compares the TSM and No Build alternatives. Volume increases are shown for the locations with additional auxiliary lanes along I-80: WB at Douglas Boulevard and between SR-65 and Rocklin Road. The signal coordination improvements along Galleria Boulevard and Roseville Parkway are expected to provide higher volumes, too. Volume decreases would occur on the parallel routes at the auxiliary lane locations: Douglas Blvd, Riverside Avenue, Sunrise Avenue, and Cirby Way to the south and Taylor Road and Sierra College Boulevard to the north. Despite the addition of auxiliary lanes, the traffic demand volume for SR-65 between I-80 and Galleria Boulevard is not forecasted to change much. While the auxiliary lanes would provide more capacity, the I-80 ramps to and from the west would remain over capacity, which would constrain the demand volume.

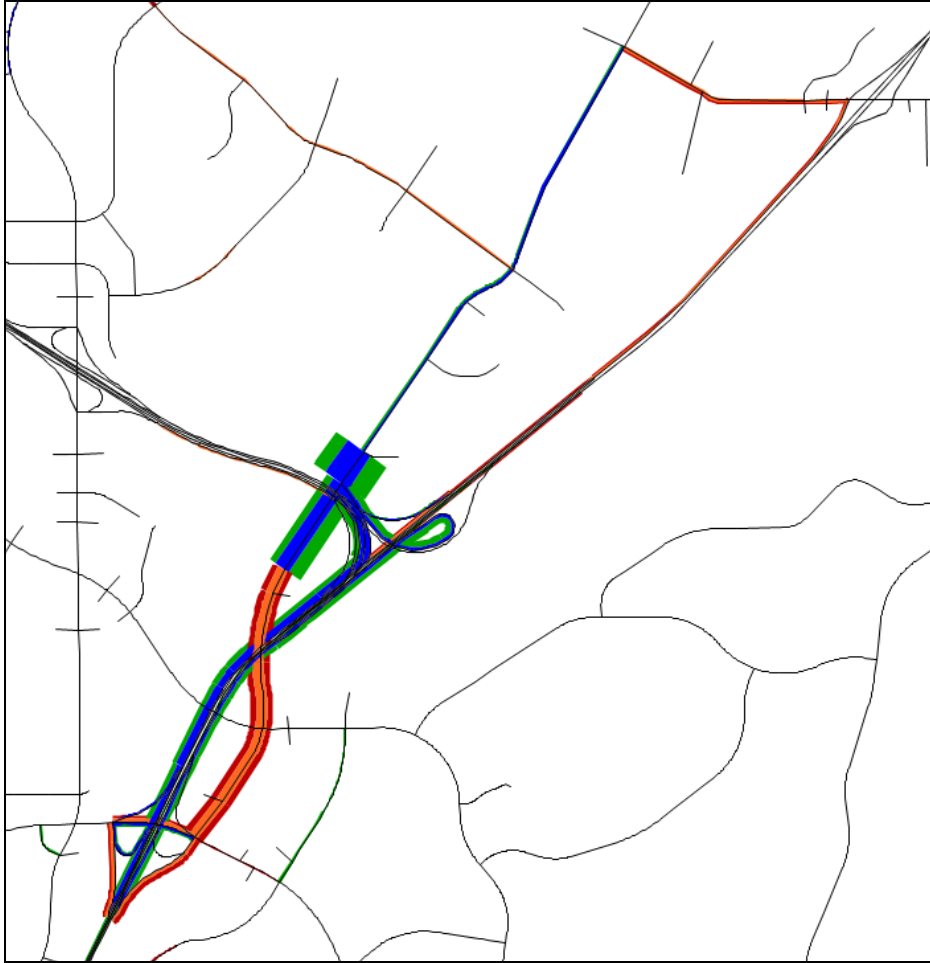


Exhibit 3: Volume Comparison of No Taylor and Half Taylor Alternatives

Exhibit 3 shows the volume differences between the No Taylor and Half Taylor alternatives. Although both alternatives would expand the I-80/SR-65 interchange, the Half Taylor alternative restores the existing Taylor Road connections. As a result, traffic volume would mostly shift from the Eureka Road interchange to the new Taylor Road interchange. The Rocklin Road interchange would see some diversion, but no change would likely occur at the SR-65/Galleria Boulevard interchange. As noted above, the increase in capacity at the freeway-to-freeway interchange would shift volume to the Galleria Boulevard interchange without regard to whether an interchange is provided at Taylor Road.

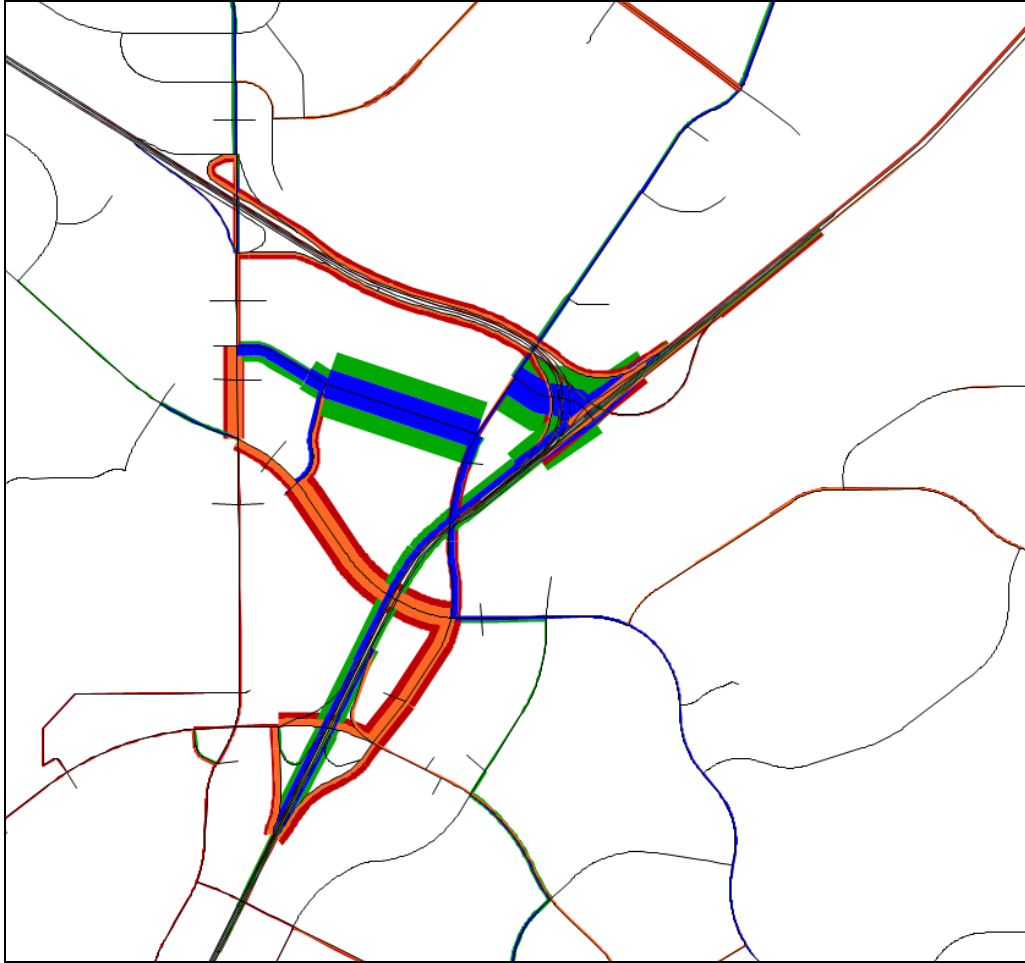


Exhibit 4: Volume Comparison showing the Antelope Creek Drive Connection

Exhibit 4 shows the effect of adding the Antelope Creek Drive connection to Taylor Road under the Full Taylor alternative. The new connection to the retail areas along Galleria Boulevard would increase travel demand for the I-80/Taylor Road interchange, Taylor Road north of Roseville Parkway, and I-80 between Eureka Road and Taylor Road. Traffic would shift from the I-80/Eureka Road and SR-65/Galleria Boulevard interchanges. In particular, the demand volume would be lower for the SR-65 viaduct between I-80 and Galleria Boulevard, which parallels the proposed Antelope Creek Drive connection.

4.3.2. HOV Volume Forecasts

The VISUM model includes HOV lanes as separate roadway links to account for the additional HOV-only capacity. Due to the close-spacing of the ramps, access to the HOV direct connectors at the I-80/SR-65 interchange is restricted in the model to traffic west of Eureka Road and north of Galleria Boulevard. The resulting HOV lane projections for the project alternatives are listed in Table 14.

Location	No Build		TSM		No Taylor		Half Taylor		Full Taylor	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
EB I-80: Eureka Rd to SR-65	850	1,380	850	1,370	880	1,520	900	1,590	900	1,680
WB I-80: SR-65 to Atlantic St	1,100	910	1,140	930	1,310	1,070	1,330	1,020	1,300	1,010
EB I-80 to NB SR-65	n/a	n/a	n/a	n/a	570	1,170	560	1,150	570	1,110
SB SR-65 to WB I-80	n/a	n/a	n/a	n/a	940	600	940	590	890	580
NB SR-65: I-80 to Stanford Ranch Rd	100 ¹	960	100 ¹	950	620	1,530	630	1,520	640	1,490
SB SR-65: Galleria Blvd to I-80	280	430	300	470	940	680	940	670	890	680

Note: ¹ An estimated minimum value.
Source: Fehr & Peers, 2013

Under the No Build alternative, HOVs will use the regular direct connector ramps to travel between the HOV lanes on I-80 and SR-65. Because the ramps will be over capacity, the demand will be constrained. In particular, the AM peak hour HOV lane volume on NB SR-65 would be low. With demand constrained at the I-80 interchange, NB SR-65 would be relatively free from congestion, so the HOV lane would not provide a travel time advantage.

With the addition of the HOV direct connector ramps, the mainline HOV lane volume would increase. The HOV direct connector peak hour volume is projected to range from 560 to 1,170 vehicles per hour depending on the direction and peak hour. With the HOVs from the WB to NB connector added in, the HOV lane volume on NB SR-65 would be similar to the EB I-80 volume. HOV lane volumes would be similar across the build alternatives.

4.3.3. Meso-Scale Network Performance for Design Year

In addition to generating traffic volume forecasts for input to the VISSIM microsimulation traffic operations model, the VISUM model was used to produce the same meso-scale network performance measures reported for existing conditions. Figures 23 through 26 compare VMT, VHT, VHD, and Freeway VHD, respectively, across the forecasting alternatives for design year conditions during the AM, the PM, and both the AM and PM peak periods. The results generally show that the build alternatives all improve network efficiency by lowering VHT and VHD compared to No Build. The Full Taylor alternatives have the largest reductions in VHT and VHD although the TSM alternative provides the best results when only considering freeway delay due to auxiliary lanes that are not included in the other alternatives.

4.3.4. Construction Year Forecasts

The construction year (2020) forecasts shown in Figures 27 through 31 were developed by interpolating between the hourly matrices for the baseline (2012) traffic volume estimates and the design year (2040) forecasts. Using VISUM, the resulting matrices were assigned to the roadway network that corresponds to the planned projects expected to be completed by 2020 (as shown in Figure 3). Due to these changes, construction year demand volumes at any particular location may not be the exact linearly interpolated value between the existing and design year volumes.

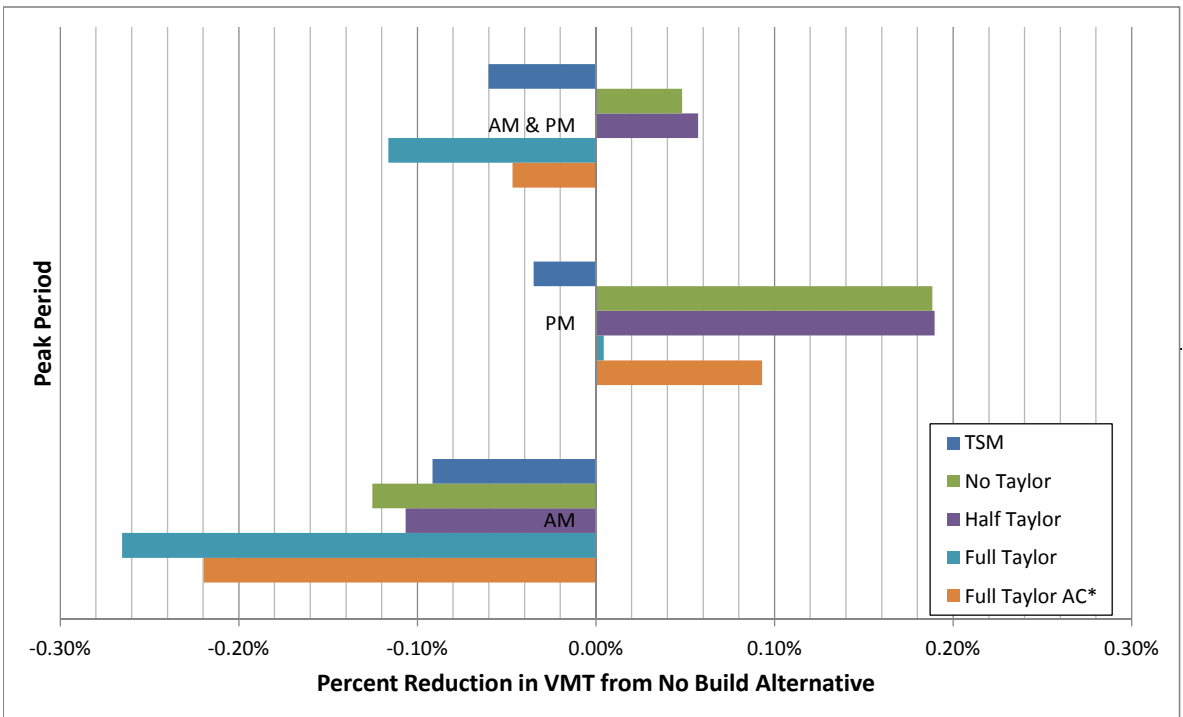
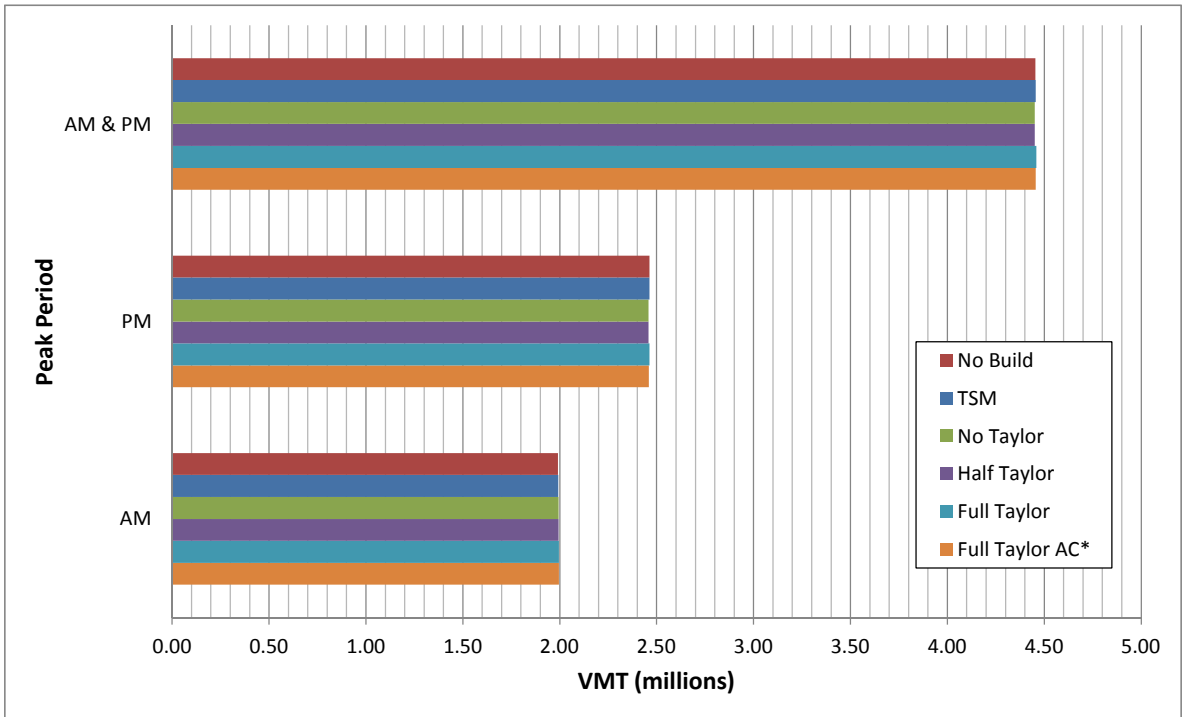
This process presumes a linear growth relationship and captures some of the influence of project alternatives on trip assignment. One of the potential limitations of this approach is that recent growth has not kept pace with the projected linear growth rate. The sluggish economic recovery from the 2008/09 recession may result in actual construction year volumes that are lower than the projections, but this outcome is acceptable for the purpose of designing and evaluating project alternatives.

4.3.5. Meso-Scale Network Performance for Construction Year

In addition to generating traffic volume forecasts for input to the VISSIM microsimulation traffic operations model, the VISUM model was used to produce the same meso-scale network performance measures reported for existing conditions. Figures 32 through 35 compare VMT, VHT, VHD, and Freeway VHD, respectively, across the forecasting alternatives for construction year conditions. The results generally show that the build alternatives all improve network efficiency by lowering VHT and VHD compared to No Build. Freeway VHD only declines under the TSM alternative. This occurs because sufficient mainline capacity is not being added in the other build alternatives in the construction year, which reduces the effectiveness of the I-80/SR-65 interchange improvements. Without additional mainline capacity in locations such as WB I-80 at Douglas Boulevard and NB SR-65, the interchange improvements simply shift bottlenecks.

FIGURE 23 - I-80/SR 65 INTERCHANGE ALTERNATIVES DESIGN YEAR MESO-SCALE VMT COMPARISON

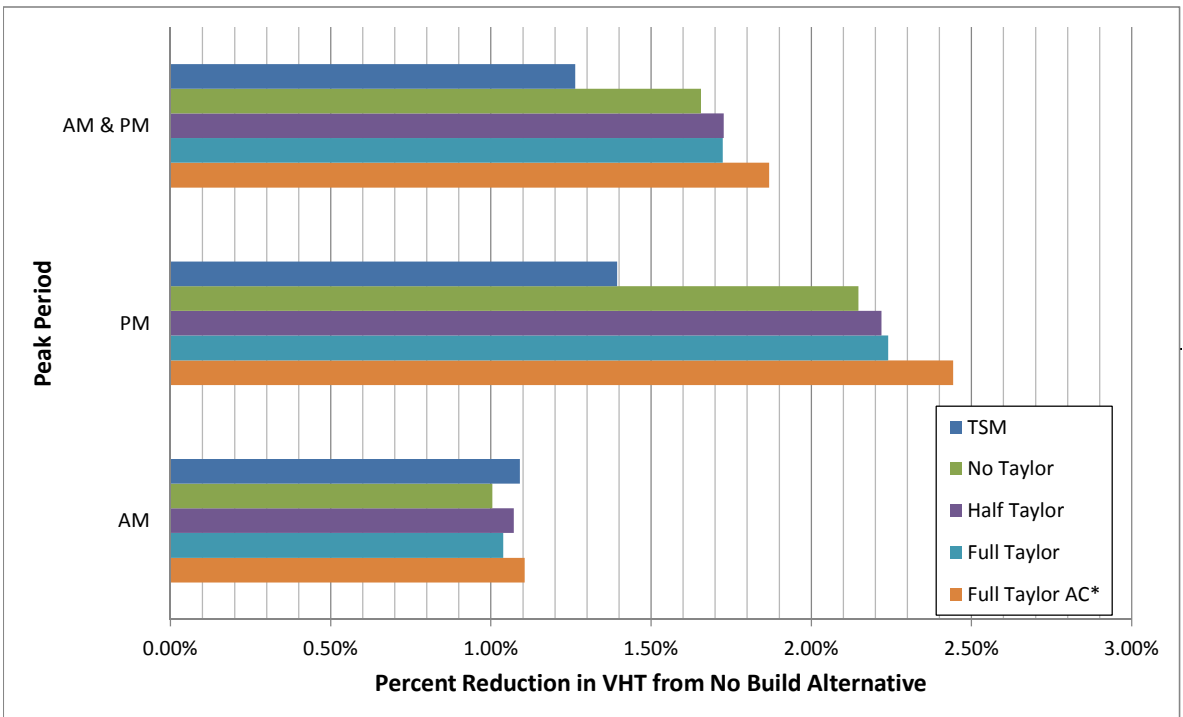
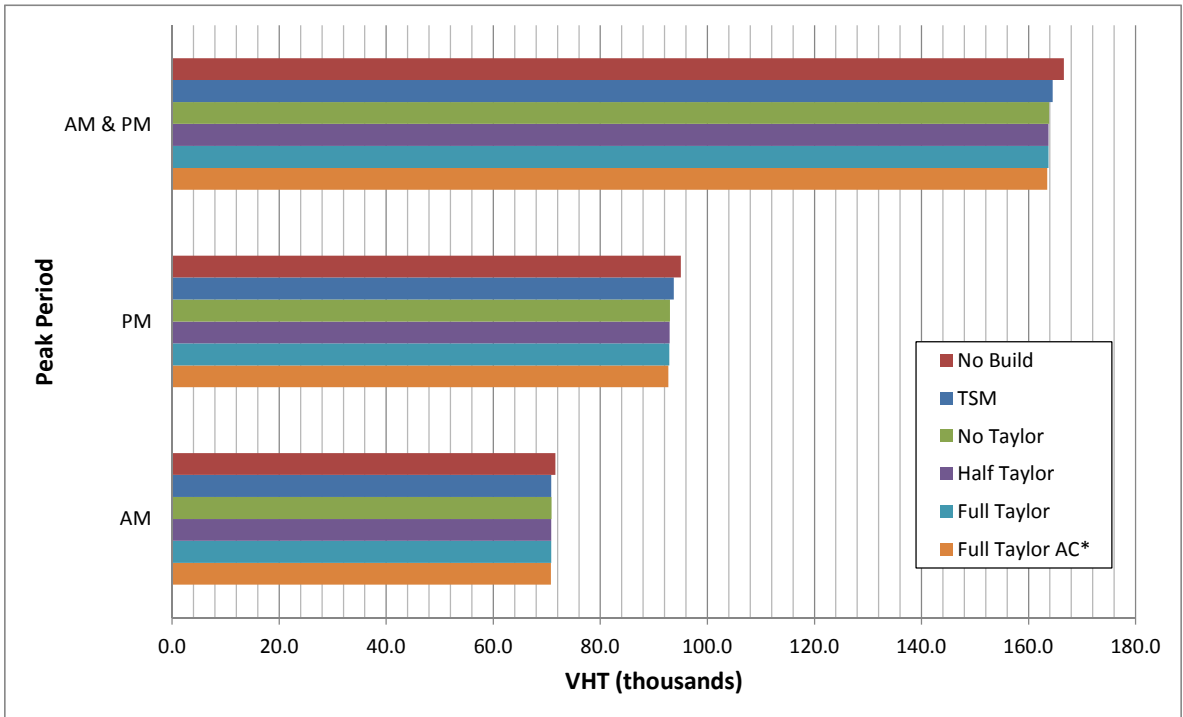
Alt	Vehicle Miles of Travel (millions)			% Change from No Build		
	AM	PM	AM & PM	AM	PM	AM & PM
No Build	1.99	2.46	4.45	-	-	-
TSM	1.99	2.46	4.46	-0.09%	-0.03%	-0.06%
No Taylor	1.99	2.46	4.45	-0.13%	0.19%	0.05%
Half Taylor	1.99	2.46	4.45	-0.11%	0.19%	0.06%
Full Taylor	2.00	2.46	4.46	-0.27%	0.00%	-0.12%
Full Taylor AC*	2.00	2.46	4.46	-0.22%	0.09%	-0.05%



* Full Taylor AC is the Full Taylor alternative with the extension of Antelope Creek Dr to Taylor Rd

FIGURE 24 - I-80/SR 65 INTERCHANGE ALTERNATIVES DESIGN YEAR MESO-SCALE VHT COMPARISON

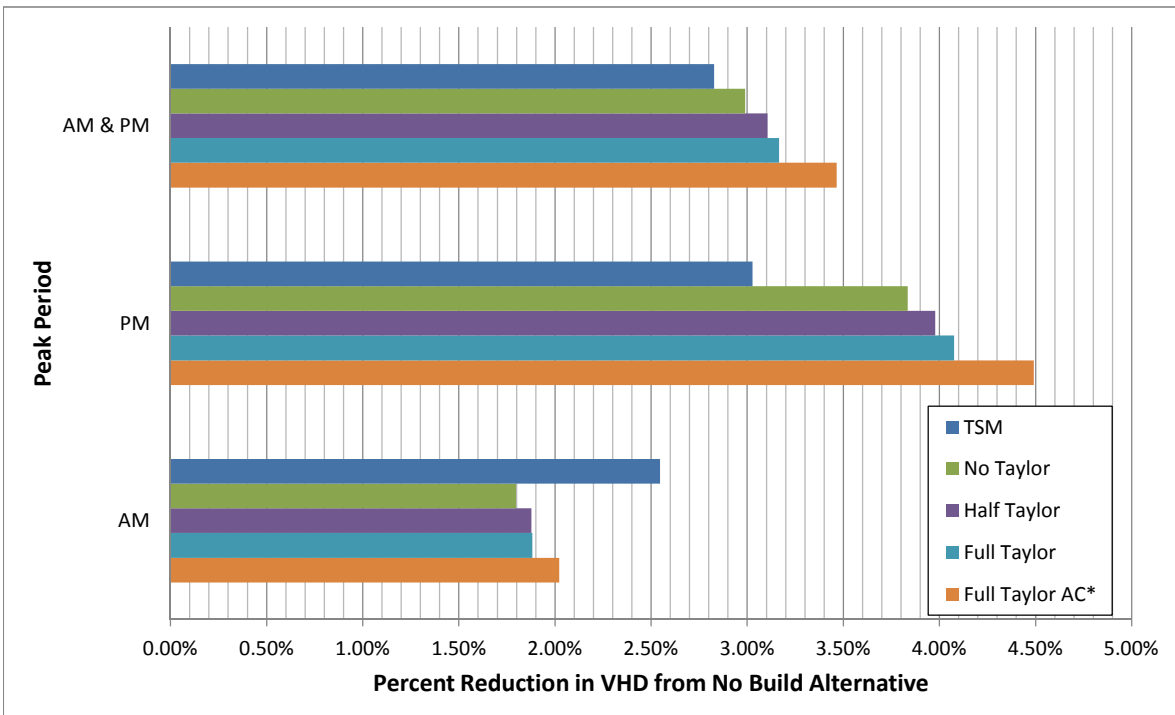
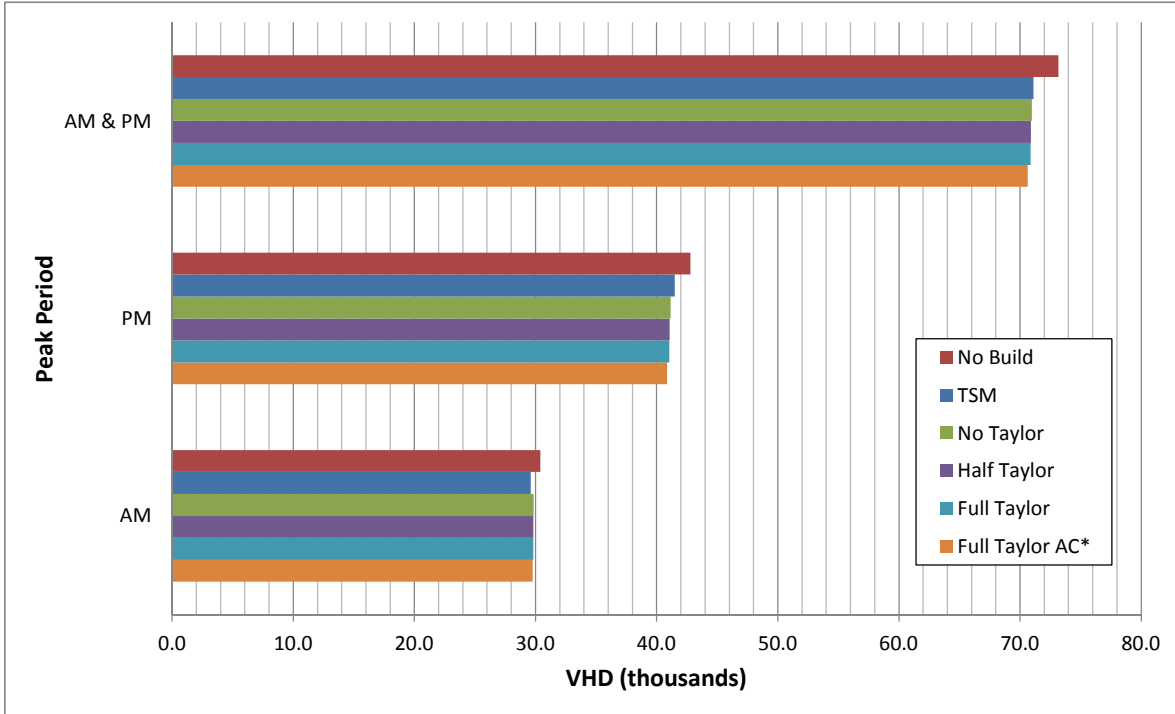
Alt	Vehicle Hours of Travel (thousands)			% Change from No Build		
	AM	PM	AM & PM	AM	PM	AM & PM
No Build	71.6	95.0	166.6	-	-	-
TSM	70.8	93.7	164.5	1.09%	1.39%	1.26%
No Taylor	70.9	93.0	163.9	1.00%	2.15%	1.66%
Half Taylor	70.8	92.9	163.7	1.07%	2.22%	1.73%
Full Taylor	70.8	92.9	163.7	1.04%	2.24%	1.72%
Full Taylor AC*	70.8	92.7	163.5	1.11%	2.44%	1.87%



* Full Taylor AC is the Full Taylor alternative with the extension of Antelope Creek Dr to Taylor Rd

FIGURE 25 - I-80/SR 65 INTERCHANGE ALTERNATIVES DESIGN YEAR MESO-SCALE VHD COMPARISON

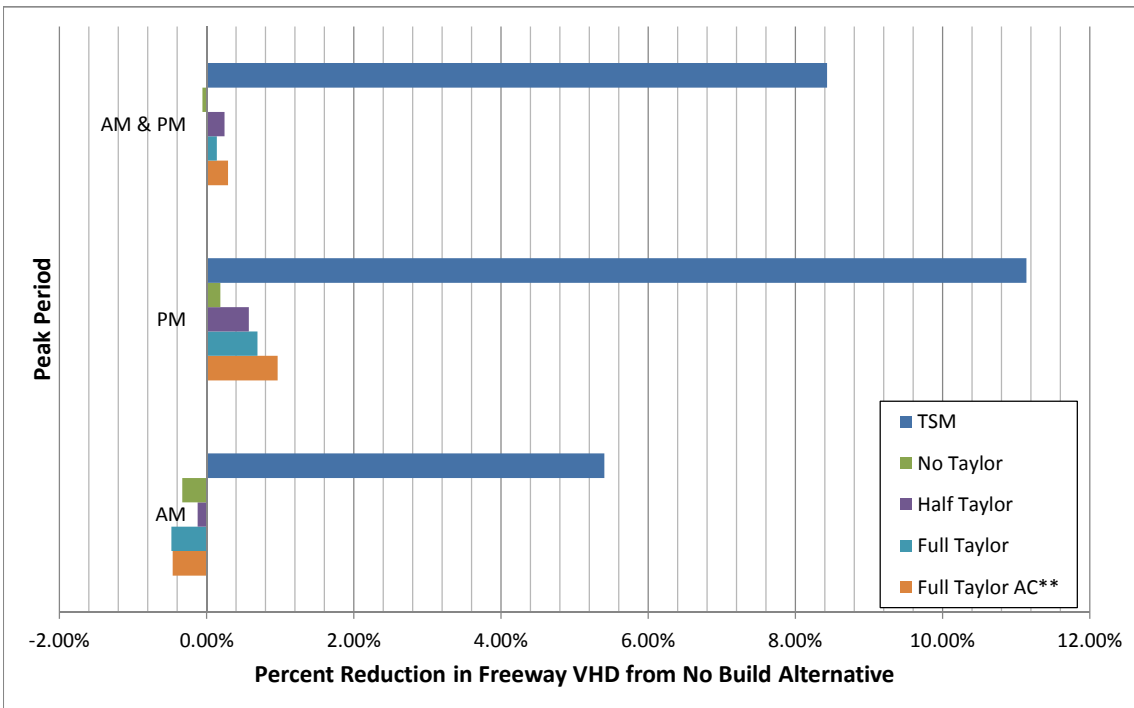
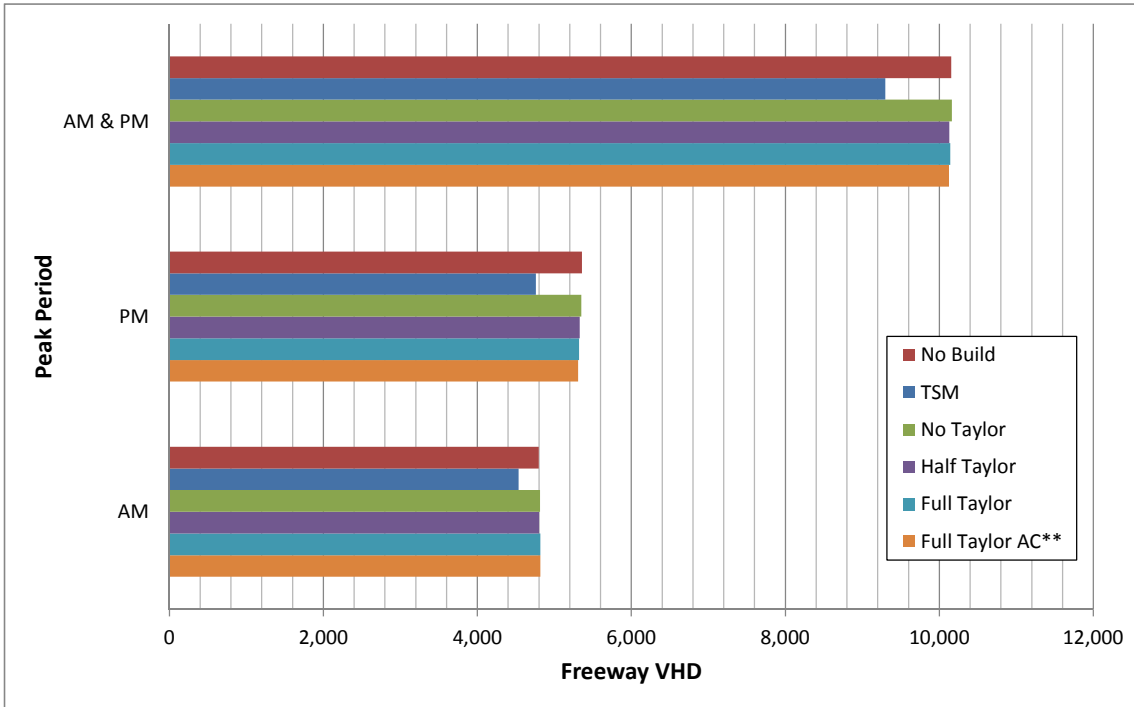
Alt	Vehicle Hours of Delay (thousands)			% Change from No Build		
	AM	PM	AM & PM	AM	PM	AM & PM
No Build	30.4	42.8	73.2	-	-	-
TSM	29.6	41.5	71.1	2.55%	3.03%	2.83%
No Taylor	29.8	41.1	71.0	1.80%	3.83%	2.99%
Half Taylor	29.8	41.1	70.9	1.88%	3.98%	3.11%
Full Taylor	29.8	41.0	70.9	1.88%	4.08%	3.16%
Full Taylor AC*	29.8	40.9	70.6	2.02%	4.49%	3.47%



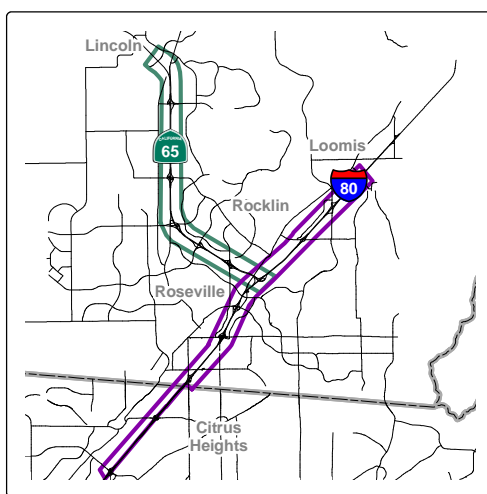
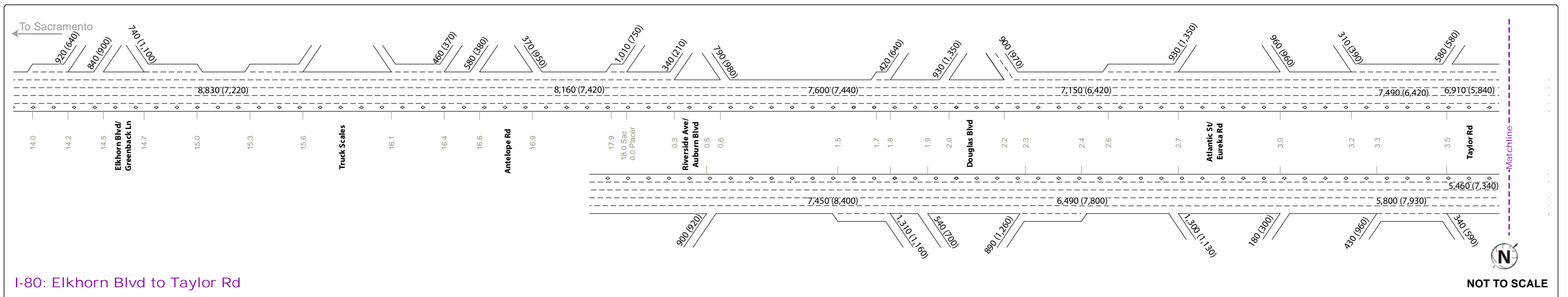
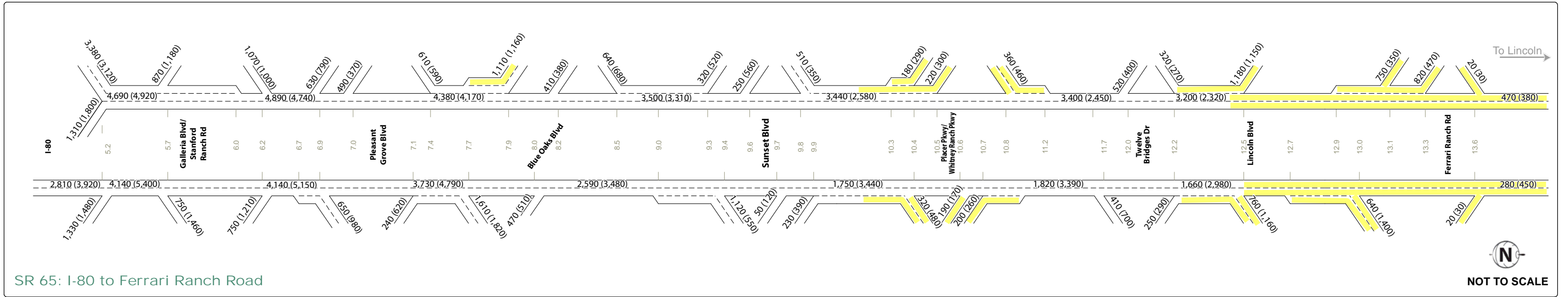
* Full Taylor AC is the Full Taylor alternative with the extension of Antelope Creek Dr to Taylor Rd

FIGURE 26 - I-80/SR 65 INTERCHANGE ALTERNATIVES DESIGN YEAR MESO-SCALE FREEWAY VHD COMPARISON

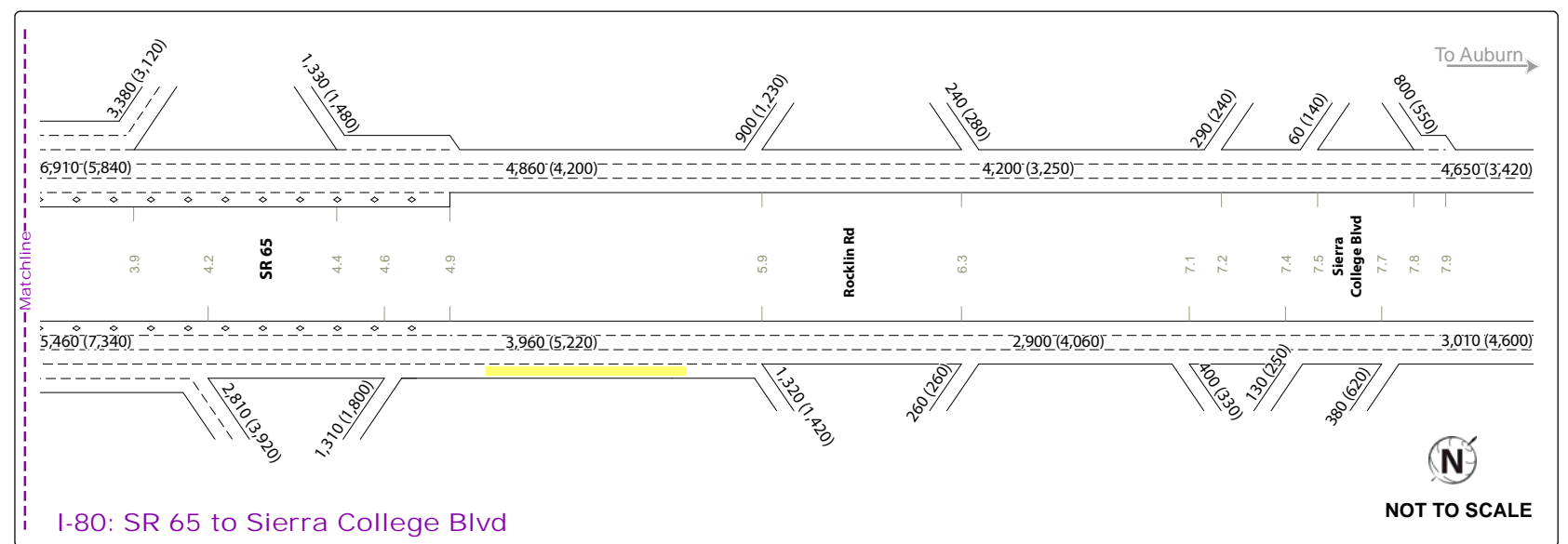
Alt	Freeway Vehicle Hours of Delay*			% Change from No Build		
	AM	PM	AM & PM	AM	PM	AM & PM
No Build	4,796	5,359	10,155	-	-	-
TSM	4,537	4,762	9,299	5.41%	11.14%	8.43%
No Taylor	4,812	5,349	10,161	-0.33%	0.19%	-0.06%
Half Taylor	4,802	5,328	10,130	-0.12%	0.57%	0.24%
Full Taylor	4,819	5,322	10,141	-0.48%	0.69%	0.14%
Full Taylor AC**	4,818	5,307	10,125	-0.46%	0.96%	0.29%

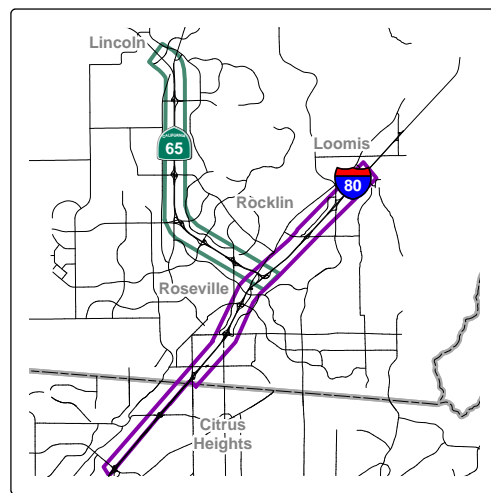
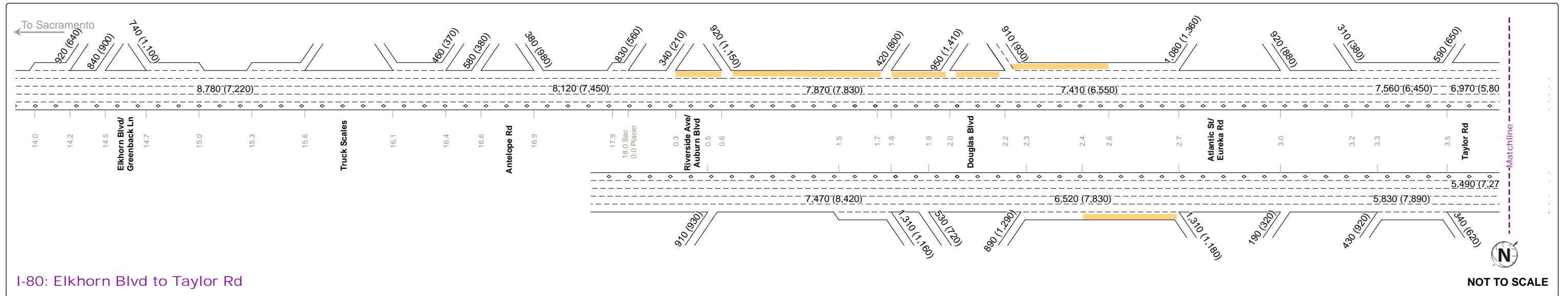
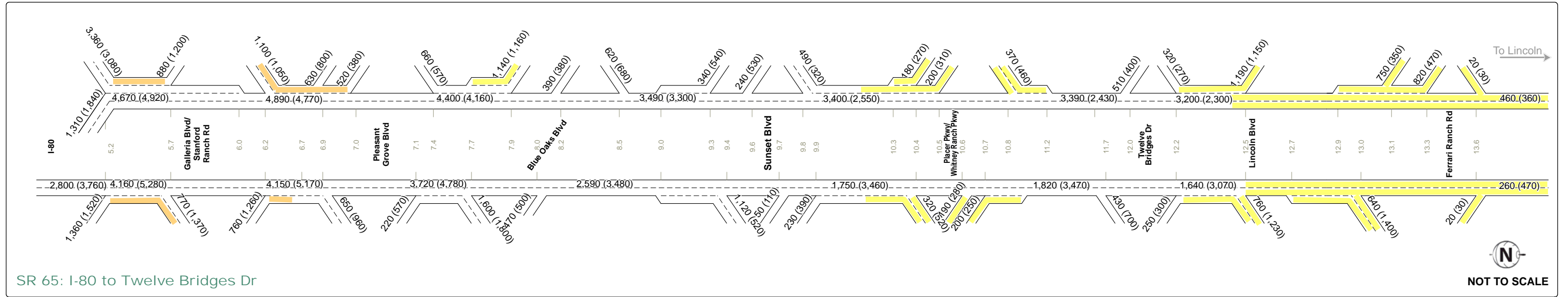


* Freeway VHD is measured only for freeway mainline links with an average speed less than 35 mph.
 ** Full Taylor AC is the Full Taylor alternative with the extension of Antelope Creek Dr to Taylor Rd.

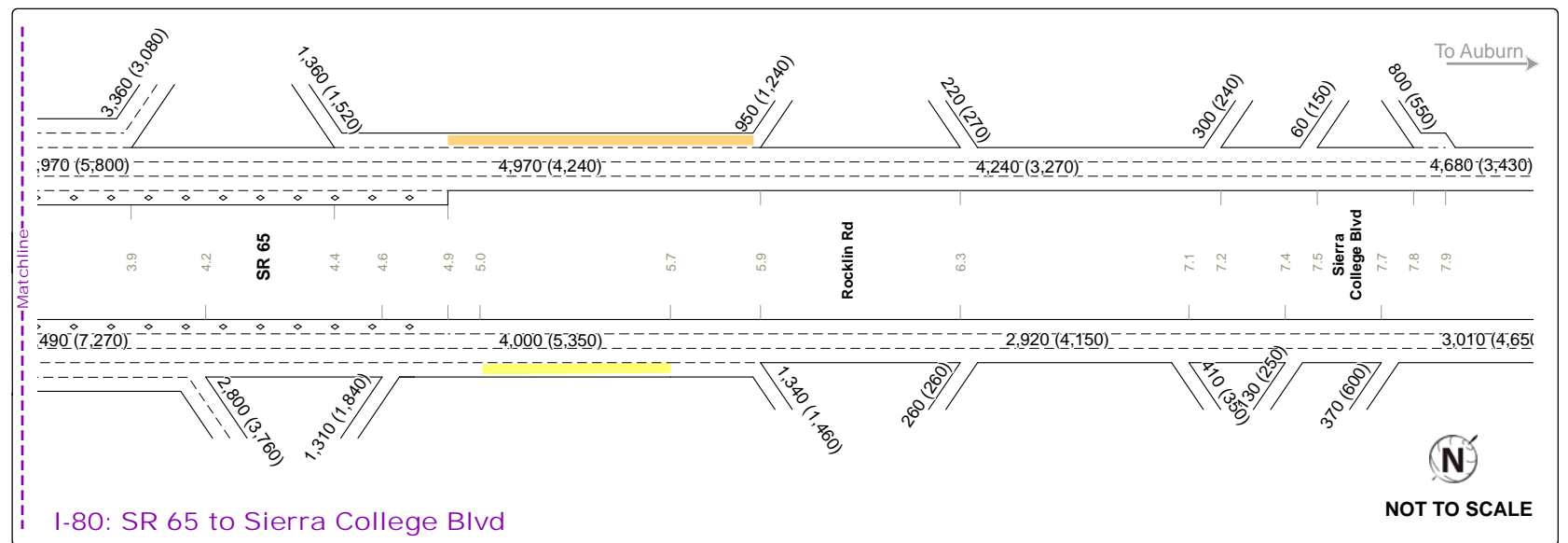


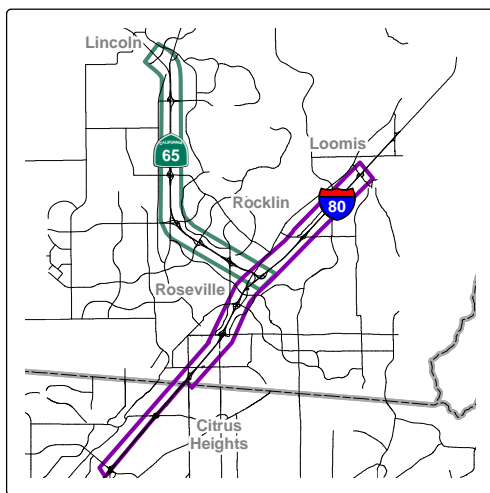
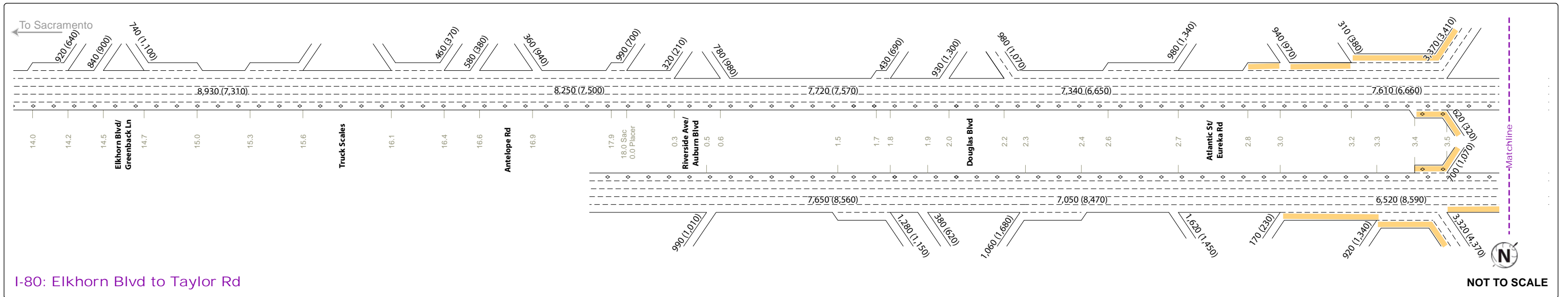
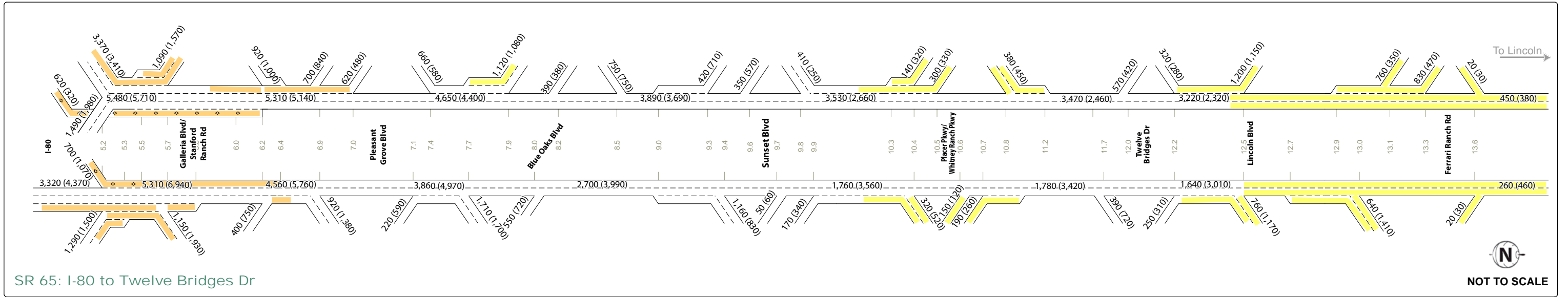
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - 10.1 Postmile
 - Separate Planned Projects



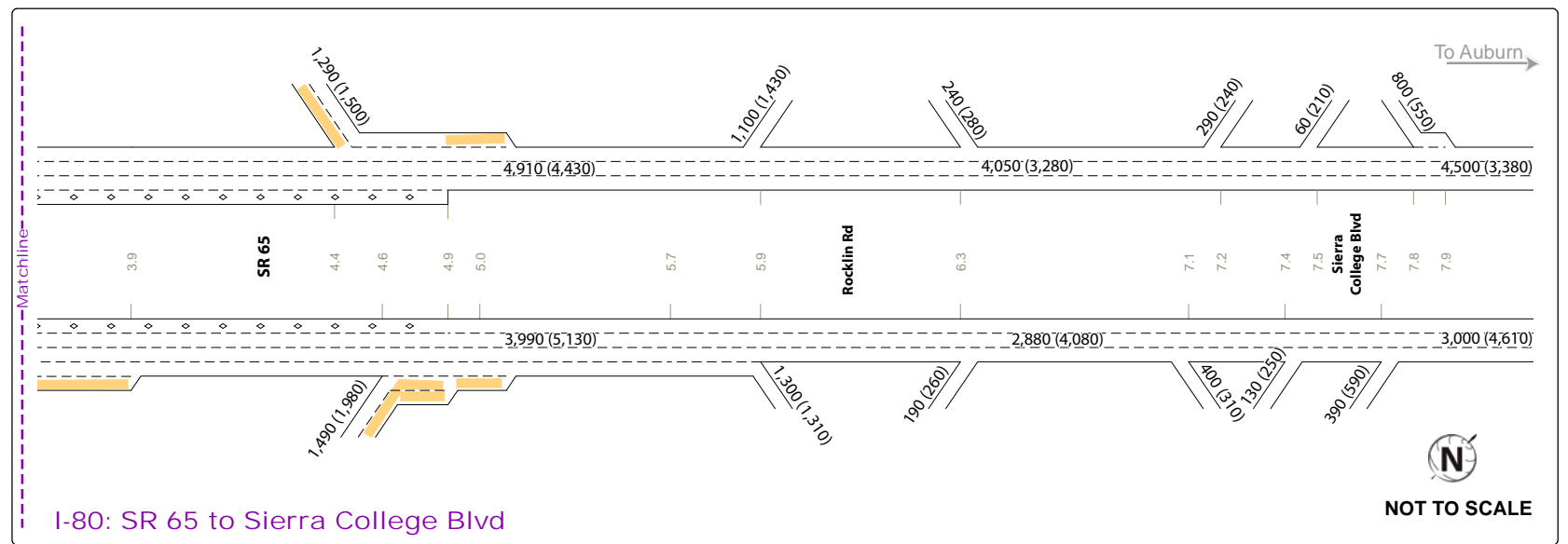


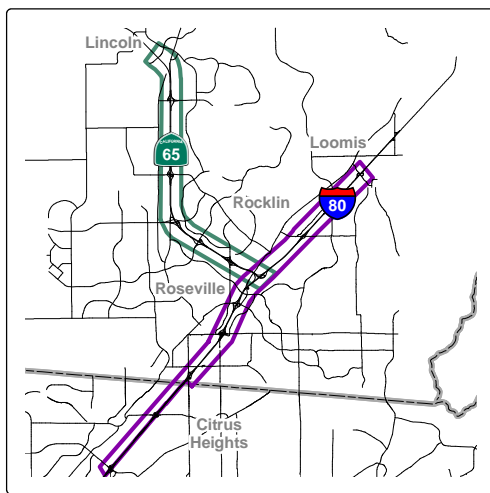
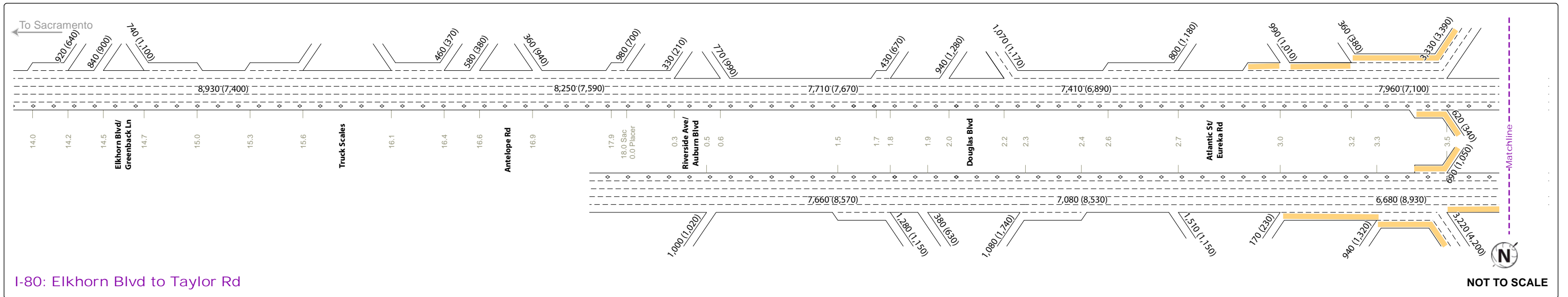
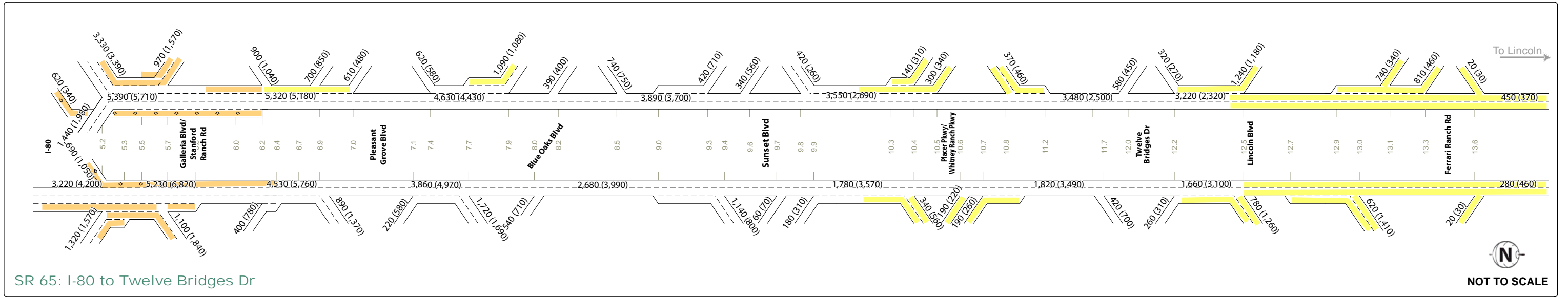
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - 10.1 Postmile
 - Separate Planned Projects
 - TSM Alternative



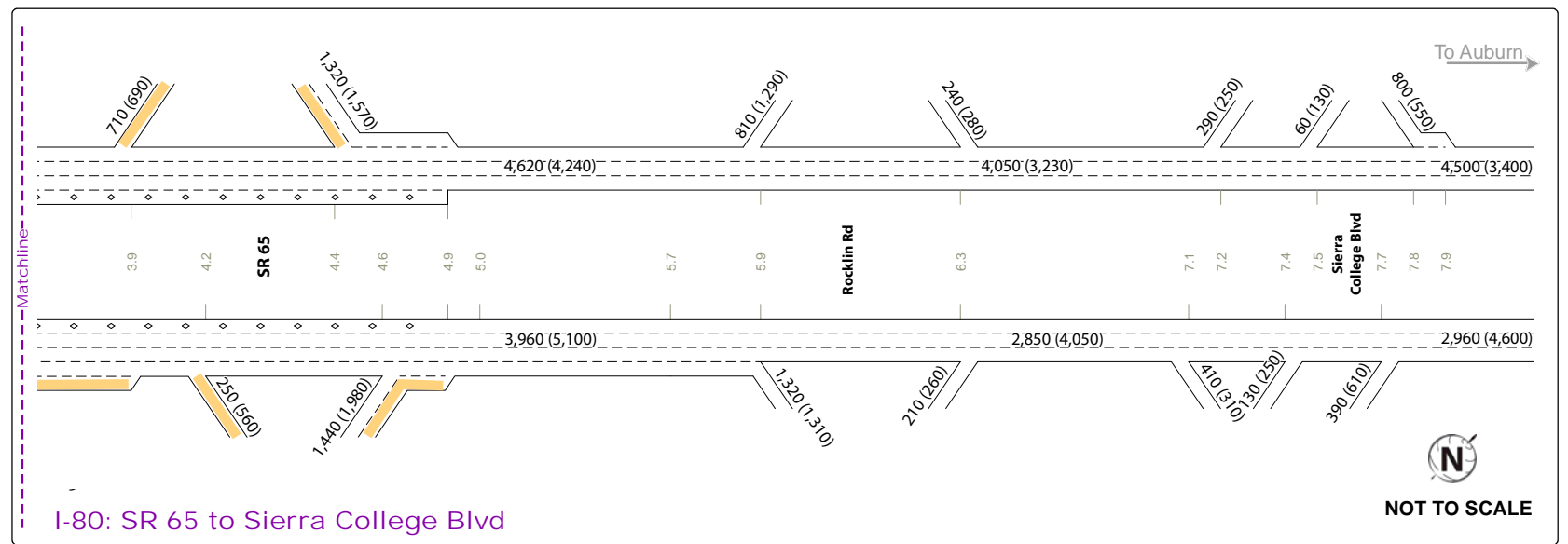


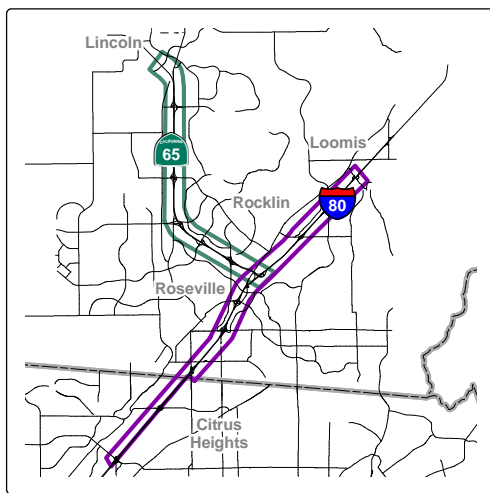
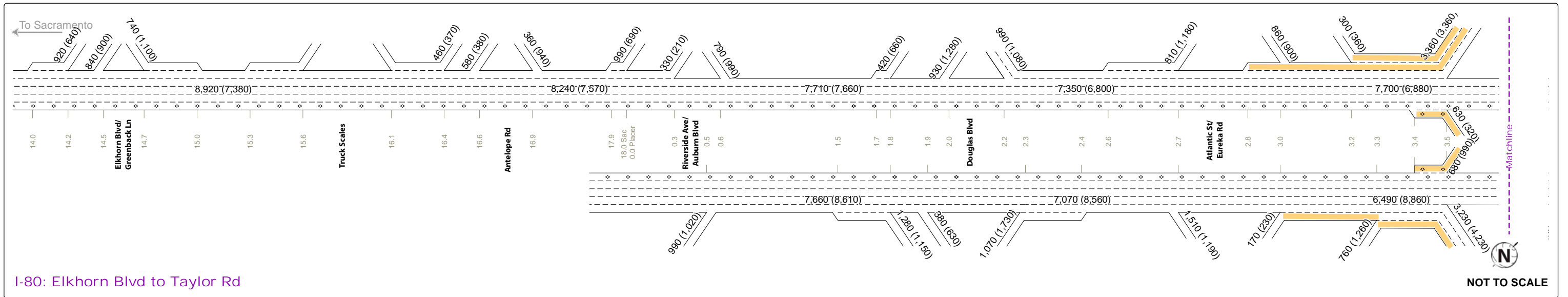
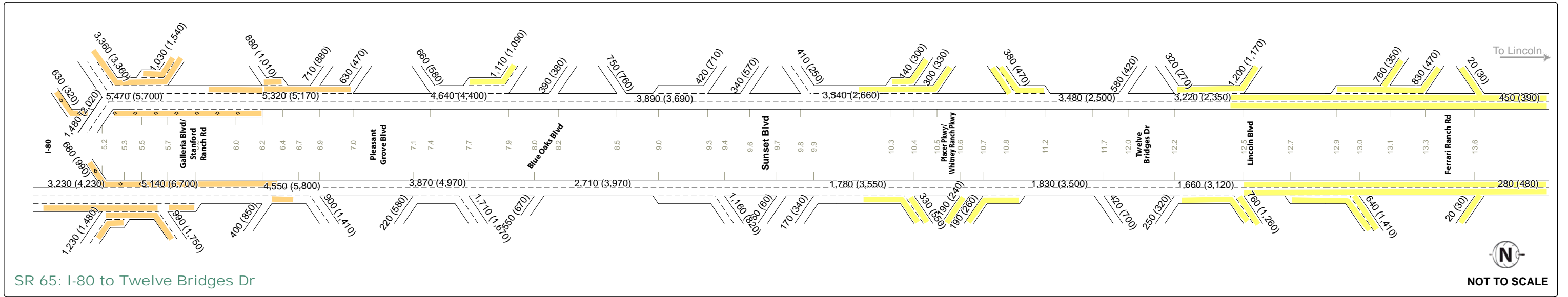
- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: No Taylor Alternative





- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - 10.1 Postmile
 - Separate Planned Projects
 - Half Taylor Alternative





- LEGEND**
- AM (PM) Peak Hour Traffic Volume for 2020 Conditions
 - 10.1 Postmile
 - Yellow line: Separate Planned Projects
 - Orange line: Full Taylor Alternative

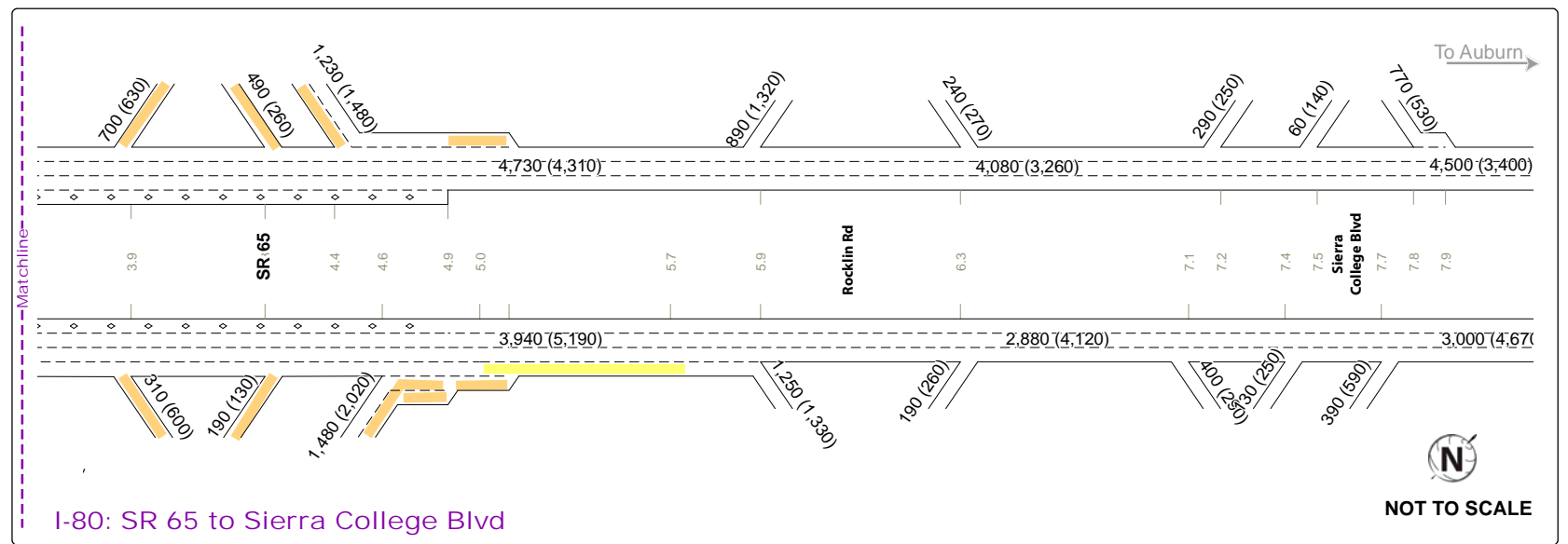


FIGURE 32 - I-80/SR 65 INTERCHANGE ALTERNATIVES CONSTRUCTION YEAR MESO-SCALE VMT COMPARISON

Alt	Vehicle Miles of Travel (millions)			% Change from No Build		
	AM	PM	AM & PM	AM	PM	AM & PM
No Build	1.64	1.91	3.56	-	-	-
TSM	1.65	1.91	3.56	-0.09%	0.00%	-0.04%
No Taylor	1.65	1.91	3.56	-0.22%	0.08%	-0.06%
Full Taylor	1.65	1.92	3.57	-0.33%	-0.11%	-0.21%

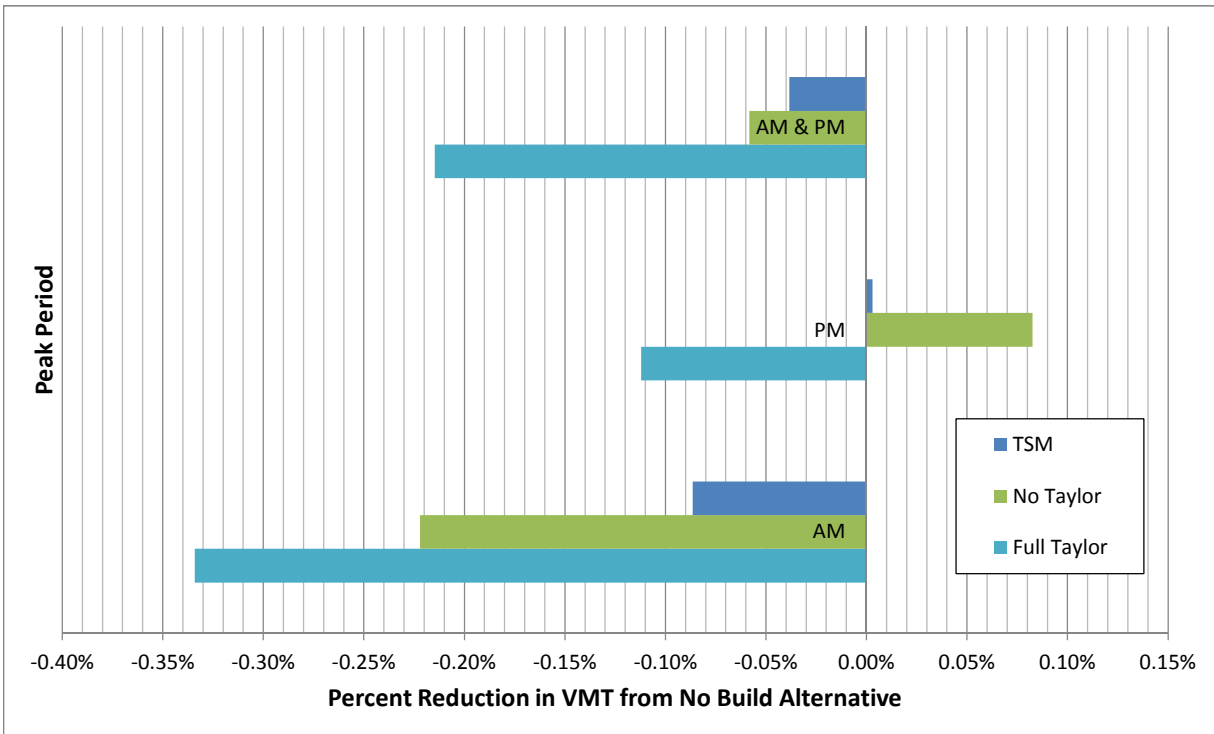
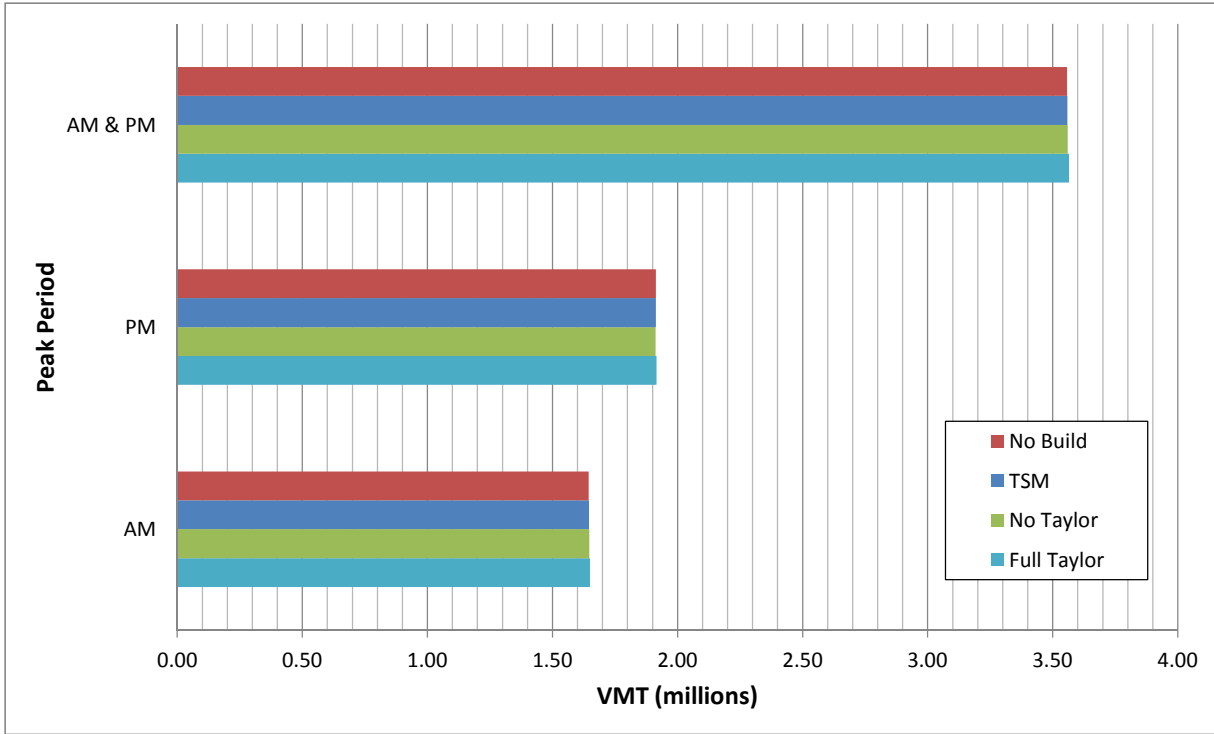


FIGURE 33 - I-80/SR 65 INTERCHANGE ALTERNATIVES CONSTRUCTION YEAR MESO-SCALE VHT COMPARISON

Alt	Vehicle Hours of Travel (thousands)			% Change from No Build		
	AM	PM	AM & PM	AM	PM	AM & PM
No Build	56.3	64.9	121.1	-	-	-
TSM	55.7	64.1	119.8	0.95%	1.16%	1.06%
No Taylor	55.7	63.0	118.7	1.05%	2.85%	2.01%
Full Taylor	55.6	63.0	118.6	1.11%	2.86%	2.04%

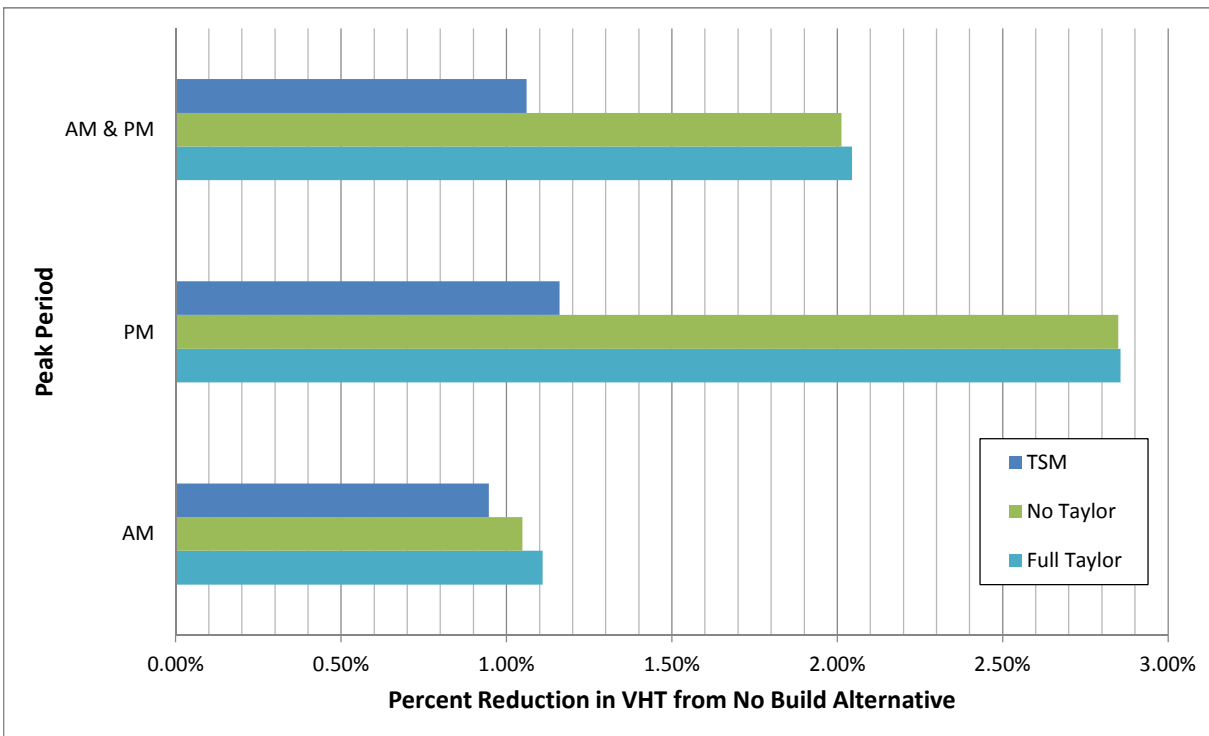
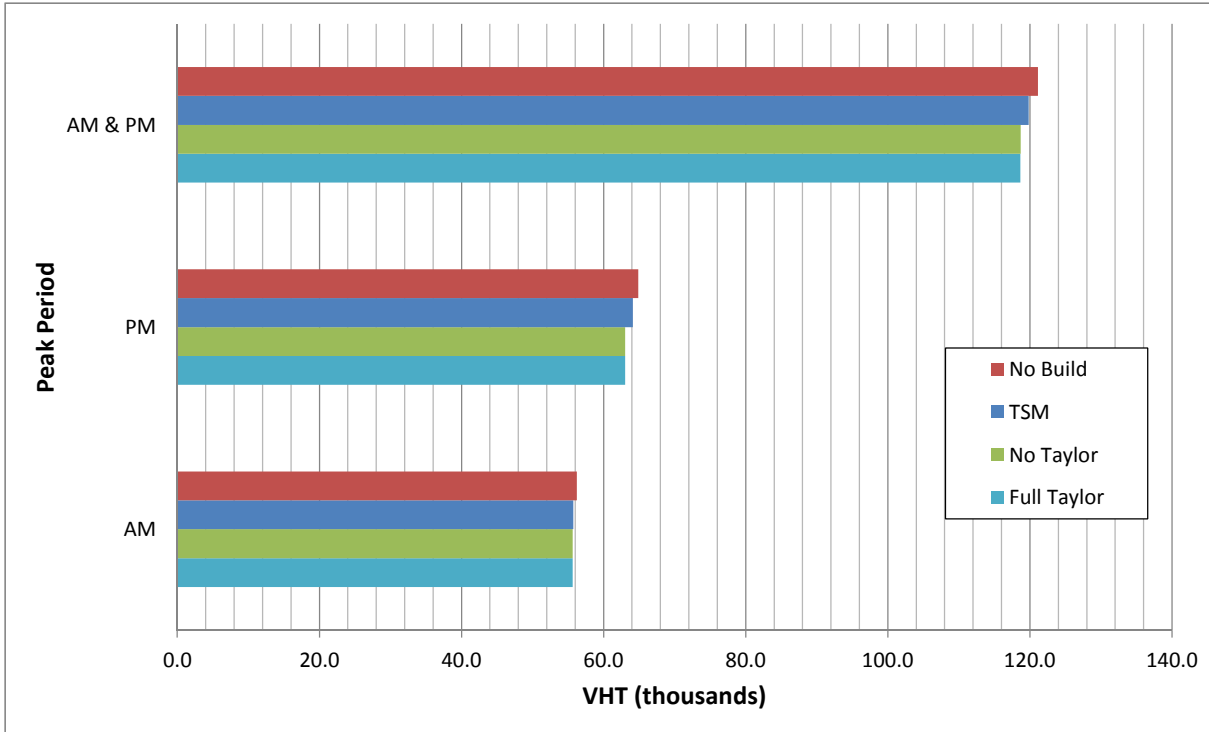


FIGURE 34 - I-80/SR 65 INTERCHANGE ALTERNATIVES CONSTRUCTION YEAR MESO-SCALE VHD COMPARISON

Alt	Vehicle Hours of Delay (thousands)			% Change from No Build		
	AM	PM	AM & PM	AM	PM	AM & PM
No Build	22.8	25.1	47.8	-	-	-
TSM	22.3	24.3	46.6	2.26%	2.84%	2.56%
No Taylor	22.3	23.6	45.9	1.99%	5.98%	4.08%
Full Taylor	22.3	23.5	45.8	2.17%	6.06%	4.20%

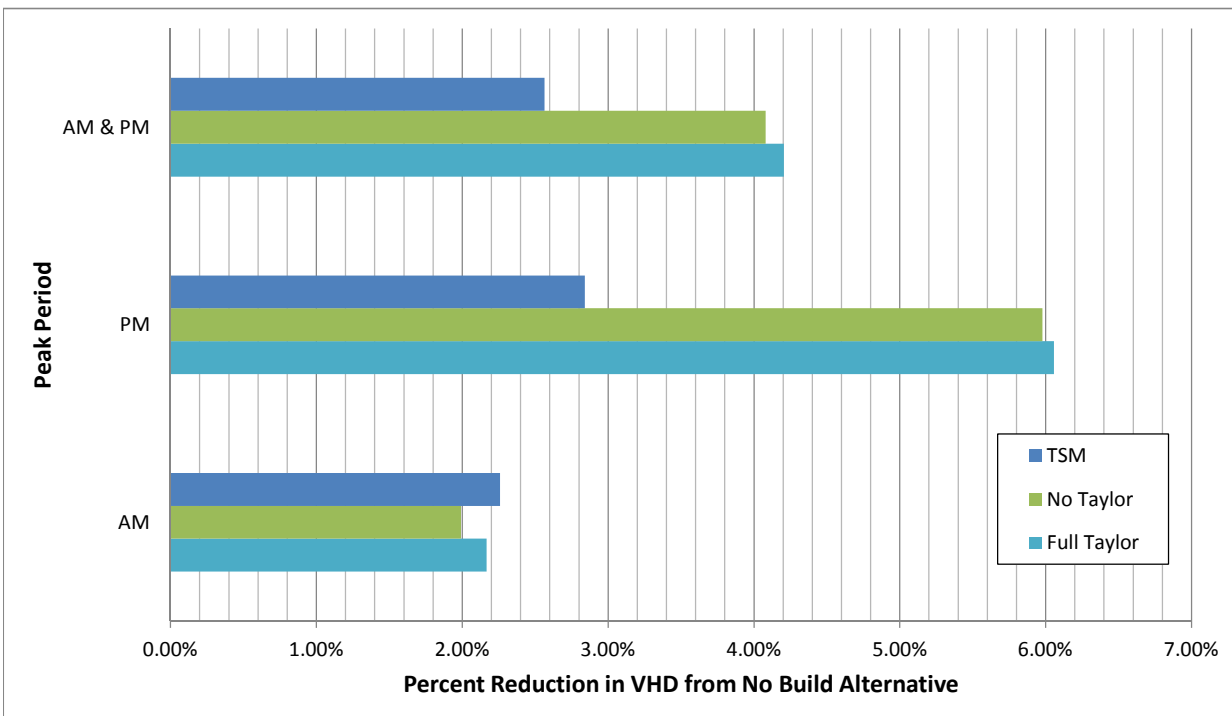
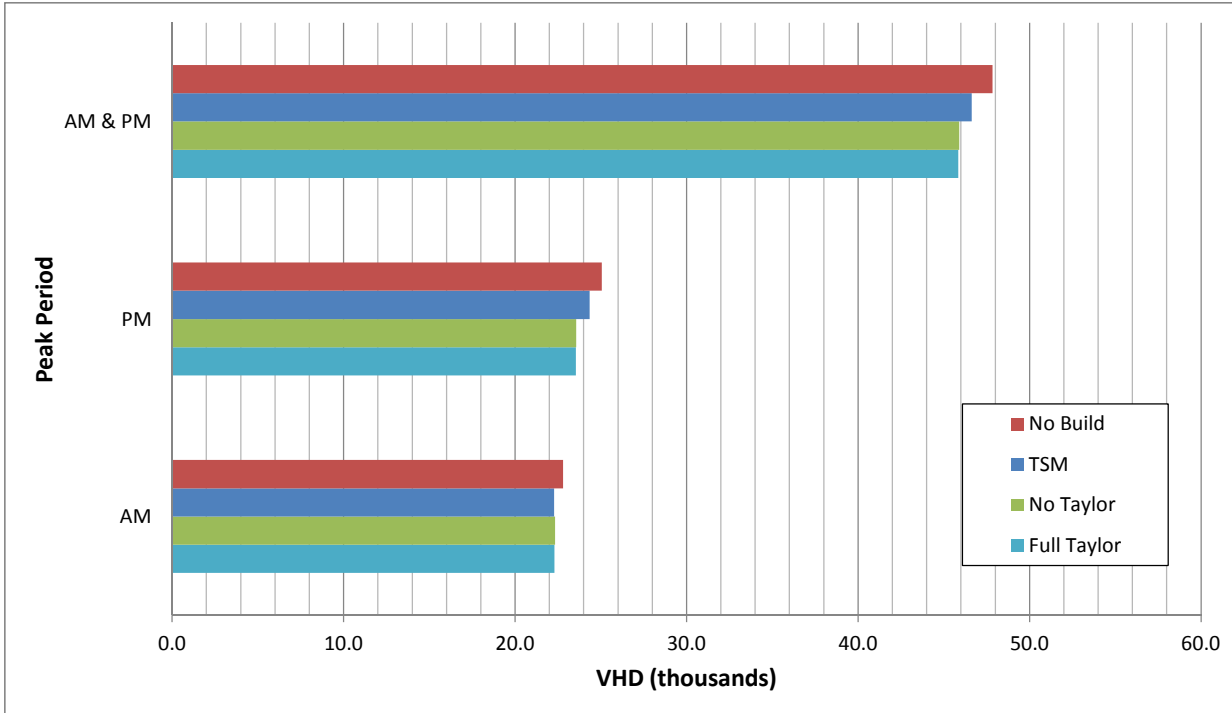
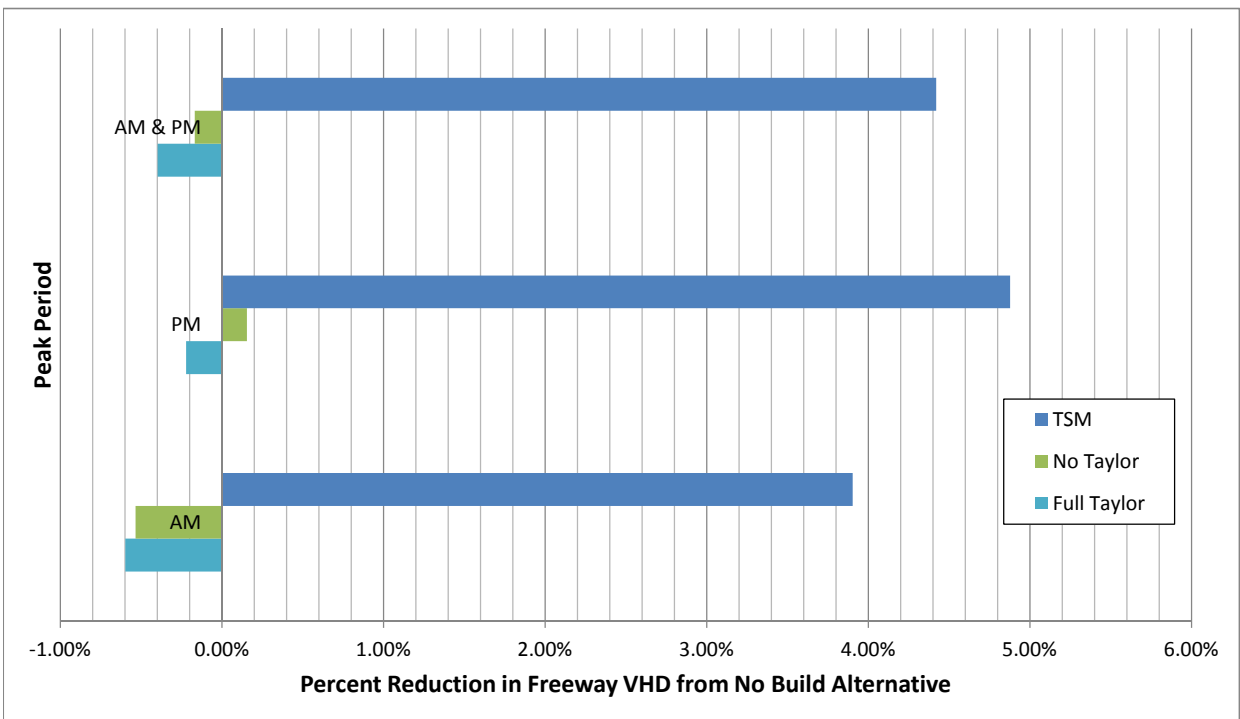
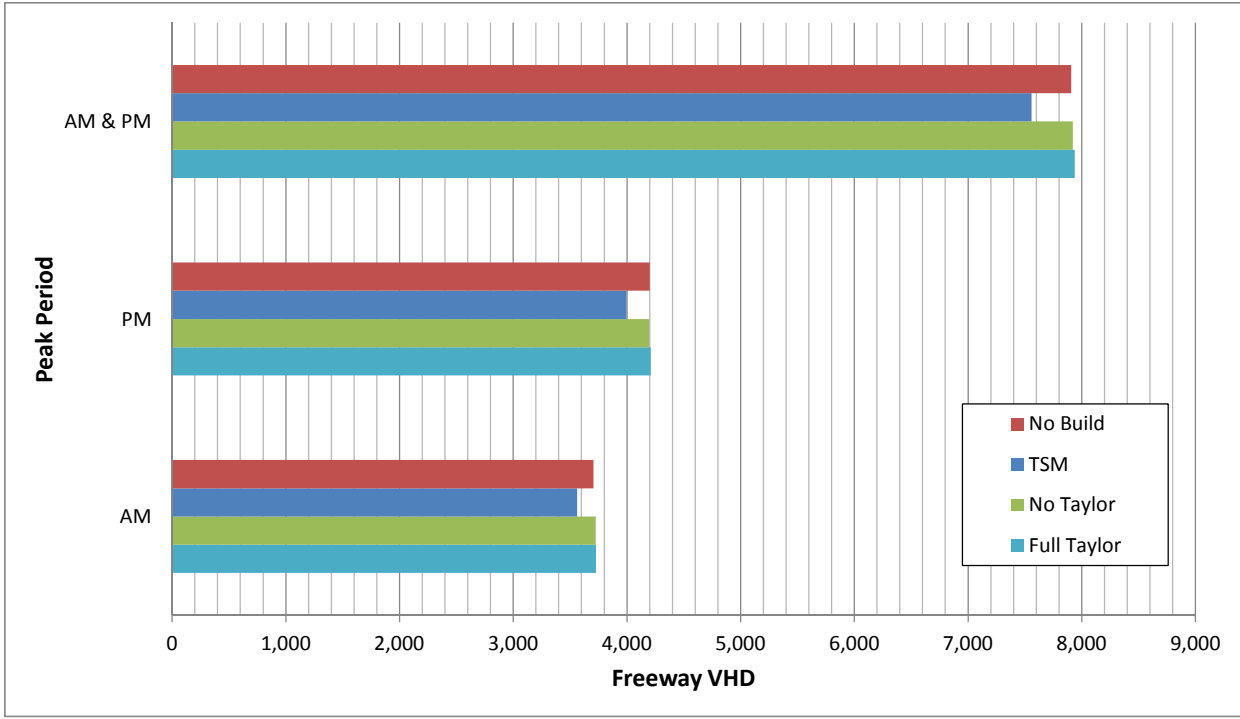


FIGURE 35 - I-80/SR 65 INTERCHANGE ALTERNATIVES CONSTRUCTION YEAR MESO-SCALE FREEWAY VHD COMPARISON

Alt	Freeway Vehicle Hours of Delay*			% Change from No Build		
	AM	PM	AM & PM	AM	PM	AM & PM
No Build	3,707	4,201	7,908	-	-	-
TSM	3,562	3,996	7,559	3.90%	4.88%	4.42%
No Taylor	3,727	4,195	7,921	-0.53%	0.15%	-0.17%
Full Taylor	3,729	4,211	7,940	-0.60%	-0.22%	-0.40%



* Freeway VHD is measured only for freeway mainline links with an average speed less than 35 mph

4.3.6. Induced Travel

The phenomenon where additional capacity leads to additional demand for travel is known as “induced travel.” Induced travel occurs when the cost of travel is reduced (i.e., travel time reduction due to additional capacity) causing an increase in demand (more travelers using the improved facility). The reduction in travel time causes various responses by travelers, including diversion from other routes, changes in destinations, changes in mode, departure time shifts, and possibly the creation of new trips all together. As described previously, the SACMET and VISUM models have limitations, but they do account for most of the factors that influence induced travel (e.g., changes in route, mode, and destination). The main factors they do not fully account for is the potential generation of new trips and long-term induced land use growth.

Since the SACMET trip generation model was calibrated to 2008 base year conditions when vehicle trip making in the region was not constrained by congestion, pricing, or some other means, the model represents a full level of travel demand being generated by households and employment. This means that new trips being created as a result of a network change are very unlikely because there is no constraint preventing these trips from occurring.

Long-term induced land use growth is the one factor that may not be fully represented because there is no direct feedback process to the land use growth forecasts. However, as part of this project, land use growth was assessed by the PDT. The PDT increased the growth of households and employment in the study area recognizing this area has been planned for additional growth and the transportation improvements associated with this project are intended to help accommodate that growth.

Chapter 5. Traffic Operations Analysis

This section summarizes the traffic operations analysis results based on the VISSIM microsimulation traffic operations model (refer to Figure 8 for specific VISSIM network limits). This analysis provides more detailed insights about peak period and peak hour traffic operations under each alternative. Technical calculations supporting the results can be found in the separately bound Technical Appendix. Design year analysis results are presented first followed by the construction year. All analysis was conducted with the same methodology described in Chapter 2. Further, the evaluation criteria from Chapter 2 were used to identify locations with deficient operations. For these locations, improvements are proposed that may be considered as project refinements or mitigation.

5.1. Design Year Conditions

Overall network performance statistics for AM and PM peak period operations are summarized for each alternative in Tables 15 and 16 below, respectively.

TABLE 15: COMPARISON OF OVERALL NETWORK PERFORMANCE BASED ON DESIGN YEAR AM PEAK PERIOD VISSIM MODEL						
Performance Measure	Existing Conditions	Design Year Conditions				
		No Build	No Taylor	Full Taylor	TSM	
Volume Served (% of total demand)	143,450 (100 %)	200,650 (95 %)	206,390 (98 %)	207,230 (99 %)	207,670 (98 %)	
VMT	645,270	831,280	873,070	880,140	869,830	
PMT	786,260	1,004,060	1,056,980	1,065,190	1,049,610	
VHT	13,760	26,470	20,080	21,060	20,420	
VHD (% of VHT)	2,670 (19.4 %)	12,040 (45.5 %)	4,990 (24.9 %)	5,830 (27.7 %)	5,310 (26.0 %)	
Delay per Vehicle Served (min)	1.1	3.6	1.5	1.7	1.5	
PHD	3,240	13,880	5,800	6,510	6,180	
Average Travel Speed	46.9	31.4	43.5	41.8	42.6	
Average HOV Speed	48.5	36.2	46.7	48.4	45.6	
Travel Time: Blue Oaks Blvd to Antelope Rd	SOV	9:44	9:29	8:31	8:30	8:31
	HOV	9:27	8:31	8:17	8:14	8:22
Notes: PMT = person miles of travel, PHD = person hours of delay						
Source: Fehr & Peers, 2013						

TABLE 16: COMPARISON OF OVERALL NETWORK PERFORMANCE BASED ON DESIGN YEAR PM PEAK PERIOD VISSIM MODEL

Performance Measure	Existing Conditions	Design Year Conditions				
		No Build	No Taylor	Full Taylor	TSM	
Volume Served (% of total demand)	198,170 (100 %)	259,410 (85 %)	294,690 (97 %)	300,780 (99 %)	281,870 (93 %)	
VMT	730,101	863,410	1,030,810	1,041,610	954,650	
PMT	880,180	1,071,230	1,286,520	1,276,960	1,172,800	
VHT	16,850	43,430	32,930	29,140	37,180	
VHD (% of VHT)	3,950 (23.4 %)	28,070 (64.6 %)	14,700 (44.6 %)	10,680 (36.7 %)	20,140 (54.2 %)	
Delay per Vehicle Served (min)	1.2	6.5	3.0	2.2	4.3	
PHD	4,670	32,910	17,470	12,580	23,550	
Average Travel Speed	43.3	19.9	31.3	35.8	25.7	
Average HOV Speed	46.9	24.7	35.6	39.2	30.3	
Travel Time: Auburn Blvd to Blue Oaks Blvd.	SOV	9:16	45:38	12:08	7:22	43:08
	HOV	9:11	15:38	8:32	6:40	17:03
Notes: PMT = person miles of travel, PHD = person hours of delay						
Source: Fehr & Peers, 2013						

Reviewing the results in Tables 15 and 16 should consider the following information.

- The Full Taylor alternative serves the largest percentage of the peak period demand volumes. The performance metrics do not fully account for vehicles that could not enter the network during the peak periods.
- The No Taylor alternative has slightly lower delay and higher average speed during the AM peak period than the Full Taylor alternative. The removal of the Taylor Road on-ramp and concentration of traffic at other on-ramps creates improved freeway operations that more than offset the increase in congestion on the local arterial network. However, this pattern does not occur in the PM peak period where having one fewer off-ramps results in substantial delay on the freeway and arterial system.
- The PM peak period results reveal that the Full Taylor alternative serves the most vehicles while having the lowest delay for vehicles and persons, as well as the lowest travel times for SOVs and HOVs.

- Overall, the build alternatives improve overall network performance compared to no build conditions.
- The AM peak period travel times are better under design year conditions than existing conditions for all alternatives. The improvement is due to auxiliary lane and HOV lane improvements that are common to all alternatives (even No Build). In particular, the WB I-80 auxiliary lane between Douglas Boulevard and Riverside Avenue substantially improves traffic flow, and SR-65 SB has a HOV lane from Blue Oaks Boulevard to I-80 under design year conditions.

Specific details about design year freeway and arterial intersection operations are discussed in more detail in the following sections.

5.1.1. Freeway Operations

Detailed freeway operations analysis was completed for the peak hour (7:30 to 8:30 AM and 4:30 to 5:30 PM) of the four hour AM and PM peak periods. The AM and PM peak hour results for select locations are reported in Tables 17 and 18, respectively. The remaining results are available in the Technical Appendix. Figures 36 through 43 display the average speed in the mixed-flow lanes throughout the network during the peak periods for each alternative.

I-80 EB

The freeway operations results indicate the No Build alternative would result in LOS F operations on I-80 in the EB direction between the beginning of the analysis area at Auburn Blvd and the SR-65 off-ramp during the AM and PM peak periods. The speed for vehicles in the mixed flow lanes would be less than 10 mph for most of this segment. All of the build alternatives provide significant congestion relief in the AM peak period; therefore no project impacts occur on EB I-80 in the AM peak hour. However, some slowing would remain between Auburn Blvd and Douglas Blvd and at the Douglas Boulevard on-ramp.

During the PM peak hour, the No Taylor and Full Taylor alternatives offer significant decreases in delay on EB I-80. However, heavy demand volumes at the Douglas Boulevard slip off-ramp results in LOS F conditions and an impact at the No Taylor alternative. The No Taylor alternative would also result in significant slowing at the Eureka Road off-ramp in the last hour of the peak period due to congestion on the arterial network that spills back onto the freeway. The project results in the following impacts on I-80 EB in the PM peak hour:

TABLE 17: SELECTED FREEWAY OPERATIONS RESULTS – DESIGN YEAR AM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	No Build	TSM	No Taylor	Full Taylor
EB I-80	Auburn Blvd to Douglas Blvd	Basic	F / 78	F / 45	F / 47	F / 45
	Douglas Blvd EB Off-ramp	Diverge	F / 71	D / 29	D / 30	D / 29
	Douglas Blvd WB Off-ramp	Diverge	F / 127	C / 24	D / 32	C / 26
	Douglas Blvd On-ramp	Merge	F / 153	C / 25	F / 80	F / 56
	Eureka Rd Off-ramp	Diverge	F / 114		E / 38	D / 31
	Eureka Rd EB On-ramp	Merge	F / 132	C / 26	D / 31	C / 28
	Eureka Rd to SR-65	Weave	F / 131¹	D / 32 ¹	C / 22	B / 20
	Taylor Rd Off-ramp	Diverge			-	B / 19
	SR-65 On-ramp	Weave	B / 20 ¹	C / 26 ¹	C / 26	C / 22
WB I-80	SR-65 Off-ramp	Diverge	C / 27	C / 26	C / 23	C / 23
	Taylor Rd Off-ramp	Diverge	-	-	-	C / 24
	Taylor Rd On-ramp	Merge	D / 32	E / 35	-	C / 21
	SR-65 to Atlantic St	Weave	E / 42 ¹	E / 45 ¹	C / 23	C / 24
	Atlantic St EB Off-ramp	Diverge	F / 53	F / 56	E / 44	D / 33
	Atlantic St On-ramp	Merge	C / 28	C / 25	D / 31	B / 19
	Douglas Blvd WB On-ramp	Merge	C / 25	E / 37	D / 28	D / 30
	Truck Scales to Elkhorn Blvd	Basic	E / 39	E / 44	F / 46	D / 33
	Elkhorn Blvd WB On-ramp	Merge	C / 28	D / 29	D / 30	E / 41
	Elkhorn Blvd EB On-ramp	Merge	E / 40	F / 51	E / 36	F / 51
NB SR-65	I-80 to Stanford Ranch Rd	Weave	F / 57¹	D / 32	C / 23	C / 23
	Stanford Ranch Rd On-ramp	Merge	D / 30	E / 37	F / 45	E / 43

TABLE 17: SELECTED FREEWAY OPERATIONS RESULTS – DESIGN YEAR AM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	No Build	TSM	No Taylor	Full Taylor
SB SR-65	Ferrari Ranch Rd EB On-ramp	Merge	C / 24	<u>F / 77</u>	E / 37	<u>F / 115</u>
	Lincoln Blvd to Twelve Bridges Dr	Weave	E / 37	<u>F / 83</u>	<u>F / 92</u>	<u>F / 93</u>
	Twelve Bridges Dr On-ramp	Merge	<u>F / 61</u>	<u>F / 71</u>	<u>F / 71</u>	<u>F / 71</u>
	Sunset Blvd WB On-ramp	Merge	E / 43	<u>F / 47</u>	<u>F / 56</u>	<u>F / 57</u>
	Blue Oaks Blvd WB On-ramp	Merge	D / 34	E / 44	<u>F / 45</u>	E / 37
	Pleasant Grove Blvd Off to On-ramp	Basic	D / 32	D / 33	<u>F / 59</u>	<u>F / 47</u>
	Galleria Blvd Off-ramp	Diverge	<u>F / 55</u>	D / 32	C / 26	C / 27
	Galleria Blvd to I-80	Weave	<u>F / 78¹</u>	D / 31	C / 22	C / 26

Note: Bold and underline font indicate LOS F conditions. Shaded cells indicate a project impact. The level of service and average density for the study segment are reported.

¹The facility type reported is for the Full Taylor and No Taylor alternatives. For locations where more than one segments exist, the highest density and LOS result is reported. The other results are contained in the Technical Appendix.

Source: Fehr & Peers, 2013

TABLE 18: SELECTED FREEWAY OPERATIONS RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS

Freeway	Location	Type ¹	No Build	TSM	No Taylor	Full Taylor
EB I-80	Auburn Blvd to Douglas Blvd	Basic	F / 154	F / 167	F / 113	E / 35
	Douglas Blvd EB Off-ramp	Diverge	F / 107	F / 118	F / 139	E / 42
	Douglas Blvd WB Off-ramp	Diverge	F / 180	F / 185	C / 28	C / 25
	Douglas Blvd On-ramp	Merge	F / 181	F / 171	E / 41	E / 37
	Eureka Rd Off-ramp	Diverge	F / 149		E / 36	E / 35
	Eureka Rd EB On-ramp	Merge	F / 96	F / 161	D / 34	D / 32
	Eureka Rd to SR-65	Weave	F / 142	F / 153	C / 25	C / 23
	Taylor Rd Off-ramp	Diverge			-	C / 22
	SR-65 On-ramp	Merge	C / 21 ¹	C / 24 ¹	E / 37	C / 21
WB I-80	Rocklin Rd On-ramp	Merge	F / 117	C / 22	D / 30	D / 32
	Rocklin Rd to SR-65	Basic	F / 113¹	D / 29 ¹	E / 39 ¹	D / 31 ¹
	SR-65 Off-ramp	Diverge	F / 114	D / 30	C / 27	C / 21
	Taylor Rd On-ramp	Merge	F / 61	C / 28	-	B / 18
	SR-65 to Atlantic St	Weave	F / 72	D / 28	C / 20	C / 21
	Atlantic St On-ramp	Merge	F / 100	C / 21	B / 19	B / 20
	Douglas Blvd Off-ramp	Diverge	F / 108		D / 32	C / 26
NB SR-65	I-80 to Stanford Ranch Rd	Weave	F / 84¹	D / 30	E / 39	D / 35
	Stanford Ranch Rd On-ramp	Merge	D / 30	D / 32	F / 93	F / 94
	Blue Oaks Blvd On-ramp	Merge	C / 23	D / 28	E / 38	E / 41
	Twelve Bridges Dr Off-ramp	Diverge	D / 30	D / 32	E / 36	E / 36

TABLE 18: SELECTED FREEWAY OPERATIONS RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS

Freeway	Location	Type¹	No Build	TSM	No Taylor	Full Taylor
SB SR-65	Sunset Blvd WB On-ramp	Merge	D / 32	E / 36	D / 30	E / 36
	Pleasant Grove Blvd EB On-ramp	Merge	D / 29	D / 29	C / 27	D / 28
	Galleria Blvd to I-80	Weave	E / 40 ¹	C / 26	C / 22	C / 23

Note: Bold and underline font indicate LOS F conditions. Shaded cells indicate a project impact. The level of service and average density for the study segment are reported.

¹ The facility type reported is for the Full Taylor and No Taylor alternatives. For locations where more than one segments exist, the highest density and LOS result is reported. The other results are contained in the Technical Appendix.

Source: Fehr & Peers, 2013

- TSM Alternative
 - From the Auburn Boulevard on-ramp to the Douglas Boulevard WB off-ramp
 - From Eureka Road off-ramp to the Taylor Road off-ramp
- No Taylor Alternative
 - Douglas Boulevard EB off-ramp

The Full Taylor alternative does not result in any impacts on I-80 EB under design year conditions. To mitigate the TSM alternative's impacts, ramp metering would need to be more restrictive or additional mixed flow lanes would be needed on EB I-80 between Auburn Boulevard and Taylor Road. Both mitigation options would likely cause other impacts. Reducing the ramp meter rate would likely create longer queues that would extend back onto local arterials. Mainline widening could have right-of-way or environmental impacts. The No Taylor alternative impact could be mitigated by adding a second lane to the off-ramp or providing an auxiliary lane between Auburn Boulevard and Douglas Boulevard. This mitigation would likely have right-of-way impacts.

I-80 WB

During the AM peak period, slow speeds would occur between Atlantic Street and the Douglas Boulevard slip on-ramp and between the Antelope Road loop on-ramp and the Elkhorn Boulevard slip on-ramp. Most of the facilities would operate at LOS E or better during the AM peak hour, however LOS F conditions would exist at select locations, as shown in Table 17. The proposed project would result in impacts at the following locations on I-80 WB in the AM peak hour:

- TSM Alternative
 - Atlantic Street EB off-ramp
 - Truck Scales on-ramp
 - Elkhorn Boulevard EB on-ramp
- No Taylor
 - From the Truck Scales on-ramp to Elkhorn Boulevard
- Full Taylor
 - Elkhorn Boulevard EB on-ramp

To mitigate the impact at the off-ramp to EB Atlantic Street would likely require reconstruction of the interchange to provide more storage for the off-ramp. Preliminary options tested as part of this analysis suggest that the most effective interchange options would likely have significant right-of-way impacts and may not be feasible. Therefore, the most viable mitigation option would be to construct one of the other project alternatives. The impact to the truck scales on-ramp and the Elkhorn Boulevard slip on-ramp would require more restrictive metering or additional mainline capacity such as a continuous auxiliary lane between the truck scale on-ramp and Elkhorn Boulevard off-ramp. More restrictive metering for the slip on-ramp from Elkhorn Boulevard could cause queuing that would extend onto the arterial.

During the PM peak hour, LOS F conditions would occur between the Rocklin Road on-ramp and the SR-65 off-ramp under the No Build alternative. The operations results also indicate vehicles from the Douglas Boulevard off-ramp would spillback onto the mainline causing significant slowing back to Taylor Road. All of the build alternatives have LOS E or better operations on WB I-80 during the PM peak period; therefore no project impacts would exist on I-80 WB during the PM peak hour. Figure 39 indicates the build alternatives would provide significantly faster travel times with little congestion or slowing.

SR-65 NB

During the AM peak hour, the No Build alternative would result in LOS F conditions at the I-80 WB on-ramp to NB SR-65. This segment would operate at LOS D or better with all of the build alternatives. Figure 40 indicates some slowing would occur at the Stanford Ranch Road on-ramp in all of the alternatives. The No Taylor and Full Taylor alternatives show more slowing, because a larger percentage of the demand volumes would be able to reach this point in the network. The proposed project would result in an impact at the Stanford Ranch Road on-ramp under the No Taylor alternative. This impact could be mitigated by adding mainline capacity such as an auxiliary lane between Stanford Ranch Road and Pleasant Grove Boulevard.

The PM peak hour results show the same trends as the AM peak hour, however the demand volumes are higher which results in more congestion. The No Build alternative results in LOS F conditions at the I-80 WB on-ramp. Figure 41 indicates there is no other significant slowing in the NB direction north of the project location.

The No Taylor and Full Taylor alternatives both result in LOS F conditions at the Stanford Ranch Road on-ramp. This bottleneck extends back to the Stanford Ranch Road off-ramp during the PM peak hour. It should be noted that the No Taylor and Full Taylor serve more traffic at the I-80/SR-65 interchange, which allows more vehicles to reach downstream facilities and results in a higher density compared to the other alternatives. The traffic operations results also indicate the No

Taylor and Full Taylor alternatives would result in more slowing (LOS E) at the Blue Oaks Boulevard on-ramp and the Whitney Ranch Parkway EB on ramp.

The No Taylor alternative would result in impacts to the segment between the Stanford Ranch Road off-ramp and on-ramp. The Full Taylor alternative would result in impacts from the Stanford Ranch Road off-ramp to Blue Oaks Boulevard. This impact could be mitigated by adding mainline capacity such as an additional lane between Galleria Boulevard and Sunset Boulevard.

SR-65 SB

During the AM peak hour, all of the project alternatives result in LOS F conditions on SB SR-65 at the Twelve Bridges Drive on-ramp. Slowing is also present at the Sunset Boulevard WB on-ramp. The build alternatives result in higher densities and more spillback at these bottlenecks than the No Build alternative. Under the No Build alternative, the demand volumes are lower because of the lower capacity of the I-80/SR-65 interchange. Similarly, the No Taylor and Full Taylor alternatives show increased densities at the Pleasant Grove Boulevard WB on-ramp due to increased demand.

The proposed project would results in impacts at the following locations on SB SR-65 during the AM peak hour under all build alternatives:

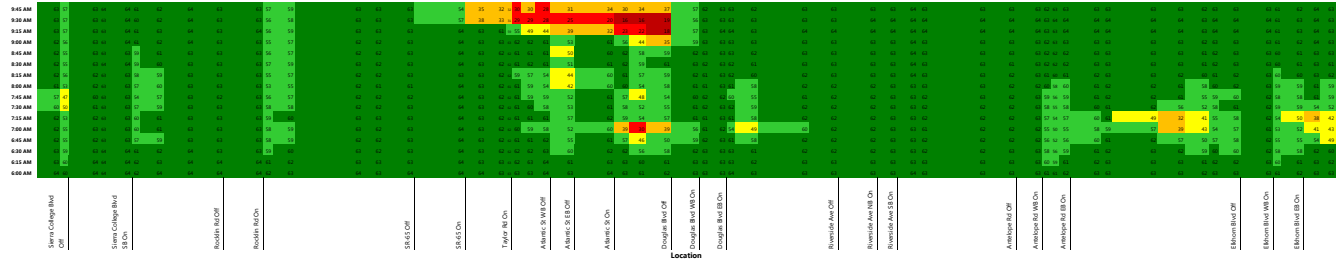
- Between the Ferrari Ranch Road EB on-ramp and the Twelve Bridges Drive on-ramp
- Sunset Boulevard WB on-ramp

The Full Taylor and No Taylor would both have impacts at the basic segment between the Pleasant Grove ramps. The Full Taylor alternative would have an impact between the Sunset Boulevard ramps. The No Taylor alternative would have an impact at the loop on-ramp at Blue Oaks Boulevard. To mitigate the impacts between Ferrari Ranch Road and Twelve Bridges Drive, additional mainline capacity is needed such as an auxiliary lane between Twelve Bridges Drive and Placer Parkway. This improvement would likely create additional impacts to facilities downstream by allowing more vehicles to reach locations that already operate at LOS E or worse, such as the ramps at Sunset Boulevard, Blue Oaks Boulevard, and Pleasant Grove Boulevard. Further, improving mixed-flow bottlenecks may influence demand for future HOV lanes. This suggests that the long-term solution for SR-65 carefully consider where additional mixed-flow lanes versus auxiliary lanes are warranted between Lincoln Boulevard and the project.

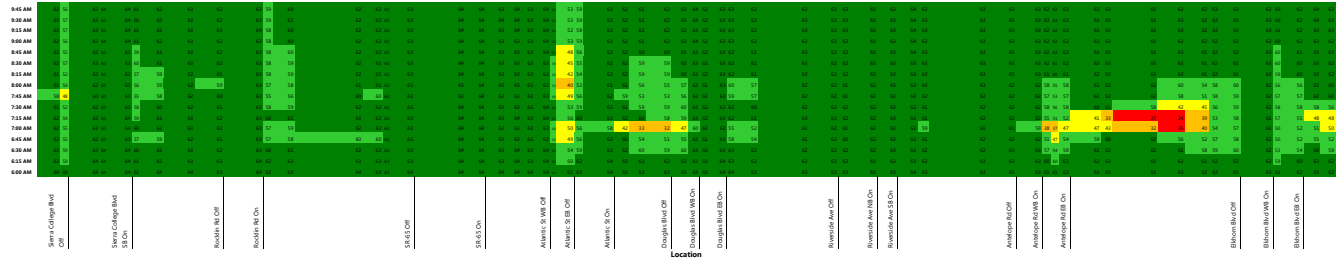
All of the study facilities operate at LOS E or better in the SB direction in the PM peak hour.

FIGURE 38 - I-80 WESTBOUND DESIGN YEAR AM PEAK PERIOD SPEED CONTOUR MAP

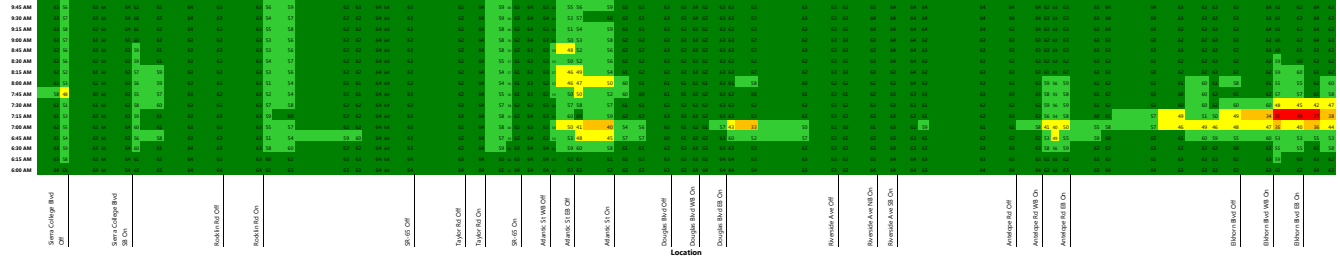
No Build Alternative



No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative

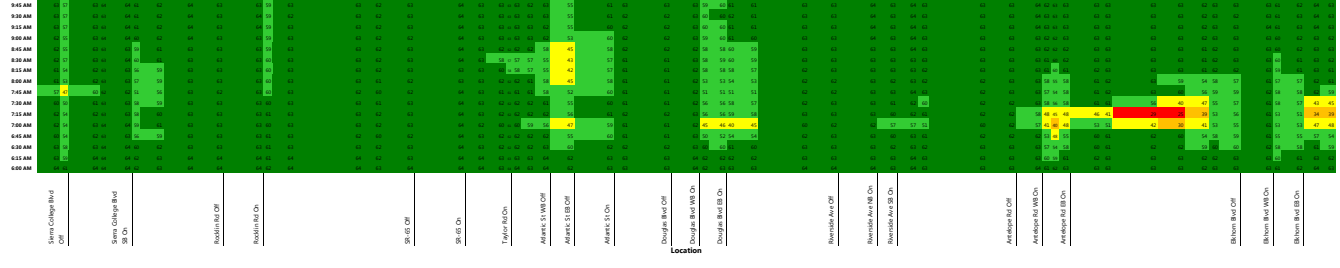
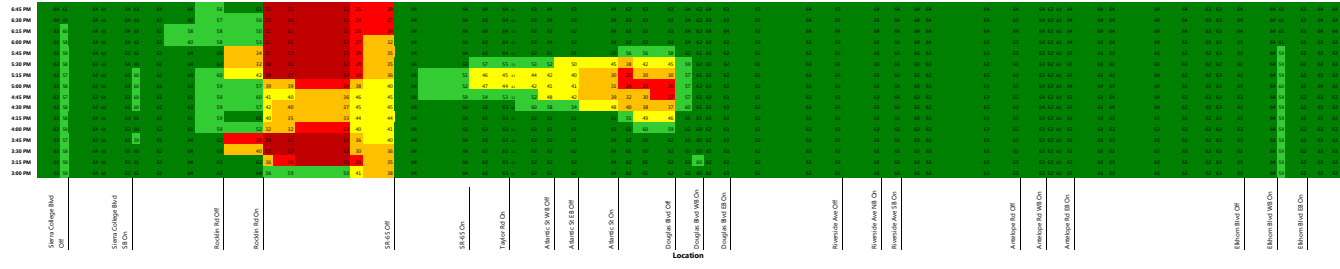
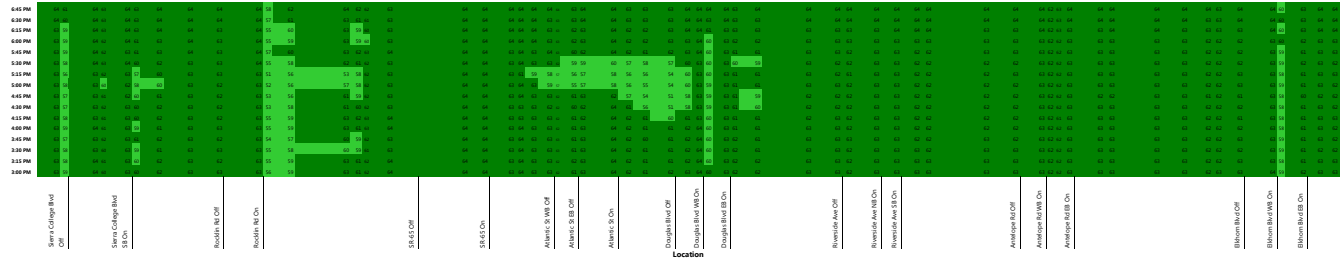


FIGURE 39 - I-80 WESTBOUND DESIGN YEAR PM PEAK PERIOD SPEED CONTOUR MAP

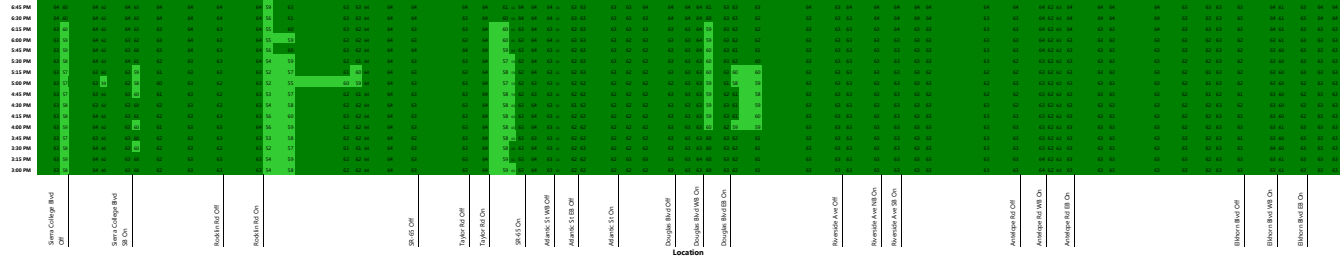
No Build Alternative



No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative

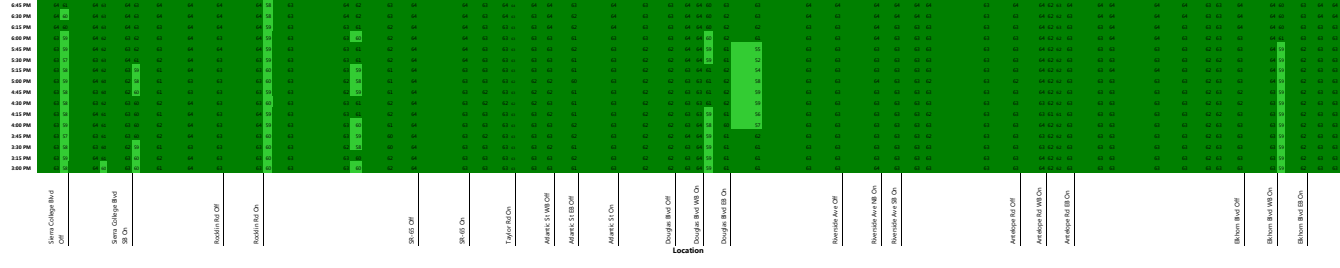
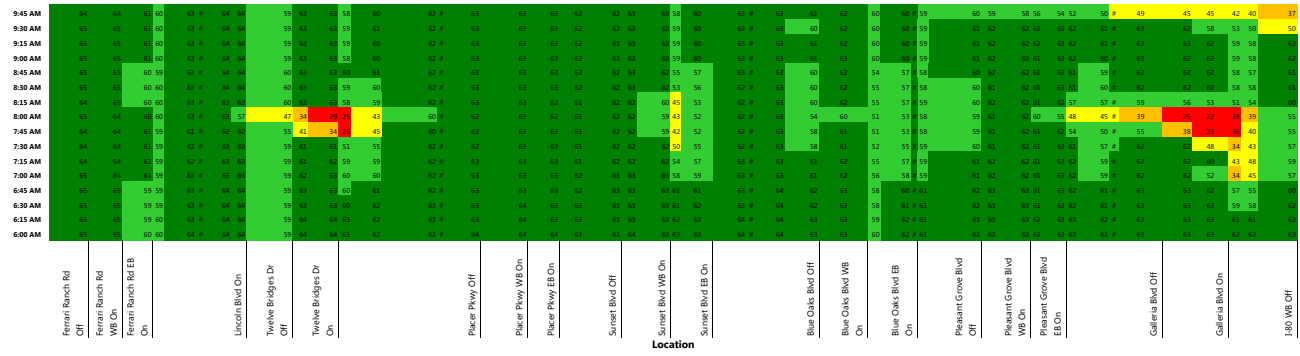
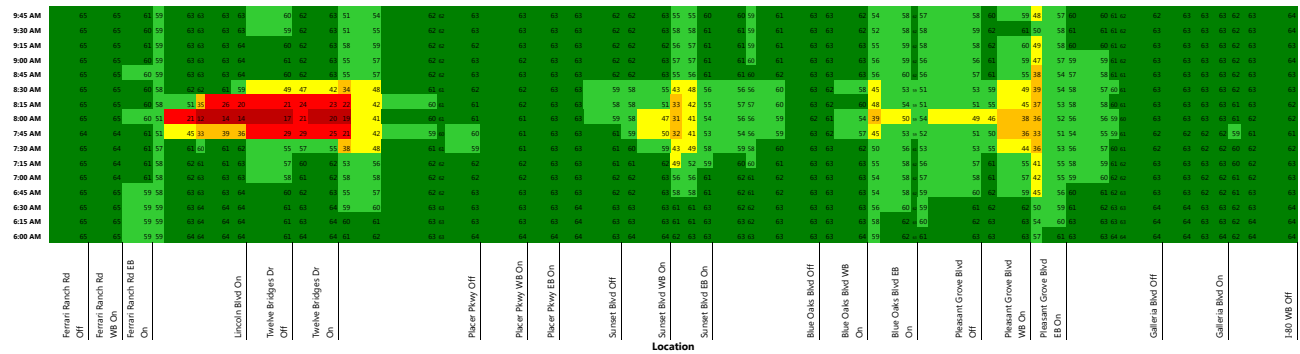


FIGURE 42 - SR 65 SOUTHBOUND DESIGN YEAR AM PEAK PERIOD SPEED CONTOUR MAP

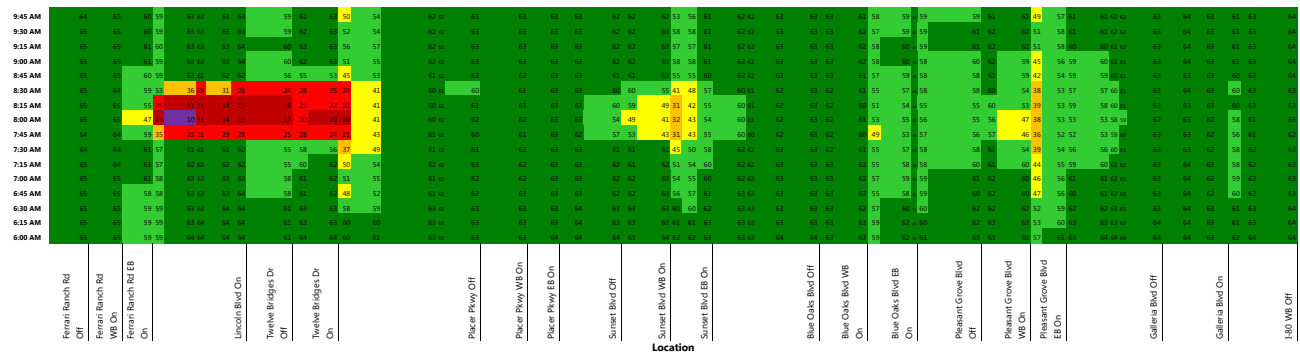
No Build Alternative



No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative

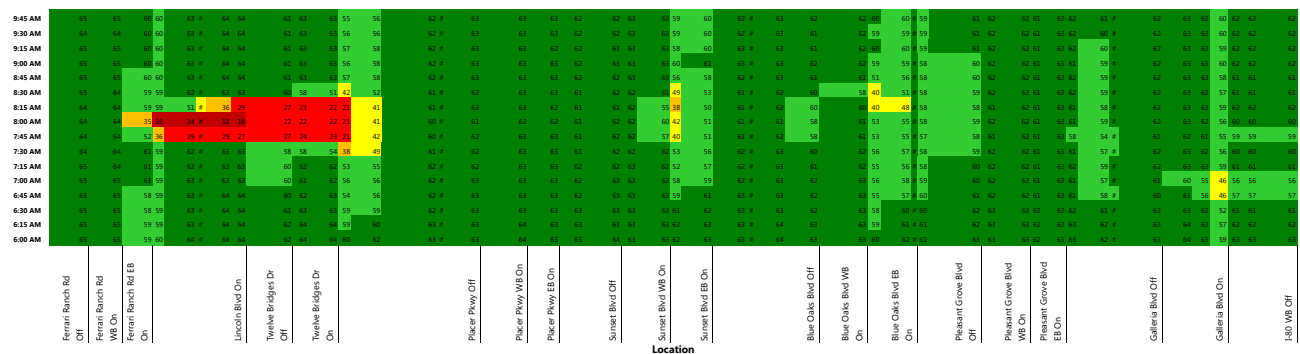
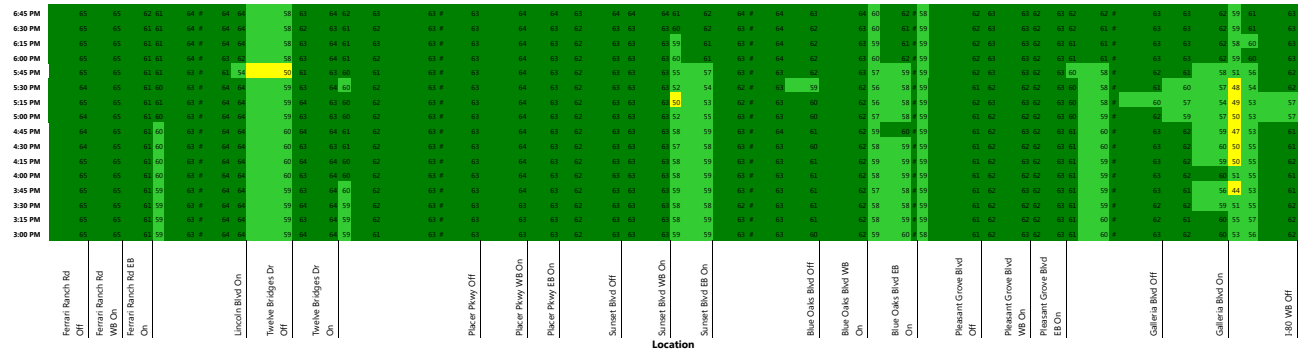
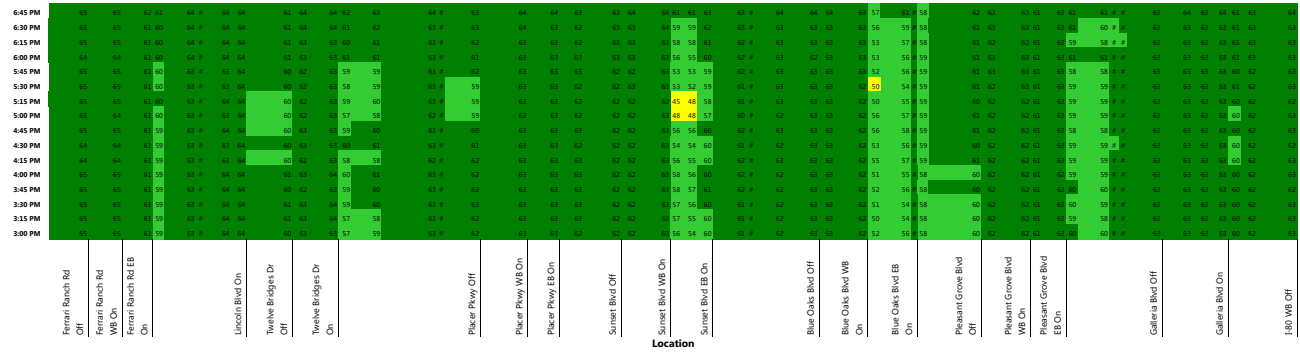


FIGURE 43 - SR 65 SOUTHBOUND DESIGN YEAR PM PEAK PERIOD SPEED CONTOUR MAP

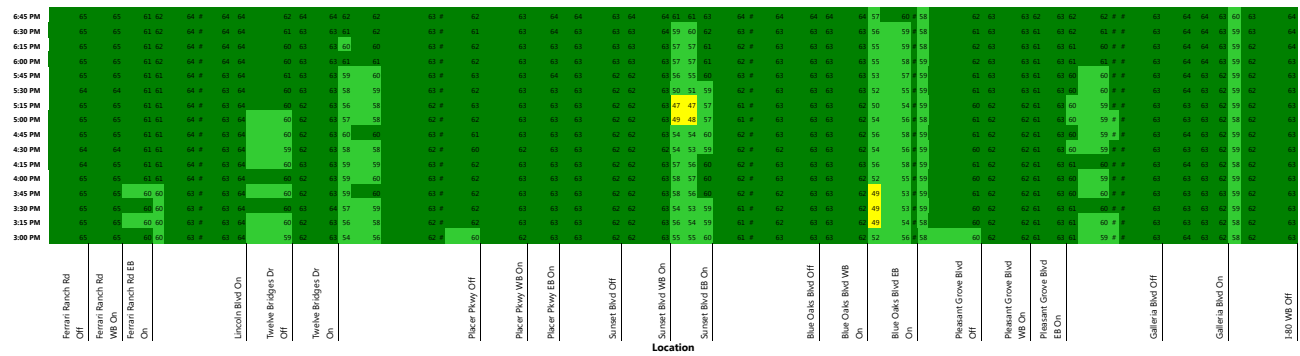
No Build Alternative



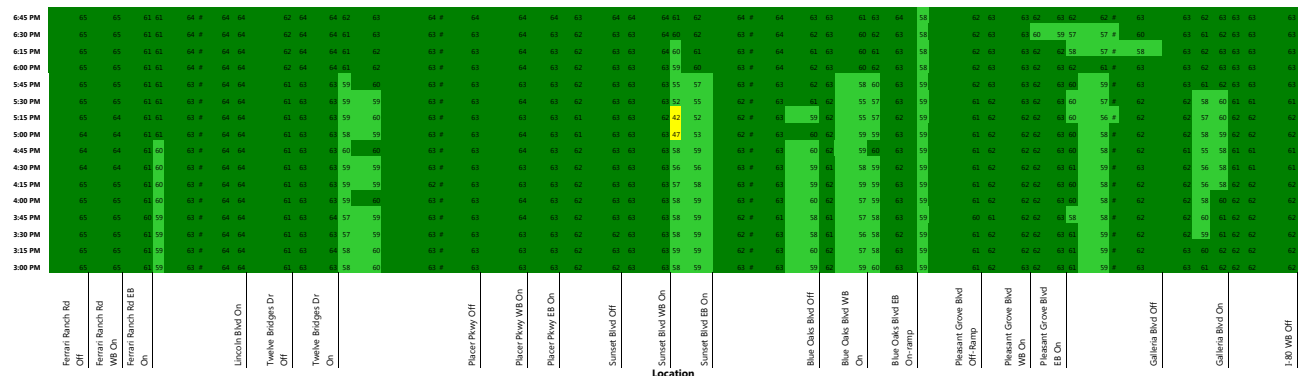
No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative



5.1.2. Arterial Intersection Operations

Tables 19 and 20 show the LOS and average delay at key study intersections under design year conditions during the AM and PM peak hours. Based on the evaluation criteria for this study, the TSM alternative results in three impacts, the No Taylor alternative results in two impacts, and the Full Taylor alternative results in one impact. See the Technical Appendix for all study intersection results.

TABLE 19: SELECTED INTERSECTION OPERATIONS RESULTS – DESIGN YEAR AM PEAK HOUR CONDITIONS				
Intersection	No Build	TSM	No Taylor	Full Taylor
1. Lincoln Blvd / Sterling Pkwy	<u>F / 88</u>	C / 28	B / 13	B / 13
2. Twelve Bridges Dr / SR-65 SB Ramps	E / 57	D / 50	C / 22	C / 26
3. Twelve Bridges Dr / SR-65 NB Ramps	D / 51	D / 47	C / 23	C / 32
5. Sunset Blvd / SR-65 NB Ramps	E / 56	C / 27	B / 13	B / 14
6. Blue Oaks Blvd / Washington Blvd	<u>F / 136</u>	<u>F / 118</u>	E / 78	<u>F / 84</u>
7. Blue Oaks Blvd / SR-65 NB Ramps	<u>F / 116</u>	<u>F / 156</u>	C / 34	D / 44
10. Stanford Ranch Rd / Five Star Blvd	<u>F / 151</u>	C / 25	C / 25	C / 26
11. Stanford Ranch Rd / SR-65 NB Ramps	<u>F / 127</u>	B / 18	C / 22	C / 21
12. Galleria Blvd / SR-65 SB Ramps	D / 38	B / 18	B / 19	B / 19
16. Roseville Pkwy / Taylor Rd	<u>F / 98</u>	<u>F / 98</u>	<u>E / 70</u>	D / 40
17. Roseville Pkwy / Sunrise Ave	C / 30	C / 31	E / 56	D / 54
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	E / 55	E / 59	D / 45	C / 30
29. Granite Dr / Rocklin Rd	D / 29	<u>E / 46</u>	<u>F / 138</u>	A / 7
33. Lincoln Blvd / SR-65 NB Off-ramp	<u>F / 98</u>	E / 80	B / 12	B / 11
34. Lincoln Blvd / SR-65 SB On-ramp	<u>F / 93</u>	<u>F / 93</u>	D / 36	B / 17
<p>Note: Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported.</p> <p>Source: Fehr & Peers, 2013</p>				

TABLE 20: SELECTED INTERSECTION OPERATIONS RESULTS – DESIGN YEAR PM PEAK HOUR CONDITIONS				
Intersection	No Build	TSM	No Taylor	Full Taylor
1. Lincoln Blvd / Sterling Pkwy	<u>F / 94</u>	C / 21	B / 16	B / 14
3. Twelve Bridges Dr / SR-65 NB Ramps	E / 77	C / 33	B / 19	C / 22
6. Blue Oaks Blvd / Washington Blvd	<u>F / >240</u>	<u>F / >240</u>	<u>F / 213</u>	<u>F / 178</u>
7. Blue Oaks Blvd / SR-65 NB Ramps	<u>F / 115</u>	<u>F / 105</u>	<u>F / >240</u>	<u>F / >240</u>
14. Galleria Blvd / Roseville Pkwy	<u>F / 213</u>	E / 62	<u>F / 196</u>	<u>F / 191</u>
16. Roseville Pkwy / Taylor Rd	D / 48	D / 54	D / 48	D / 42
17. Roseville Pkwy / Sunrise Ave	<u>F / >240</u>	<u>F / 217</u>	<u>F / 214</u>	<u>F / 115</u>
19. Atlantic St / I-80 WB Ramps	D / 51	B / 16	B / 19	B / 14
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	<u>F / 92</u>	E / 74	E / 63 ^a	C / 32
21. Eureka Rd / Sunrise Ave	<u>F / 184</u>	<u>F / 144</u>	<u>F / 120</u>	<u>F / 137</u>
23. Douglas Blvd / Harding Blvd	<u>F / >240</u>	<u>F / 220</u>	E / 71	D / 53
24. Douglas Blvd / I-80 WB Ramps	<u>F / 237</u>	E / 66	D / 48	B / 13
25. Douglas Blvd / I-80 EB Ramps	<u>F / 124</u>	<u>F / 112</u>	D / 51	C / 34
26. Douglas Blvd / Sunrise Ave	<u>F / >240</u>	<u>F / >240</u>	<u>F / 238</u>	<u>F / 227</u>
29. Rocklin Rd / Granite Dr	<u>F / >240</u>	<u>F / 178</u>	<u>F / 112</u>	<u>F / 85</u>
30. Rocklin Rd / I-80 WB Ramps	<u>F / 99</u>	<u>F / 53</u>	A / 6	B / 14
31. Rocklin Rd / I-80 EB Ramps	E / 36	C / 20	B / 11	B / 11
32. Rocklin Rd / Aguilar Rd	<u>F / 123</u>	<u>F / 144</u>	<u>F / 86</u>	<u>F / 57</u>
33. Lincoln Blvd / SR-65 NB Off-ramp	<u>F / 98</u>	A / 9	B / 12	A / 8
34. Lincoln Blvd / SR-65 SB On-ramp	<u>F / 101</u>	C / 21	C / 28	C / 27
<p>Note: Bold and underline font indicate unacceptable operations. The LOS and average delay in seconds per vehicle are reported.</p> <p>(a) Actual operation may be worse. LOS E conditions occur within the typical limits of the intersection turn lanes. However, queues extend beyond the intersection limits on the off-ramp approach and extend onto the freeway.</p> <p>Source: Fehr & Peers, 2013</p>				

The following intersections would operate at LOS F during the PM peak hour under all project alternatives:

- Blue Oaks Boulevard / Washington Boulevard
- Blue Oaks Boulevard / SR-65 NB Ramps

- Roseville Parkway / Sunrise Avenue
- Eureka Road / Sunrise Avenue
- Douglas Boulevard / Sunrise Avenue
- Rocklin Road / Granite Drive
- Rocklin Road / Aguilar Road

The analysis results indicate these intersections will need significant capacity enhancements with and without the proposed project to operate within the established LOS thresholds for these locations. Before any improvements are proposed though, the interaction between these locations and the rest of the network should be considered. In some cases, the operation of these intersections meters traffic accessing the freeway. This may be desirable in certain locations such as at Blue Oaks Boulevard/Washington Boulevard at least until sufficient capacity is available on SR-65 to accommodate the demand levels. In other locations, improvements to the freeway system, such as an auxiliary lane, may reduce demand and/or queuing that would improve intersection operations.

All three build alternatives would cause an impact at Blue Oaks Boulevard / SR-65 NB ramps: The TSM alternative during the AM peak hour and the other two alternatives during the PM peak hour. The excessive delay at Blue Oaks Boulevard / SR-65 NB ramps is primarily due to LOS F conditions and spillback from the adjacent Blue Oaks Boulevard / Washington Boulevard intersection. The Blue Oaks Boulevard / SR-65 NB ramps intersection can be improved with longer NB turn pockets, and additional turn lanes. While this improvement could provide modest congestion relief, the interchange will need additional capacity to operate at acceptable levels.

The TSM alternative would also cause impacts at the Douglas Boulevard / Sunrise Avenue and Rocklin Road / Aguilar Road intersections due to an increase in traffic demand caused by the added auxiliary lanes on EB I-80 between Douglas Boulevard and Eureka Road and on WB I-80 between Rocklin Road and SR-65. The auxiliary lanes draw more traffic onto the freeway (through these intersections) and off of parallel facilities, such as Sunrise Avenue and Sierra College Boulevard. While the auxiliary lanes are beneficial for mainline and arterial operations, select intersections would require capacity increases to accommodate the additional demand. The Rocklin Road / Aguilar Road intersection is already being planned for expansion as part of the I-80/Rocklin Road interchange upgrade project. For purposes of the I-80/SR-65 interchange analysis, preliminary design plans were used for the I-80/Rocklin Road project. Final design plans are being based on the traffic demand volumes from the I-80/SR-65 project so that acceptable traffic operations can be provided.

The No Taylor alternative would also create an impact at Rocklin Road / Granite Drive. With the removal of the Taylor Road WB on-ramp to I-80, a portion of the traffic diverts to Rocklin Road to access I-80. The additional traffic volume results in higher delay. Similar to Rocklin Road / Aguilar Road, the final design plans for the I-80/Rocklin Road interchange project are expected to accommodate these higher volumes acceptably.

The No Taylor alternative results in higher demand volumes at the Eureka Road off-ramp in the PM peak period. The analysis results shown in Table 20 indicate the Eureka Road / Taylor Road / I-80 EB Ramps would operate at LOS E under the No Taylor alternative; however the model only captures delay within the footprint of the intersection. The delay results do not account for the delay experienced by drivers in queues that extend much beyond the turn pockets on the NB approach. Exhibit 5 below shows the extent of the queue under the No Taylor alternative. For comparison, Exhibit 6 shows the traffic operations with the Full Taylor alternative.

If the model were to attribute all of this delay to the Eureka Road / Taylor Road / I-80 EB Ramps intersection, it would result in LOS F conditions. For the purposes of this report, this is considered a significant project impact. To mitigate, the off-ramp would need to be widened to two lanes.

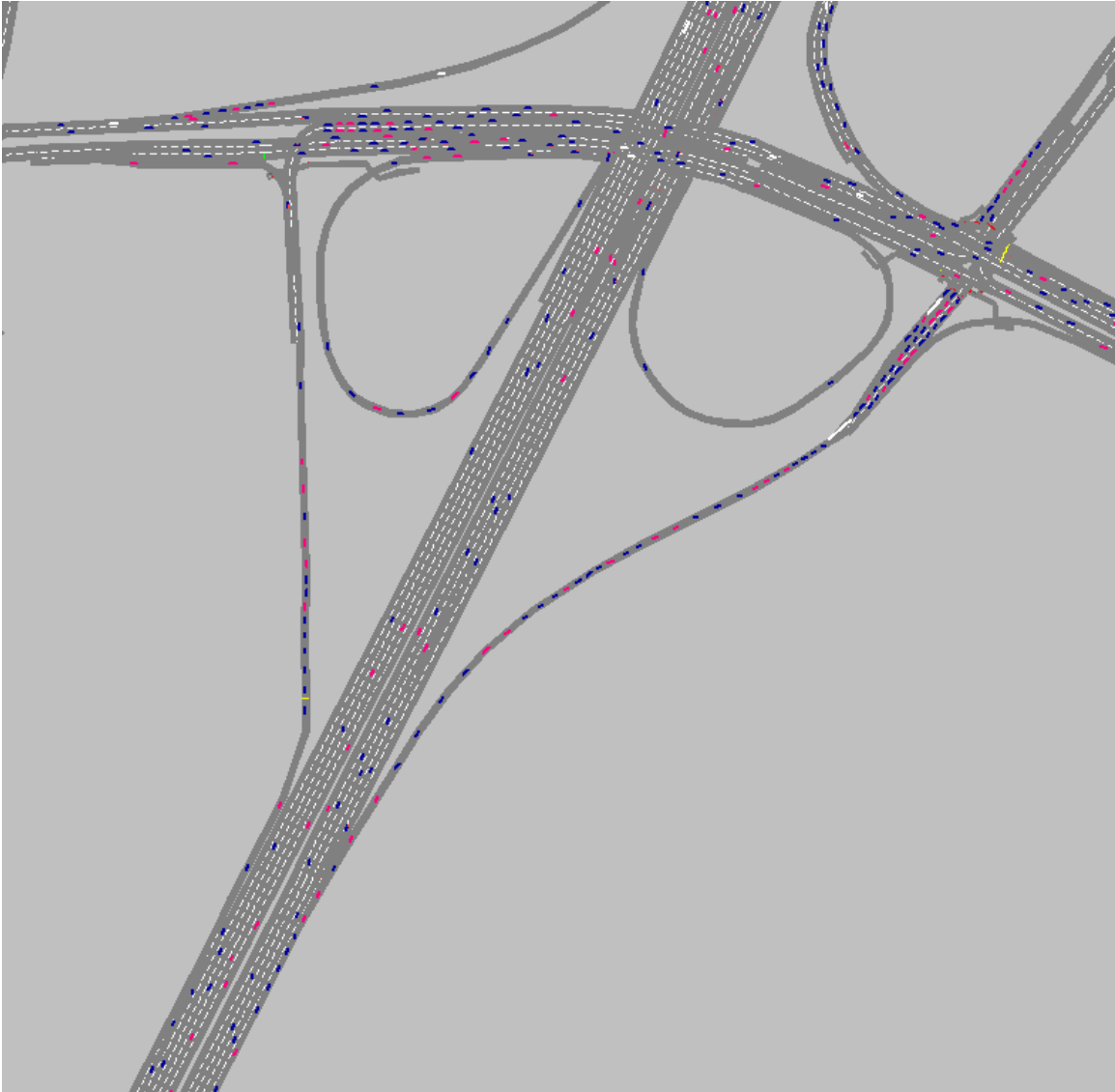


Exhibit 5: EB I-80 Off-ramp to Eureka Road – No Taylor Alternative



Exhibit 6: EB I-80 Off-ramp to Eureka Road – Full Taylor Alternative

5.2. Construction Year Conditions

Overall network performance statistics for AM and PM peak period operations are summarized for each alternative in Tables 21 and 22 below, respectively.

TABLE 21: COMPARISON OF OVERALL NETWORK PERFORMANCE BASED ON CONSTRUCTION YEAR AM PEAK PERIOD VISSIM MODEL						
Performance Measure	Existing Conditions	Construction Year Conditions				
		No Build	TSM	No Taylor	Full Taylor	
Volume Served (% of total demand)	143,450 (100 %)	163,780 (96 %)	168,490 (99 %)	167,200 (99 %)	166,810 (99 %)	
VMT	645,270	740,650	777,500	782,060	781,890	
PMT	786,260	909,000	955,670	958,490	964,490	
VHT	13,760	23,040	17,550	18,360	17,420	
VHD (% of VHT)	2,670 (19.4 %)	10,330 (44.8 %)	4,230 (24.1 %)	5,010 (27.3 %)	4,060 (23.3 %)	
Delay per Vehicle Served (min)	1.1	3.8	1.5	1.8	1.5	
PHD	3,240	12,370	5,010	5,870	4,750	
Average Travel Speed	46.9	32.1	44.3	42.6	44.9	
Average HOV Speed	48.5	34.4	46.8	46.0	48.4	
Travel Time: Blue Oaks Blvd. to Antelope Rd	SOV	9:44	17:10	9:23	11:07	11:18
	HOV	9:27	13:58	8:42	8:16	8:58
Notes: PMT = person miles of travel, PHD = person hours of delay Source: Fehr & Peers, 2013						

TABLE 22: COMPARISON OF OVERALL NETWORK PERFORMANCE BASED ON CONSTRUCTION YEAR PM PEAK PERIOD VISSIM MODEL

Performance Measure	Existing Conditions	Construction Year Conditions				
		No Build	TSM	No Taylor	Full Taylor	
Volume Served (% of total demand)	198,170 (101.1 %)	216,610 (91.3 %)	234,640 (99.2 %)	232,010 (98.6 %)	232,440 (99.9 %)	
VMT	730,101	805,450	906,070	905,910	915,240	
PMT	880,180	998,020	1,117,770	1,116,600	1,128,680	
VHT	16,850	37,230	23,500	23,240	22,960	
VHD (% of VHT)	3,950 (23.4 %)	23,020 (61.8 %)	7,550 (32.1 %)	7,380 (31.8 %)	6,940 (30.2 %)	
Delay per Vehicle Served (min)	1.2	6.4	1.9	1.9	1.8	
PHD	4,670	27,150	9,060	8,870	8,240	
Average Travel Speed	43.3	21.6	38.6	39.0	39.9	
Average HOV Speed	46.9	25.8	40.7	41.1	42.8	
Travel Time: Auburn Blvd to Blue Oaks Blvd.	SOV	9:16	35:10	7:43	6:44	6:30
	HOV	9:11	14:07	7:20	6:41	6:17
Notes: PMT = person miles of travel, PHD = person hours of delay						
Source: Fehr & Peers, 2013						

Reviewing the results in Tables 21 and 22 should consider the following information.

- The Full Taylor alternative serves the largest percentage of the peak period demand volumes. The performance metrics do not fully account for vehicles that could not enter the network during the peak periods.
- The AM and PM peak period results reveal that the Full Taylor alternative serves the most vehicles while having the lowest delay for vehicles and persons, as well as the lowest travel times for SOVs and HOVs during the PM peak hour.
- Overall, the build alternatives improve overall network performance compared to no build conditions.

Specific details about construction year freeway and arterial intersection operations are discussed in more detail in the following sections.

5.2.1. Freeway Operations

Detailed freeway operations analysis was completed for the peak hour (7:30 to 8:30 AM and 4:30 to 5:30 PM) of the four hour AM and PM peak periods. The AM and PM peak hour results for select locations are reported in Tables 23 and 24, respectively. The remaining results are available in the Technical Appendix. Figures 44 through 51 display the average speed in the mixed-flow lanes throughout the network during the peak periods for each alternative.

I-80 EB

The freeway operations results indicate the No Build alternative would result in LOS F operations on I-80 at the off-ramps to NB SR-65 and Rocklin Road during the AM peak hour. The No Taylor and Full Taylor alternatives would result in LOS F conditions at the Douglas Boulevard on-ramp. This is a project impact and is the result of higher demand volumes for the build alternatives. The TSM alternative also has a higher demand volume, but the auxiliary lane assumed between Douglas Boulevard and Eureka Road provides the capacity needed to achieve LOS C conditions. This auxiliary lane is required for the other build alternatives as mitigation.

During the PM peak hour, the No Build alternative would result in LOS F conditions from the beginning of the analysis area at Auburn Boulevard to the SR-65 off-ramp, with speeds less than 20 mph for the majority of the peak period. The TSM alternative would result in LOS F conditions for the Eureka Road to Taylor Road weave section and at the SR-65 off-ramp. However, Figure 45 indicates that most of the delay for the TSM alternative occurs after the peak hour. The bottleneck begins at the Taylor Road off-ramp and extends to Auburn Boulevard.

The No Taylor and Full Taylor alternatives offer significant decreases in delay on EB I-80 compared to the other alternatives. The No Taylor alternative would result in LOS F conditions between Auburn Boulevard and the Douglas Boulevard WB off-ramp, but it would still be an improvement over No Build conditions. The Full Taylor alternative would result in acceptable operations at all study locations on EB I-80 during the PM peak period. The Taylor Road interchange provides additional access points to I-80, which relieves congestion at the adjacent interchanges. None of the build alternatives result in impacts on I-80 EB in the PM peak hour.

TABLE 23: SELECTED FREEWAY OPERATIONS RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS						
Freeway	Location	Type¹	No Build	TSM	No Taylor	Full Taylor
EB I-80	Douglas Blvd On-ramp	Merge	D / 28	C / 24	<u>F / 49</u>	<u>F / 50</u>
	Eureka Rd Off-ramp	Diverge	D / 30		D / 33	E / 36
	Eureka Rd to SR-65	Weave	<u>F / 66¹</u>	D / 32 ¹	C / 20	B / 19
	Taylor Rd Off-ramp	Diverge			-	B / 17
	SR-65 On-ramp	Merge	B / 20 ¹	D / 32 ¹	C / 21	B / 19
WB I-80	SR-65 Off-ramp	Diverge	<u>F / 51</u>	C / 22	C / 22	C / 21
	Taylor Rd Off-ramp	Diverge	-	-	-	C / 24
	Taylor Rd On-ramp	Merge	<u>F / 56</u>	D / 34	-	C / 22
	SR-65 to Atlantic St	Weave	<u>F / 96¹</u>	E / 38 ¹	<u>F / 62</u>	C / 24
	Atlantic St EB Off-ramp	Diverge	<u>F / 93</u>	<u>F / 49</u>	<u>F / 88</u>	<u>F / 46</u>
	Atlantic St On-ramp	Merge	<u>F / 107</u>	C / 27	<u>F / 55</u>	<u>F / 52</u>
	Douglas Blvd Off-ramp	Diverge	<u>F / 46</u>		<u>F / 72</u>	<u>F / 71</u>
	Douglas Blvd WB On-ramp	Merge	<u>F / 114</u>	E / 42	<u>F / 94</u>	<u>F / 107</u>
	Douglas Blvd EB On-ramp	Merge	<u>F / 71</u>	<u>F / 59</u>	<u>F / 61</u>	<u>F / 64</u>
	Douglas Blvd to Riverside Ave	Basic	D / 35	D / 32	E / 35	E / 36
	Riverside Ave Off-ramp	Diverge	D / 32	D / 32	D / 34	E / 35
	Truck Scales to Elkhorn Blvd	Basic	E / 41	<u>F / 57</u>	<u>F / 87</u>	<u>F / 77</u>
	Elkhorn Blvd WB On-ramp	Merge	<u>F / 93</u>	<u>F / 96</u>	<u>F / 76</u>	<u>F / 68</u>
	Elkhorn Blvd EB On-ramp	Merge	<u>F / 82</u>	<u>F / 82</u>	<u>F / 64</u>	<u>F / 77</u>
NB SR-65	I-80 to Stanford Ranch Rd	Weave	<u>F / 87¹</u>	D / 30	C / 22	C / 22
	Stanford Ranch Rd On-ramp	Merge	<u>F / 63</u>	D / 33 ¹	E / 39	E / 42

TABLE 23: SELECTED FREEWAY OPERATIONS RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS						
Freeway	Location	Type¹	No Build	TSM	No Taylor	Full Taylor
SB SR-65	Lincoln Blvd to Twelve Bridges Dr	Weave	<u>F / 153</u>	C / 24	C / 26	C / 25
	Twelve Bridges Dr On-ramp	Merge	<u>F / 164</u>	E / 41	<u>F / 50</u>	<u>F / 48</u>
	Sunset Blvd WB On-ramp	Merge	<u>F / 139</u>	D / 32	<u>F / 83</u>	<u>F / 86</u>
	Sunset Blvd EB On-ramp	Merge	<u>F / 126</u>	E / 42	<u>F / 77</u>	<u>F / 76</u>
	Blue Oaks Blvd Off-ramp	Diverge	<u>F / 139</u>	D / 32	<u>F / 51</u>	<u>F / 77</u>
	Blue Oaks Blvd WB On-ramp	Merge	<u>F / 111</u>	D / 30	<u>F / 63</u>	<u>F / 83</u>
	Blue Oaks Blvd to Pleasant Grove Blvd	Weave	<u>F / 96</u>	D / 29	E / 44	<u>F / 54</u>
	Pleasant Grove Blvd WB On-ramp	Merge	<u>F / 79</u>	D / 28	D / 30	E / 39
	Pleasant Grove Blvd EB On-ramp	Merge	<u>F / 58</u>	E / 35	D / 29	D / 32
	Galleria Blvd Off-ramp	Diverge	D / 34	D / 33	C / 26	C / 26
Galleria Blvd to I-80	Weave	C / 26	C / 26	C / 24	C / 23	
<p>Note: Bold and underline font indicate LOS F conditions. Shaded cells indicate a project impact. The level of service and average density for the study segment are reported.</p> <p>¹The facility type reported is for the Full Taylor and No Taylor alternatives. For locations where more than one segments exist, the highest density and LOS result is reported. The other results are contained in the Technical Appendix.</p> <p>Source: Fehr & Peers, 2013</p>						

TABLE 24: SELECTED FREEWAY OPERATIONS RESULTS – CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS						
Freeway	Location	Type ¹	No Build	TSM	No Taylor	Full Taylor
EB I-80	Auburn Blvd to Douglas Blvd	Basic	F / 142	D / 33	F / 47	E / 44
	Douglas Blvd EB Off-ramp	Diverge	F / 103	C / 24	F / 49	D / 34
	Douglas Blvd WB Off-ramp	Diverge	F / 158	C / 23	F / 77	E / 42
	Douglas Blvd On-ramp	Merge	F / 165	D / 30	E / 45	D / 34
	Eureka Rd Off-ramp	Diverge	F / 131		E / 42	D / 34
	Eureka Rd EB On-ramp	Merge	F / 147	D / 34	D / 33	D / 31
	Eureka Rd to SR-65	Weave	F / 135¹	F / 51¹	C / 24	C / 23
	Taylor Rd Off-ramp	Diverge			-	C / 21
	SR-65 On-ramp	Merge	B / 19 ¹	C / 24 ¹	B / 19	B / 18
WB I-80	Rocklin Rd On-ramp	Merge	F / 153	B / 20	C / 24	C / 23
	Rocklin Rd to SR-65	Basic	F / 128¹	C / 23 ¹	C / 24 ¹	C / 24 ¹
	SR-65 Off-ramp	Diverge	F / 140	C / 23	C / 21	B / 20
	Taylor Rd On-ramp	Merge	C / 25	D / 29	-	B / 16
	SR-65 to Atlantic St	Weave	C / 27 ¹	D / 31 ¹	C / 21	C / 22
	Atlantic St On-ramp	Merge	C / 20	C / 22	F / 57	F / 50
	Douglas Blvd Off-ramp	Diverge	B / 15		F / 94	F / 96
	Douglas Blvd WB On-ramp	Merge	D / 29	D / 32	F / 99	F / 101
	Douglas Blvd EB On-ramp	Merge	D / 33	F / 52	F / 64	F / 64
NB SR-65	I-80 to Stanford Ranch Rd	Weave	F / 90¹	D / 34	C / 26	C / 25
	Stanford Ranch Rd On-ramp	Merge	F / 83	D / 34	F / 46	E / 44
	Blue Oaks Blvd On-ramp	Merge	C / 22	D / 29	F / 48	E / 42

TABLE 24: SELECTED FREEWAY OPERATIONS RESULTS – CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS						
Freeway	Location	Type¹	No Build	TSM	No Taylor	Full Taylor
SB SR-65	Sunset Blvd WB On-ramp	Merge	<u>F / 134</u>	C / 23	C / 25	C / 25
	Pleasant Grove Blvd EB On-ramp	Merge	<u>F / 60</u>	C / 28	C / 27	C / 27
	Galleria Blvd to I-80	Weave	D / 29 ¹	C / 24	C / 23	C / 23
<p>Note: Bold and underline font indicate LOS F conditions. Shaded cells indicate a project impact. The level of service and average density for the study segment are reported.</p> <p>¹ The facility type reported is for the Full Taylor and No Taylor alternatives. For locations where more than one segments exist, the highest density and LOS result is reported. The other results are contained in the Technical Appendix.</p> <p>Source: Fehr & Peers, 2013</p>						

I-80 WB

During the AM peak period, traffic congestion would occur from SR-65 to Douglas Boulevard and from Antelope Road to Elkhorn Boulevard. Figure 46 indicates the build alternatives generally have higher levels of congestion between Antelope Road and Elkhorn Boulevard, because the increase in capacity at the I-80/SR-65 interchange allows more vehicles to arrive at those locations during the peak hour.

The TSM alternative results in impacts at the Douglas Boulevard EB on-ramp and all segments from the Riverside Avenue to Antelope Road basic segment to the end of the network at the Elkhorn Boulevard EB on-ramp (excluding the off-ramp to Elkhorn Boulevard). The No Taylor alternative creates impacts at the weave section between SR-65 and Atlantic Street, Atlantic Street to Douglas Boulevard, and from Antelope Road to Elkhorn Boulevard. The Full Taylor alternative creates impacts from Atlantic Street to Douglas Boulevard and from the Truck Scales to Elkhorn Boulevard. To mitigate these impacts, the planned auxiliary lane between Douglas Boulevard and Riverside Avenue should be constructed, along with an additional mixed-flow lane between Antelope Road and the end of the network at Elkhorn Boulevard.

The congestion shown at the Douglas Boulevard slip on-ramp in both the AM and PM peak period speed contour maps for all alternatives, except the TSM alternative, indicates the need for an auxiliary lane between Douglas Boulevard and Riverside Avenue. This improvement is part of the TSM alternative.

During the PM peak hour, LOS F conditions would also occur between the Rocklin Road on-ramp and the SR-65 off-ramp under the No Build alternative due to traffic queued from NB SR-65.

SR-65 NB

During the AM and PM peak hours, the No Build alternative would result in LOS F conditions at the I-80 WB on-ramp and the Stanford Ranch Road on-ramp. The No Taylor alternative would have LOS F conditions at the Stanford Ranch Road on-ramp and the Blue Oaks Boulevard on-ramp in the PM peak hour. The latter location would be a project impact that could be mitigated through more aggressive ramp metering or extending the acceleration lane. All other study facilities on NB SR-65 are projected to operate acceptably.

SR-65 SB

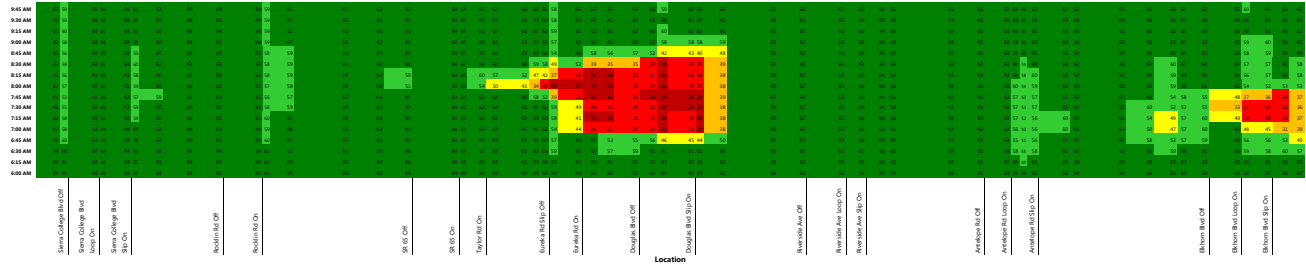
During the AM peak hour, the No Build alternative would result in LOS F operations between Ferrari Ranch Road and Pleasant Grove Boulevard. Figure 50 indicates the travel speed would be less than 20 mph for most of the AM peak period.

The three build alternatives offer significantly less delay and higher travel speeds. The No Taylor and Full Taylor would also operate at LOS F at the Twelve Bridges Drive on-ramp and from Sunset Boulevard to Pleasant Grove Boulevard; however the average densities are less than the No Build alternative. Table 23 indicates the TSM alternative would result in acceptable operations at all study facilities on SB SR-65 during the AM peak hour. The auxiliary lane between Pleasant Grove Boulevard and Galleria Boulevard in the TSM alternative relieves the bottleneck that occurs under the other three alternatives.

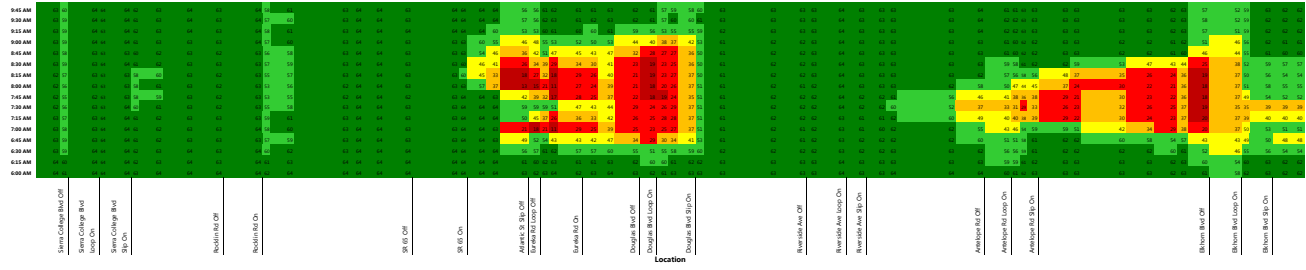
During the PM peak hour, the No Build alternative would have significant delays from Sunset Boulevard to Pleasant Grove Boulevard. The build alternatives would result in acceptable operations at all study facilities on SB SR-65 during the PM peak hour. There are no project impacts under construction year on SR-65 SB.

FIGURE 46 - I-80 WESTBOUND CONSTRUCTION YEAR AM PEAK PERIOD SPEED CONTOUR MAP

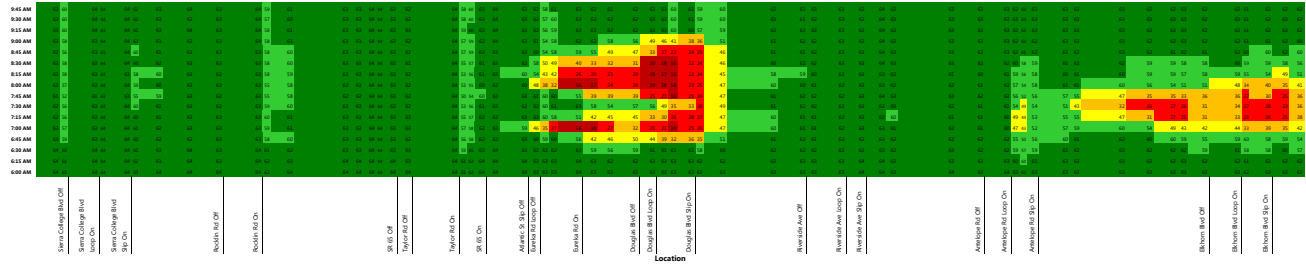
No Build Alternative



No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative

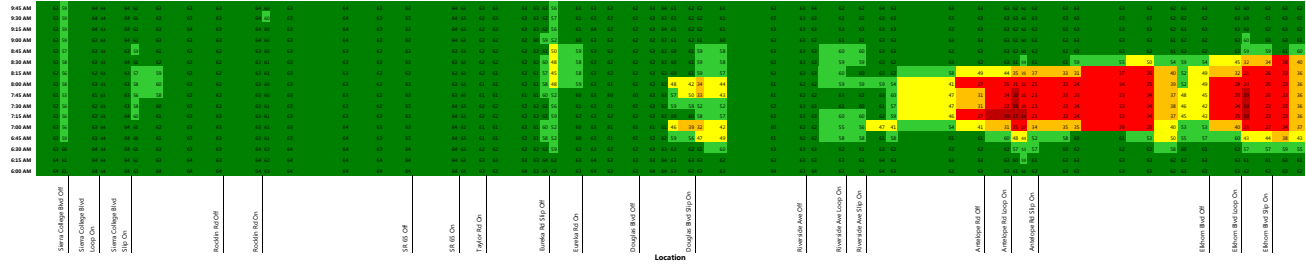
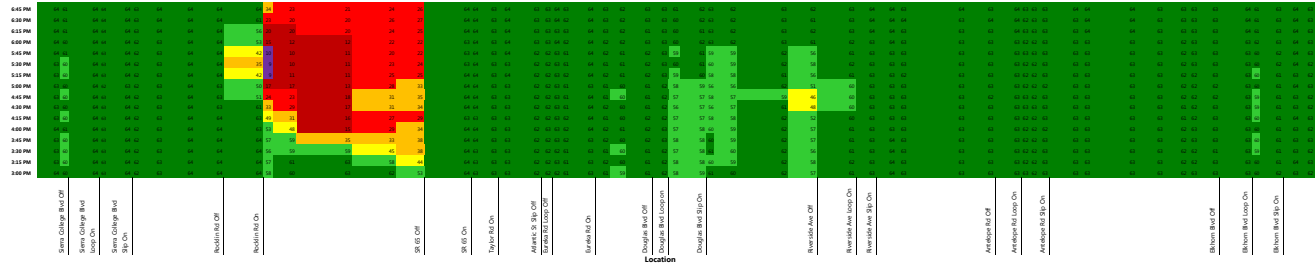
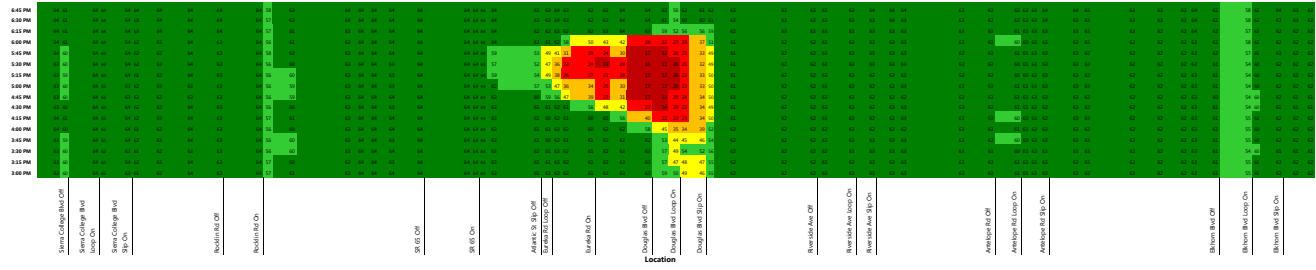


FIGURE 47 - I-80 WESTBOUND CONSTRUCTION YEAR PM PEAK PERIOD SPEED CONTOUR MAP

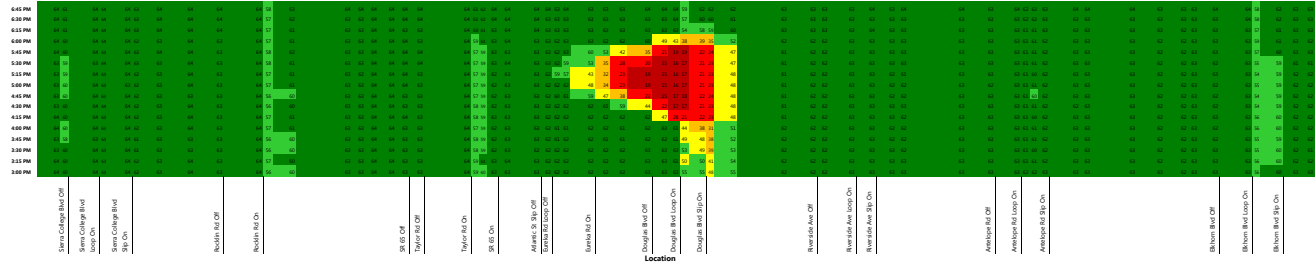
No Build Alternative



No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative

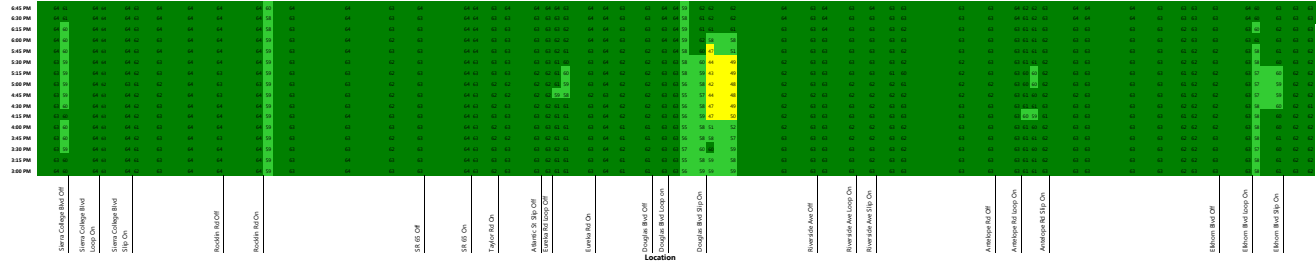
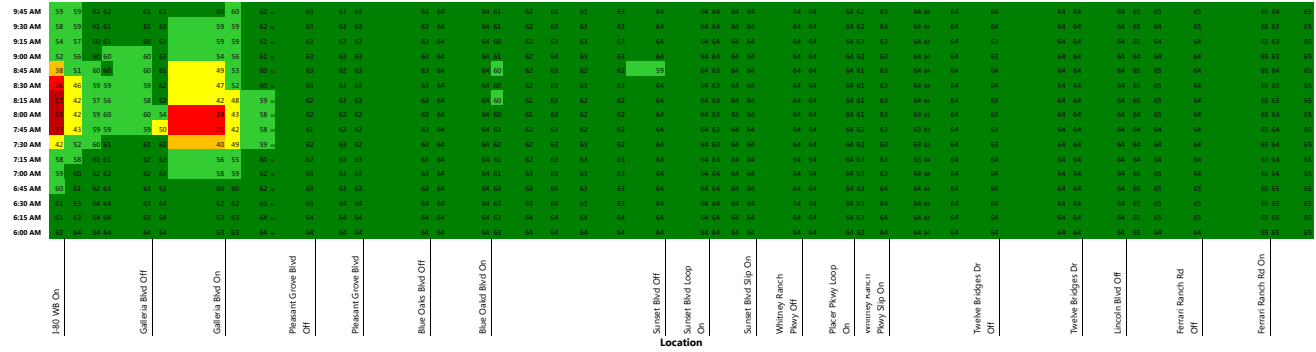
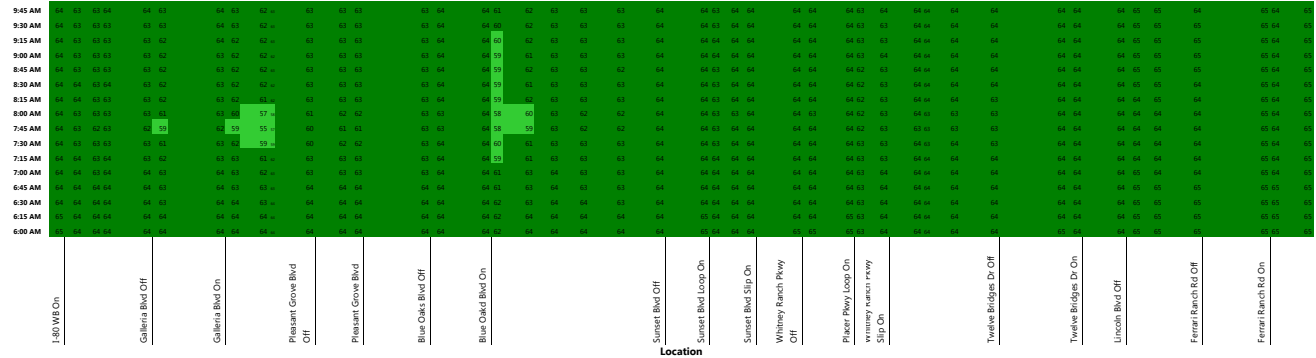


FIGURE 48 - SR 65 NORTHBOUND CONSTRUCTION YEAR AM PEAK PERIOD SPEED CONTOUR MAP

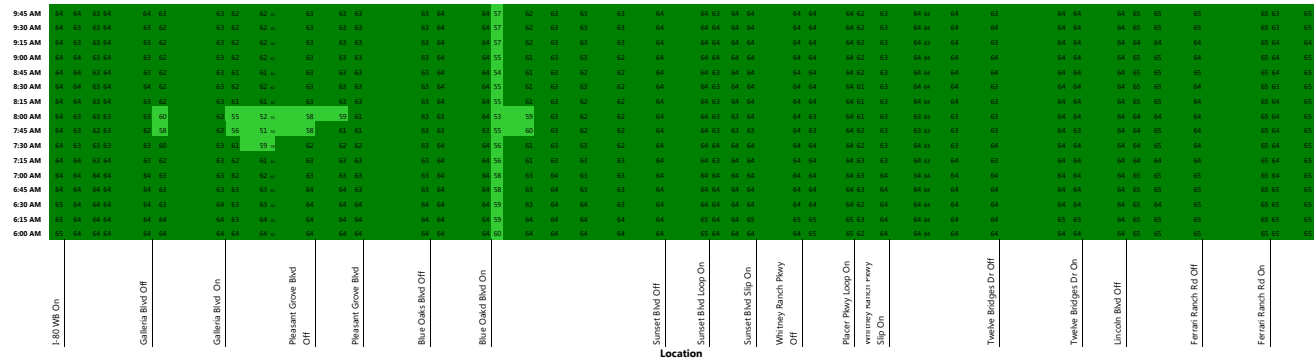
No Build Alternative



No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative

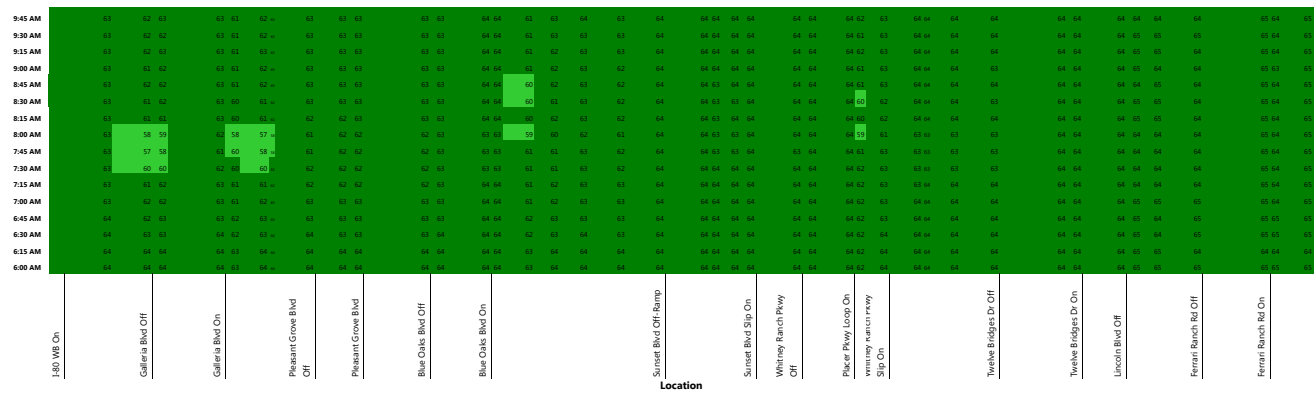
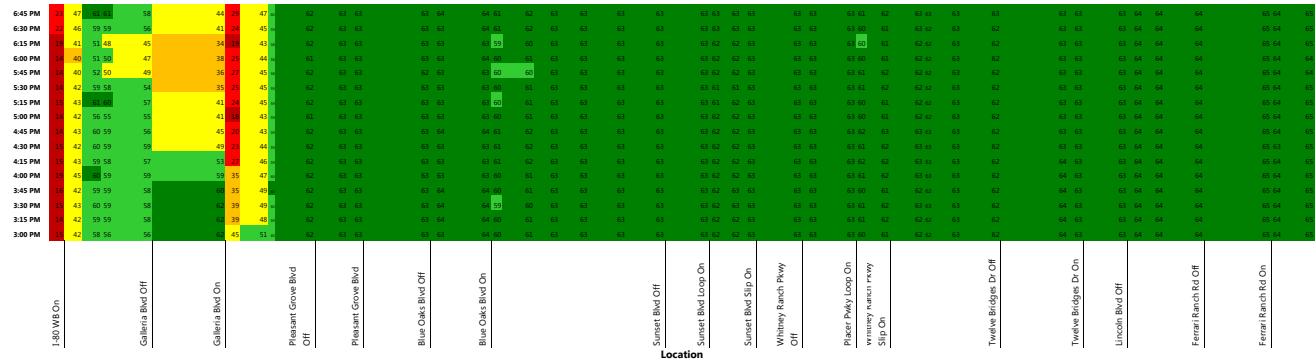
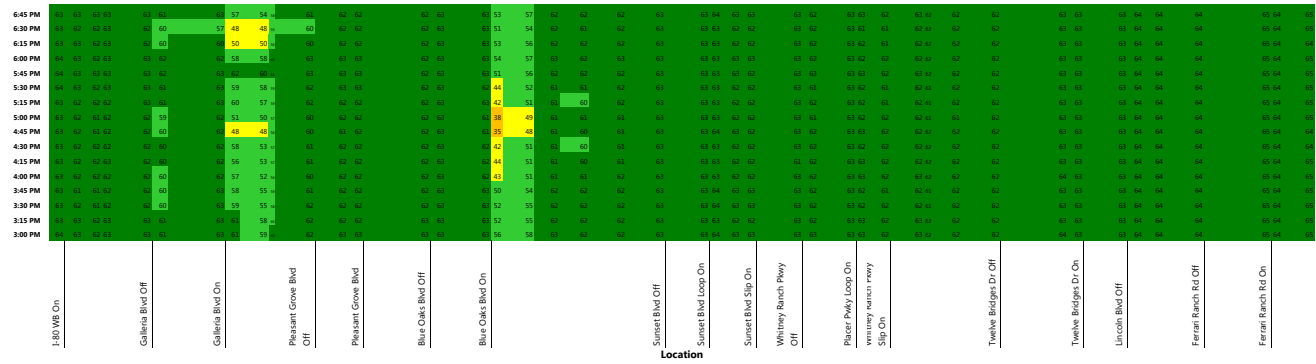


FIGURE 49 - SR 65 NORTHBOUND CONSTRUCTION YEAR PM PEAK PERIOD SPEED CONTOUR MAP

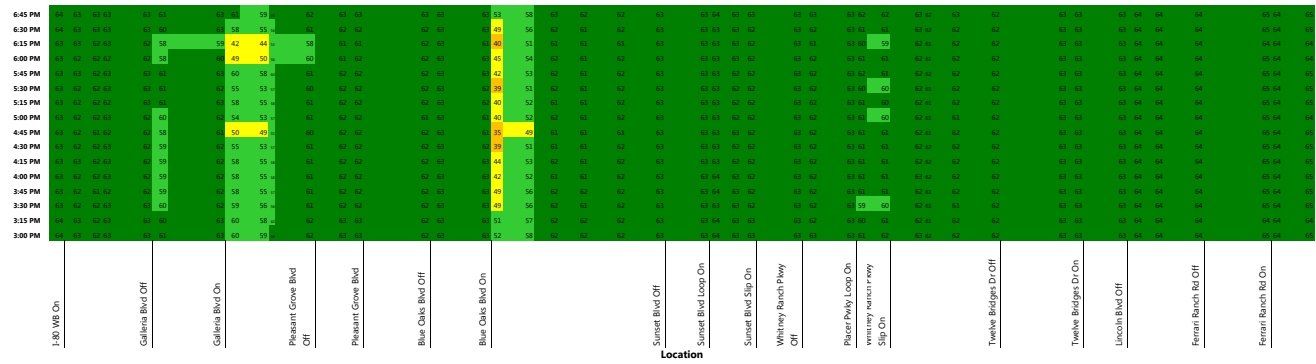
No Build Alternative



No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative

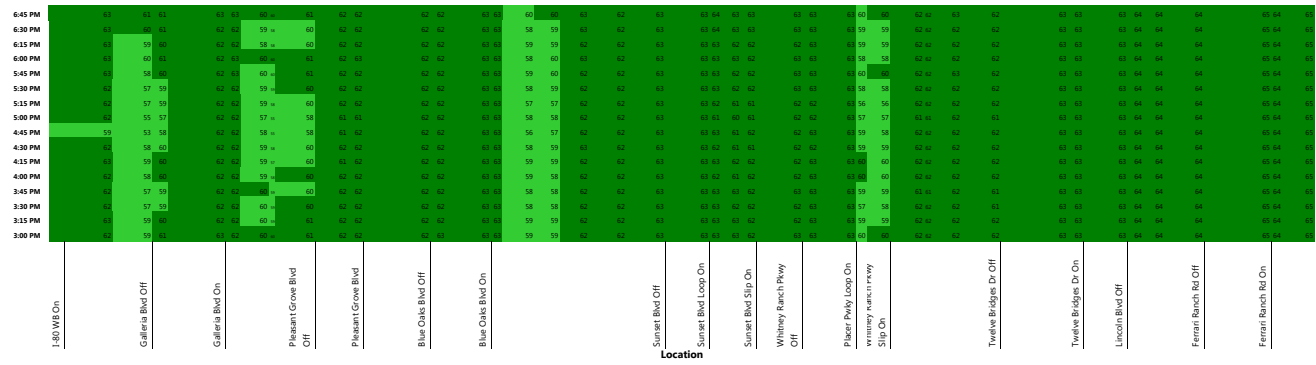
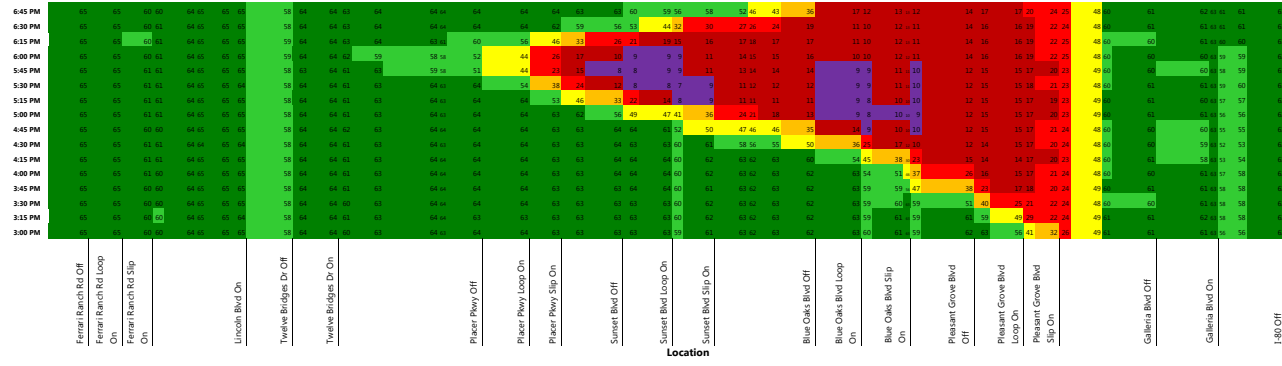
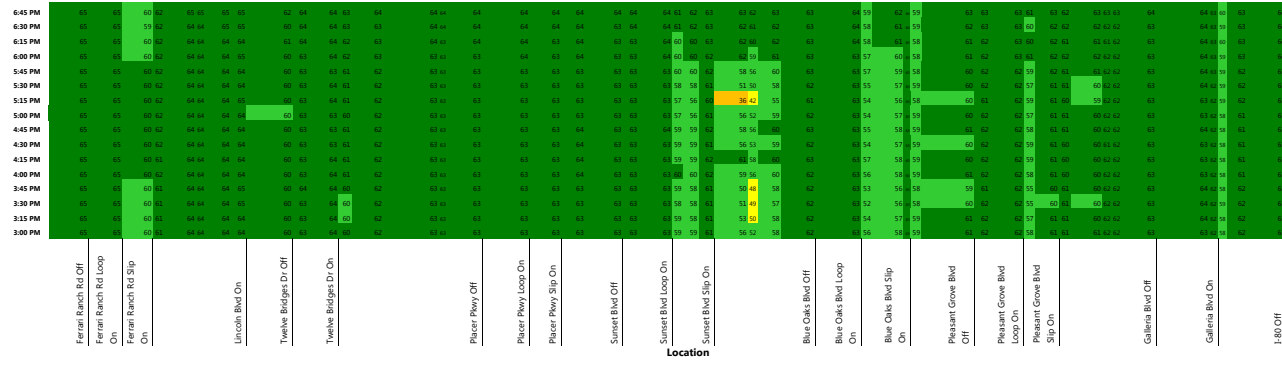


FIGURE 51 - SR 65 SOUTHBOUND CONSTRUCTION YEAR PM PEAK PERIOD SPEED CONTOUR MAP

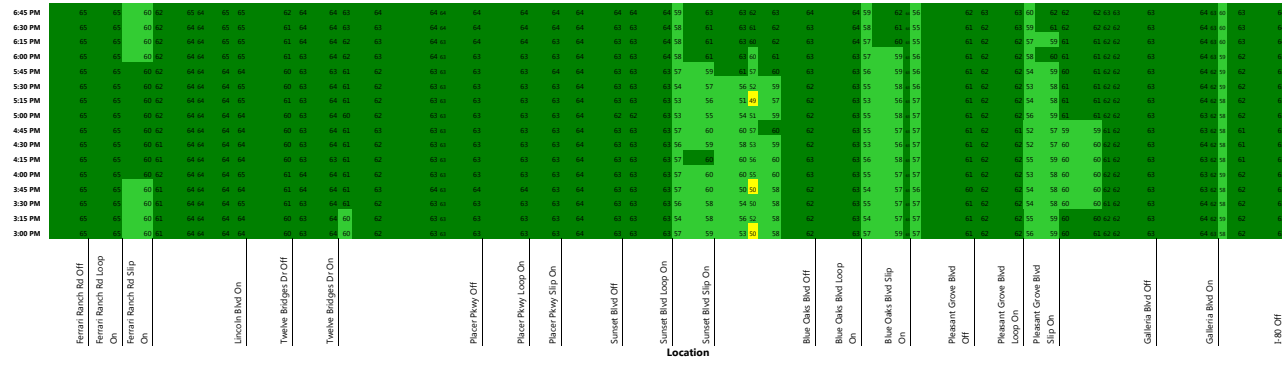
No Build Alternative



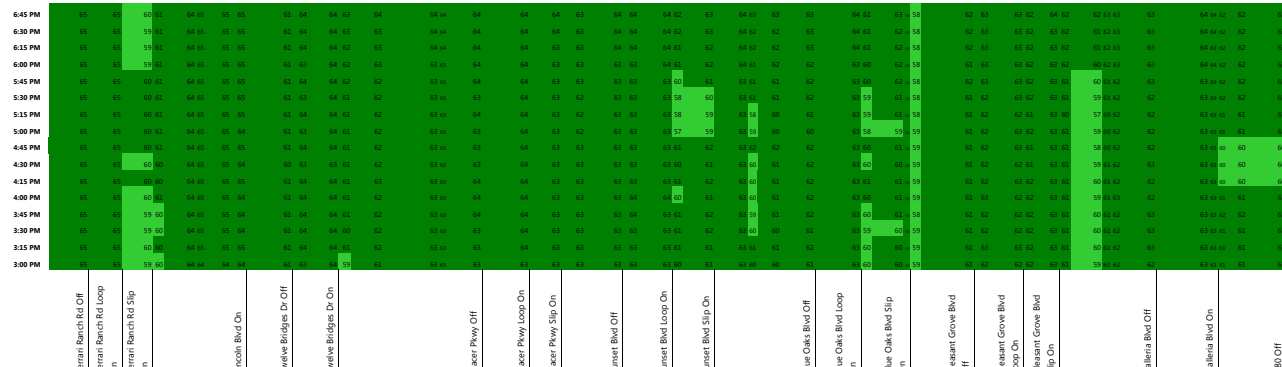
No Taylor Alternative



Full Taylor Diamond Alternative



TSM Alternative



5.2.2. Arterial Intersection Operations

Tables 25 and 26 show the LOS and average delay at key study intersections under design year conditions during the AM and PM peak hours, respectively. Based on the evaluation criteria for this study, the TSM alternative does not result in any intersection impacts, the No Taylor alternative results in four impacts, and the Full Taylor alternative results in one impact. See the Technical Appendix for all study intersection results.

TABLE 25: SELECTED INTERSECTION OPERATIONS RESULTS – CONSTRUCTION YEAR AM PEAK HOUR CONDITIONS				
Intersection	No Build	TSM	No Taylor	Full Taylor
2. Twelve Bridges Dr / SR-65 SB Ramps	<u>F / 136</u>	C / 24	A / 9	C / 24
3. Twelve Bridges Dr / SR-65 NB Ramps	<u>F / 89</u>	A / 9	A / 9	B / 20
6. Blue Oaks Blvd / Washington Blvd	<u>F / 187</u>	<u>F / 87</u>	D / 38	D / 41
14. Roseville Pkwy / Galleria Blvd	D / 36	D / 36	E / 67	D / 41
16. Roseville Pkwy / Taylor Rd	<u>F / 130</u>	<u>E / 66</u>	<u>E / 56</u>	<u>E / 56</u>
17. Roseville Pkwy / Sunrise Ave	C / 24	C / 28	E / 69	E / 74
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	C / 22	C / 22	D / 38	C / 25
21. Eureka Rd / Sunrise Ave	C / 25	C / 25	<u>D / 36</u>	C / 33
24. Douglas Blvd / I-80 WB Ramps	E / 59	C / 25	C / 22	C / 34
25. Douglas Blvd / I-80 EB Ramps	D / 47	A / 6	B / 11	A / 9
26. Douglas Blvd / Sunrise Ave	C / 30	C / 26	D / 36	D / 38
30. Rocklin Rd / I-80 WB Ramps	D / 37	B / 14	B / 18	B / 18
31. Rocklin Rd / I-80 EB Ramps	<u>E / 70</u>	C / 30	C / 25	C / 21
33. Lincoln Blvd / SR-65 NB Off-ramp	<u>F / 97</u>	A / 5	A / 2	A / 2
34. Lincoln Blvd / SR-65 SB On-ramp	<u>F / 229</u>	B / 13	C / 23	C / 24
<p>Note: Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported.</p> <p>Source: Fehr & Peers, 2013</p>				

TABLE 26: SELECTED INTERSECTION OPERATIONS RESULTS – CONSTRUCTION YEAR PM PEAK HOUR CONDITIONS				
Intersection	No Build	TSM	No Taylor	Full Taylor
1. Lincoln Blvd / Sterling Pkwy	<u>F / 120</u>	B / 14	B / 13	B / 13
4. Sunset Blvd / SR-65 SB Ramps	E / 59	A / 6	B / 11	A / 9
5. Sunset Blvd / SR-65 NB Ramps	<u>F / 113</u>	B / 11	B / 12	B / 12
6. Blue Oaks Blvd / Washington Blvd	<u>F / 188</u>	D / 46	E / 68	E / 77
7. Blue Oaks Blvd / SR-65 NB Ramps	C / 26	B / 13	<u>F / 105</u>	E / 56
10. Stanford Ranch Rd / Five Star Blvd	<u>F / 107</u>	<u>F / 95</u>	<u>D / 36</u>	<u>D / 43</u>
14. Galleria Blvd / Roseville Pkwy	<u>F / 227</u>	E / 56	E / 61	D / 55
15. Roseville Pkwy / Creekside Ridge Dr	<u>E / 61</u>	<u>D / 50</u>	B / 16	B / 18
16. Roseville Pkwy / Taylor Rd	D / 37	D / 46	D / 51	D / 42
17. Roseville Pkwy / Sunrise Ave	C / 32	D / 40	<u>F / 134</u>	E / 62
19. Atlantic St / I-80 WB Ramps	D / 36	C / 25	B / 12	B / 15
20. Eureka Rd / Taylor Rd / I-80 EB Ramps	D / 42	E / 73	D / 53	D / 52
21. Eureka Rd / Sunrise Ave	<u>D / 49</u>	<u>D / 47</u>	<u>E / 71</u>	<u>E / 63</u>
23. Douglas Blvd / Harding Blvd	<u>F / 123</u>	<u>F / 113</u>	D / 37	D / 51
24. Douglas Blvd / I-80 WB Ramps	D / 42	B / 13	D / 49	C / 35
25. Douglas Blvd / I-80 EB Ramps	E / 64	A / 7	D / 41	C / 34
26. Douglas Blvd / Sunrise Ave	<u>F / 203</u>	<u>F / 169</u>	<u>E / 74</u>	<u>F / 186</u>
29. Rocklin Rd / Granite Dr	<u>F / 170</u>	<u>F / 105</u>	<u>F / 141</u>	<u>F / 137</u>
30. Rocklin Rd / I-80 WB Ramps	<u>F / 82</u>	C / 22	C / 24	C / 28
31. Rocklin Rd / I-80 EB Ramps	<u>F / 115</u>	C / 28	D / 48	C / 25
32. Rocklin Rd / Aguilar Rd	<u>F / 229</u>	C / 25	<u>F / 142</u>	B / 16
33. Lincoln Blvd / SR-65 NB Off-ramp	<u>F / 134</u>	A / 8	A / 2	A / 2
34. Lincoln Blvd / SR-65 SB On-ramp	<u>F / 138</u>	B / 15	C / 29	C / 23
<p>Note: Bold and underline font indicate unacceptable operations. Shaded cells indicate a project impact. The LOS and average delay in seconds per vehicle are reported.</p> <p>Source: Fehr & Peers, 2013</p>				

The following intersections would operate at an unacceptable LOS based on the evaluation criteria under all project alternatives:

- Roseville Parkway / Taylor Road
- Stanford Ranch Road / Five Star Boulevard
- Eureka Road / Sunrise Avenue
- Douglas Boulevard / Sunrise Avenue
- Rocklin Road / Granite Drive

The analysis results indicate these intersections will need significant capacity enhancements with and without the proposed project to operate within the established LOS thresholds for these locations. Before any improvements are proposed though, the interaction between these locations and the rest of the network should be considered. In some cases, the operation of these intersections meters traffic accessing the freeway or contributes to queuing that may extend back onto the freeway. In other locations, improvements to the freeway system, such as an auxiliary lane, may reduce demand and/or queuing that would improve intersection operations.

The TSM alternative would not result in any intersection impacts under construction year conditions. The No Taylor alternative would have impacts at Blue Oaks Boulevard / SR-65 NB Ramps, Roseville Parkway / Sunrise Avenue, and Eureka Road / Sunrise Avenue. The excessive delay at Blue Oaks Boulevard / SR-65 NB ramps is primarily due to LOS F conditions and spillback from the adjacent Blue Oaks Boulevard / Washington Boulevard intersection. As discussed above for the design year, the Blue Oaks Boulevard interchange will require substantial capacity enhancements to accommodate the future traffic demand.

Roseville Parkway / Sunrise Avenue and Eureka Road / Sunrise Avenue experience higher traffic demand under the No Taylor alternative because motorists who are traveling to/from Taylor Road divert to the adjacent interchanges at Eureka Road and Douglas Boulevard to access the freeway. During the PM peak period, traffic under the No Build alternative is constrained from reaching these intersections due to freeway congestion. With the improved freeway operations under the build alternatives, the volume served during the peak hour increases, which leads to higher delays. Additional lanes would be needed at the intersections to accommodate the increase in traffic volume.

Chapter 6. Findings and Conclusions

6.1. Summary of Impacts

The project impacts are summarized below by alternative.

TSM Alternative

- Design Year AM Peak Hour
 - WB I-80: Atlantic Street EB off-ramp, Truck Scales on-ramp, and Elkhorn Boulevard EB on-ramp
 - SB SR-65: Ferrari Ranch Road on-ramp to Twelve Bridges Drive on-ramp and Sunset Boulevard WB on-ramp
 - Intersections: Blue Oaks Boulevard / SR-65 NB Ramps
- Design Year PM Peak Hour
 - EB I-80: Auburn Boulevard on-ramp to Douglas Boulevard WB off-ramp, after the Eureka Road off-ramp to Taylor Road
 - Intersections: Douglas Boulevard / Sunrise Avenue and Rocklin Road / Aguilar Road
- Construction Year AM Peak Hour
 - WB I-80: Riverside Avenue to Elkhorn Boulevard and after the Elkhorn Boulevard off-ramp to Elkhorn Boulevard WB on-ramp
- Construction Year PM Peak Hour
 - WB I-80: Douglas Boulevard EB on-ramp

No Taylor Alternative

- Design Year AM Peak Hour
 - WB I-80: Truck Scales on-ramp to Elkhorn Boulevard
 - NB SR-65: Stanford Ranch Road on-ramp

- SB SR-65: Ferrari Ranch Road to Twelve Bridges Drive on-ramp, Sunset Boulevard WB on-ramp, Blue Oaks Boulevard WB on-ramp, and from Pleasant Grove Boulevard off-ramp to on-ramp
- Intersections: Rocklin Road / Granite Drive
- Design Year PM Peak Hour
 - EB I-80: Douglas Boulevard EB off-ramp
 - NB SR-65: after the Stanford Ranch Road off-ramp to Stanford Ranch Road on-ramp
 - Intersections: Blue Oaks Boulevard / SR-65 NB Ramps
- Construction Year AM Peak Hour
 - EB I-80: Douglas Boulevard on-ramp
 - WB I-80: SR-65 to Atlantic Street, from the lane drop after the Atlantic Street off-ramp to Atlantic Street on-ramp, Douglas Boulevard off-ramp to before the Douglas Boulevard WB on-ramp, and after the Antelope Road off-ramp to before the Elkhorn Boulevard WB on-ramp
 - Intersections: Eureka Road / Sunrise Avenue
- Construction Year PM Peak Hour
 - WB I-80: from the lane drop after the Atlantic Street off-ramp to Douglas Boulevard EB on-ramp
 - NB SR-65: Blue Oaks Boulevard on-ramp
 - Intersections: Blue Oaks Boulevard / SR-65 NB Ramps, Roseville Parkway / Sunrise Avenue, Eureka Road / Sunrise Avenue

Full Taylor Alternative

- Design Year AM Peak Hour
 - WB I-80: Elkhorn Boulevard EB on-ramp

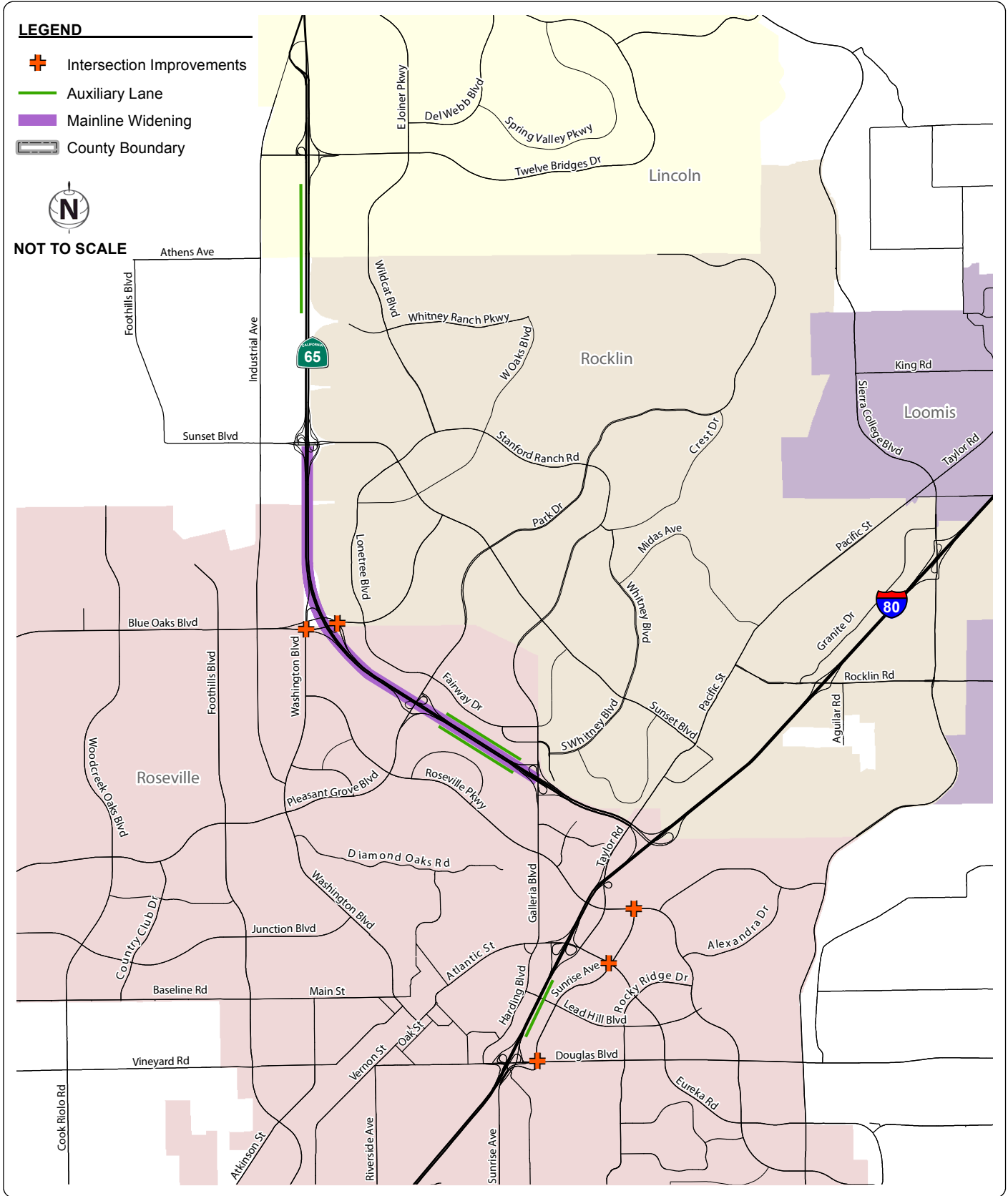
- SB SR-65: Ferrari Ranch Road EB on-ramp to Twelve Bridges Drive on-ramp, after the Sunset Boulevard off-ramp to Sunset Boulevard WB on-ramp, and from Pleasant Grove Boulevard off-ramp to on-ramp
- Design Year PM Peak Hour
 - NB SR-65: after the Stanford Ranch Road off-ramp to Pleasant Grove Boulevard and from after the Pleasant Grove Boulevard off-ramp to Blue Oaks Boulevard
 - Intersections: Blue Oaks Boulevard / SR-65 NB Ramps
- Construction Year AM Peak Hour
 - EB I-80: Douglas Boulevard on-ramp
 - WB I-80: Douglas Boulevard off-ramp to before the Douglas Boulevard WB on-ramp, and after the Truck Scales off-ramp to Elkhorn Boulevard off-ramp
- Construction Year PM Peak Hour
 - WB I-80: Atlantic Street on-ramp to Douglas Boulevard EB on-ramp
 - NB SR-65: Blue Oaks Boulevard on-ramp
 - Intersections: Eureka Road / Sunrise Avenue

6.2. Recommended Project Refinements

The traffic operations results show that even with implementation of the project, bottlenecks will exist on both I-80 and SR-65 under Design Year conditions. While this means that peak hour LOS F conditions would remain, this finding is consistent with the concept LOS for the I-80 and SR-65 corridors. Additionally, peak hour freeway congestion will provide incentives to commuters to carpool, ride transit, and/or adjust trip times such that the transportation system is used more efficiently.

The TSM alternative analysis results demonstrate that auxiliary lanes in key locations can significantly reduce traffic congestion in the peak periods. Auxiliary lanes in the following locations would reduce delays and improve LOS on I-80 and SR-65 under Design Year conditions for all alternatives:

- I-80 EB between Douglas Boulevard and Eureka Road
- SR-65 NB between Galleria Boulevard and Pleasant Grove Boulevard



- SR-65 SB between Pleasant Grove Boulevard and Galleria Boulevard

The operations results also indicate the need for an auxiliary lane at the following location:

- SR-65 SB between Twelve Bridges Drive and Placer Parkway

The demand volumes on SR-65 establish the need for capacity improvements beyond the planned HOV lanes. The traffic operations results indicate a third mixed-flow lane may be necessary to accommodate the projected growth in Roseville, Rocklin, and Lincoln. The benefit of an additional mixed-flow lane should be carefully weighed against the desired HOV lane operations. The additional mixed-flow lane would decrease congestion in the SR-65 corridor, which would in turn decrease the incentive to carpool.

In addition to mainline improvements, the arterial roadway network will require significant capacity enhancements with and without the proposed project. The study intersections in the following corridors are projected to operate unacceptably under Design Year conditions for all project alternatives.

- Blue Oaks Boulevard
- Sunrise Avenue
- Rocklin Road

The Blue Oaks Boulevard / Washington Boulevard intersection operates at LOS F and causes traffic to spillback into multiple adjacent intersections (such as the Blue Oaks Boulevard / SR-65 NB Ramps intersection) and even onto the SR-65 mainline. The existing interchange does not have sufficient capacity to serve projected growth and is likely to become a serious bottleneck affecting both SR-65 and local arterial operations. Capacity improvement for this interchange and connecting arterials should be studied through the Caltrans project development process to determine the optimal future design that can accommodate the established LOS expectations of Rocklin, Roseville, and Caltrans.

The traffic operations results also indicate that the Sunrise Avenue corridor will experience high levels of delay by 2040 regardless of which project alternative is chosen. All three of the study intersections along the corridor will operate at LOS F: Douglas Boulevard, Eureka Road, and Roseville Parkway. The results demonstrate the need for additional north/south capacity. The auxiliary lane discussed above on EB I-80 between Douglas Boulevard and Eureka Road could help to alleviate congestion on Sunrise Avenue. However, adding an auxiliary lane would cause a shift in travel, such that more vehicles would use Douglas Boulevard and Eureka Road to access I-80. This is evident by the increase in delay at the Douglas Boulevard / Sunrise Avenue intersection

in the TSM alternative. The effects of the auxiliary lane should be carefully examined in a traffic impact study and mitigated as needed.

Lastly, two of the planned roundabouts in the Rocklin Road corridor are projected to operate at LOS F with and without the proposed project. This operations analysis was based on preliminary design plans. The I-80/Rocklin Road project team is still developing the final designs, which will be based on the demand volumes from the I-80/SR-65 project. Therefore, these roundabouts are expected to be designed to provide acceptable traffic operations.

Chapter 7. References

This chapter contains the references cited in the Transportation Analysis Summary Report.

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I-80/SR 65 Interchange Improvements

Traffic Focus Meeting Minutes

Technical Traffic Team Meeting – July 30, 2013 Summary

Attendees

Jim Calkins, Caltrans,
Christine Zdunkiewicz, Caltrans
Mike Smith, Caltrans (by phone)
Keith Mack, Caltrans
Leo Heuston, CH2MHill
Lauren Proctor, CH2MHill
Ron Milam, Fehr & Peers,
David Stanek, Fehr & Peers,
Katie Jackson, Fehr & Peers

General Observations

Fehr & Peers started the meeting with an overview of the modeling and analysis process. This included walking through the steps to develop, calibrate, and validate the various models as well as to obtain project develop team (PDT) approval on key inputs or estimates used in the modeling process. Attendees agreed that the process followed a state of the practice approach to addressing a complex project in a congested area. Fehr & Peers also asked if any new data or evidence was available that would justify specific model input changes. Attendees agreed that none was available.

At this stage in the process, the comments being raised are largely due to the traffic operations analysis showing acceptable performance despite portions of the project not meeting desired design thresholds. It was recognized that the design thresholds have been established based on multiple objectives that include traffic operations as well as safety. So, even if traffic operations are projected to perform well, the analysis does not provide a complete picture about potential safety concerns. This is where consistency with design thresholds helps to fill out the picture.

Based on the comments, the weaving section lengths being shorter than the design thresholds appeared to raise the biggest concerns. Fehr & Peers explained that the acceptable traffic operations in the weave sections, especially in the eastbound (EB) direction between Eureka Road and SR-65 was largely due to a limited number of lane changes projected to occur in the weave section. For example, 70 percent of the PM peak hour trips entering the EB I-80 from the Eureka slip on-ramp are destined for SR-65 NB. Only about 420 vehicles are making lane changes to access EB I-80. This is a direct result of the socioeconomic projections that show little growth to east and substantial growth the north and northwest in Rocklin, Roseville and Lincoln. Since the traffic operations outcome in this weave section is dependent on the socioeconomic forecasts and resulting travel patterns, Fehr & Peers recommended that sensitivity analysis be performed to understand how different future scenarios could affect weave section operations.

Fehr & Peers reported on research they have been conducting with Robert Bain, a toll and revenue forecasting expert from England, about the uncertainty in future year forecasts. Robert's research suggests that a 25+ year forecast could have an error range of plus or minus 40 percent. During the meeting, Fehr & Peers tested this level of change in the weaving input volumes using the Leisch weaving analysis method. The results remained acceptable. This test was just one of a few that Caltrans suggested should be conducted to understand how different splits in weaving traffic volumes could affect traffic operations. Fehr & Peers agreed to perform the following tests.

- Use the Leisch method to test 40 percent and 100 percent increases in the weaving volumes for EB and WB weaving sections between Eureka/Atlantic and SR-65. This analysis will focus on the AM peak hour for the WB direction and PM peak hour for the EB direction. The total freeway mainline volume for this analysis will rely on the 'demand' forecasts and not potentially constrained volumes that could occur due to upstream bottlenecks.

In addition to these tests, Fehr & Peers will also complete the following investigation and model refinements. Note that some of these refinements were already previously agreed to for purposes of finalizing the transportation analysis report.

- Test the removal of the WB slip off-ramp to Atlantic Street. This test will be based on AM peak hour volumes for the No Taylor Alternative. Fehr & Peers will assess the effect on the WB weaving section between SR-65 and Atlantic Street as well as the effect on the ramp terminal intersection operations including off-ramp queuing from the signal and impacts to the adjacent intersections.
- Revise truck routing in the VISSIM model to ensure trucks remain on prescribed routes.
- Revise the I-80/Rocklin Road interchange to maintain the current tight diamond configuration with minor modifications to account for future signal coordination and ramp widening associated with increased storage. This change will be subject to PDT approval.
- Revised the EB off-ramp to Eureka Road to include two-lanes with a continuous auxiliary lane to the Douglas Boulevard on-ramp for the No Taylor alternative.
- Update the VISSIM post-processor to report off-ramp queue lengths.
- Add the optional EB exit lane (fourth through lane) at the NB SR-65 off-ramp for the Full Taylor alternative.

The final discussion item was an overview of two new alternatives created by the design team. Both had merits in that they increased the weaving section lengths. Some comments on potential refinements were shared, but both alternatives are still very early in the design process and it's not clear whether any additional alternatives will be formerly added to the process. If they are, Fehr & Peers would need to prepare a formal analysis for inclusion in the transportation analysis report. Based on the new designs largely increasing weaving lengths, the general consensus was that traffic operations would likely improve and the decision to move forward with these concepts would be based on what is preferred from a design and safety perspective rather than traffic operations.

David Stanek

From: David Stanek
Sent: Wednesday, September 18, 2013 1:20 PM
To: Leo.Heuston@CH2M.com; lmcneel-caird@pctpa.net; Calkins, Jim W@DOT (jim.calkins@dot.ca.gov); D Michael Smith (d.michael.smith@dot.ca.gov); Lauren.Proctor@ch2m.com; William Mack (william_mack@dot.ca.gov)
Cc: Ronald Milam; Chris.Benson@CH2M.com; Christine Zdunkiewicz (christine_zdunkiewicz@dot.ca.gov); cynthia_d_smith@dot.ca.gov; Katie Jackson
Subject: I-80/SR-65 Traffic Focus Meeting 9-11 Notes

Thanks to everyone that participated in the traffic team meeting on Wednesday, September 11. Here is our summary of the meeting outcomes.

1. The purpose of the meeting was to discuss the outstanding traffic comments and vet the responses provided by the project team. CH2M HILL provided a master list of comments for the group to discuss. The two outstanding comments were the initial focus of the meeting. These comments are Item No. 14 and Item No. 21 in the attached summary table.
2. For Item No. 14, final input from Caltrans forecasting had not been received prior to the meeting. Initial indications suggested the forecasts were acceptable. The group discussed what potential changes could occur in the forecasts and agreed that the main concern was what would happen if the weaving volumes changed in the I-80 EB weaving section between Eureka and SR-65. In response, Dave Stanek discussed the weaving sensitivity analysis for this location. The results showed that the current forecasts included 73 percent of the on-ramp traffic from Eureka destined for NB SR-65. This percentage matches expectation given the current split and where growth is planned to occur. This volume would have to reduce to 37 percent for LOS F conditions to occur in the weaving section. **Based on the discussion, Caltrans agreed that the current forecasts are acceptable.**

During the discussion of this item, Dave Stanek reviewed all of the weaving sensitivity tests (see attached spreadsheet containing sensitivity results). In four of the five cases (all based on the No Taylor Alternative), the proposed design allowed for higher traffic volumes or different weaving volume distributions before LOS F would occur. The one exception occurred on EB I-80 between Douglas and Eureka. Even with the two-lane off-ramp at Eureka and continuous auxiliary lane extending back to Douglas, this weaving section had LOS F conditions according to the Leisch method. Dave pointed out that the Leisch method is conservative in that it uses freeway capacity estimates of 1,900 vehicles per lane instead of the higher 2010 HCM value of 2,400 although truck percentage and other geometric features are not accounted for in the Leisch Method. Further, the Leisch Method is a deterministic method that does account for driver behavior or vehicle performance. **As such, the VISSIM results are a more accurate representation of expected results.**

3. For Item No. 21, the VISSIM sensitivity tests showed that the EB I-80 weaving section between Douglas and Eureka operates acceptably using current driver behavior settings or using more aggressive drivers for the No Taylor Alternative with the two-lane off-ramp to Eureka. If less familiar or less aggressive driver inputs are used, then vehicle queuing occurs in the right-hand freeway lanes as vehicles move over early in anticipation of exiting to NB SR-65. **The group agreed to keep the current driver behavior settings for the analysis but to include all of the sensitivity tests in the technical appendix of the traffic report.**

Other observations from the VISSIM tests revealed that the two-lane EB off-ramp to Eureka Road may require changes in signal timings on Eureka Road or dual left-turn lanes on the off-ramp approach to reduce off-ramp queuing. The two-lane off-ramp is only proposed to be constructed as part of the No Taylor Alternative and the new Braided Ramp Alternative. As noted in the summary comment table, the two-lane off-ramp will be analyzed as a sensitivity test for Full Taylor Alternative so its effect on traffic operations can be documented in the traffic report.

4. Dave Stanek also shared the results of the sensitivity tests for eliminating the WB slip off-ramp to Atlantic Street. The freeway mainline and ramp junctions would continue to operate acceptably and the ramp terminal intersection could accommodate the change in traffic volumes without causing queuing or other problems on the loop off-ramp. **The group discussed that the project does not include this change in any of the build alternatives but none of the designs would preclude it in the future if it was deemed necessary.**
5. Jim Calkins asked about metering of the WB I-80 off-ramp to NB SR-65. The group acknowledged that metering the WB I-80 off-ramp to NB SR-65 could be done now and would help reduce the queuing that occurs on EB I-80 during the p.m. peak period. **However, the ramp meter is not needed in the future with the proposed project based on the traffic operations analysis for 2040. Caltrans confirmed that metering the WB I-80 off-ramp to NB SR 65 does not need to be included in the I-80/SR 65 project alternatives.**

If you have any comments or suggestions, please let me know.

Thanks,
Dave

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Traffic and Design Review Comment and Response Summary

ITEM NO.	BY	DATE	Ref Doc	COMMENT	BY	DATE	RESPONSE/CLARIFICATION	DATE	RESOLUTION
Responses and comments to Traffic Report and Design Review 7/22/13									
1	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	1) The lack of weave turbulence in year 2040 on EB I-80 approaching Rt-65 does not seem realistic. A more realistic traffic model provides the tools needed to assess the alternatives.	F&P	8/1/2013	Based on the 7.30.13 meeting with Caltrans, no new data or evidence is available that indicates the 'lack of weave turbulence' is not realistic. The comment was largely due to the weaving length being shorter than the desired design threshold and wanting to understand why this did not have a greater influence on traffic operations. A review of the weaving volumes suggests that the model results match expectations since actual weaving movements are limited. Most of the traffic entering the freeway from the EB Eureka on-ramps is destined for NB SR-65 (i.e., 70%) so drivers do not require a lane change. Hence, actual weaving movements involving lane changes are limited through this freeway section. Despite the acceptable traffic operations, traffic safety may still be a concern. The interchange spacing design guidance is based on both operations and safety concerns. Longer weave lengths are preferable to help reduce speed differentials and allow sufficient reaction time for lane changes. The proposed design attempts to balance operations, safety, right-of-way take, and environmental impacts. The simulation model shows that drivers exhibiting behavior similar to current conditions would likely navigate the proposed weaving section without creating operational problems, but this model cannot predict collision probability		See item 14 (comment 1) below. No additional response here.
2	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	2) The lack of weave turbulence could be due to modeling assumptions and these assumptions should be changes to reflect more realistic/accurate conditions (higher traffic load).	F&P	8/1/2013	A sensitivity test of the simulation model with less aggressive driver behavior shows the potential for congestion at the Eureka Rd overcrossing. Vehicles would overload the rightmost lane between the Eureka Rd off-ramp and loop on-ramp resulting in congestion. However, this may not be realistic since drivers would adjust over time to wait to make the lane change until farther downstream. It also may not be realistic since the simulation model was calibrated to current driver behavior. If congestion increases in the future, drivers would likely become more aggressive. Therefore, we also tested what happens with more aggressive drivers and the results were similar to the base case. Minimizing the potential for congestion in the weave area can be best accomplished by increasing the weaving length or removing lane change movements.		See Item 18 (comment 5) below. No additional response here.
3	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	3) This can be done by including the follow improvements to EB I-80 and eliminating upstream bottlenecks that constrict EB I-80 traffic from reaching Rt-65. (see comments 4, 5 and 6 for improvements suggested)	F&P	8/1/2013	The Leisch Method analysis of the demand volumes – not the constrained volumes that the simulation model uses – also do not show an operational constraint. Even increasing the weaving volumes by 40 percent did not create operational deficiencies, but additional sensitivity tests will be conducted <ul style="list-style-type: none"> • Use the Leisch method to test 40 percent and 100 percent increases in the weaving volumes for EB and WB weaving sections between Eureka/Atlantic and SR-65. This analysis will focus on the AM peak hour for the WB direction and PM peak hour for the EB direction. The total freeway mainline volume for this analysis will rely on the 'demand' forecasts and not potentially constrained volumes that could occur due to upstream bottlenecks. 		See item 15 (comment 2) below. No additional response here.
4	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	4) The 2040 traffic model should include auxiliary lanes in both directions on I-80 between Auburn/Riverside and Douglas. These lanes were proposed by Placer County and are a realistic and probable improvement. The model needs to show the addition load they would send to Rt-65 on EB I-80.	F&P	8/1/2013	An additional lane in the eastbound direction between Riverside Ave and Douglas Blvd is not a proposed project (although the westbound lane is).		Complete. During the 7/30/13 meeting, Caltrans Ops representatives confirmed that it should not be added to the model unless it is a planned project
5	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	5) The 2040 traffic model should include two lanes for the Eureka off-ramp on EB I-80. Improvements to this off-ramp have been proposed in the past and are a realistic and probable improvement. The model needs to show if the bottleneck would be eliminated and any additional addition load it would send to Rt-65.	F&P	8/1/2013	The most recent model [for the No Taylor Alternative] (July 2013) includes the two-lane off-ramp to Eureka Rd. The results continue to show acceptable operations in the eastbound weave section between Eureka Rd and SR-65. This refinement to the model will be reflected in the final report.		See Item 21 (comment 8) below. No additional response here.

Traffic and Design Review Comment and Response Summary

ITEM NO.	BY	DATE	Ref Doc	COMMENT	BY	DATE	RESPONSE/CLARIFICATION	DATE	RESOLUTION
6	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	6) The revised model should also be able to show the new impacts with and without the Taylor Road Interchange.	F&P	8/1/2013	To date, we have only tested the Design Year No Taylor PM model, but the other models will be revised.	8/16/2013	Agreed.
7	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	7) The lack of traffic volume using the EB I-80 Eureka on-ramp vs. the new Taylor Road Interchange seems skewed and should be revised. Too much traffic is using Taylor Road.	F&P	8/1/2013	In the Design Year PM peak hour, the on-ramp volume at Eureka Rd under the No Taylor Alternative is 310 vehicles at the loop on-ramp and 1,420 vehicles at the slip on-ramp. The Full Taylor Alternative has 150 vehicles at the new Taylor Rd on-ramp. The Eureka Rd on-ramp volumes decrease only by 40 (to 300 and 1,380, respectively) compared to the No Taylor Alternative. The remaining 110 vehicles are predicted to use other routes under the No Taylor Alternative due to the different access. If the Eureka Rd on-ramp volumes were higher in the Full Taylor Alternative (i.e., held constant from the No Taylor Alternative), the EB weaving section between Eureka and SR-65 would still operate acceptably. As part of the sensitivity tests described above, we'll also test a scenario where the on-ramp volumes are increased above the No Taylor Alternative level.	8/16/2013	Agreed.
8	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	8) The HOV lane volumes seem high and a lower HOV percentage rate in the model would increase volumes in mixed flow lanes. This should be considered.	F&P	8/1/2013	During the meeting, we reviewed the HOV volumes and percentages of mainline traffic. Caltrans confirmed that the percentages were all towards the lower end of the range when compared to other corridors in District 3. Since all of the forecasts were developed following a state of the practice methodology and were reviewed and approved by the PDT, this final check affirms that the forecasts are acceptable.	8/16/2013	Agreed 11) Under the direct responses to previous Caltrans comments, dated July 22, 2013, response #8: As per the July 30 meeting, Caltrans has agreed that an HOV percentage of 22 % on I-80 and SR65 mainline is a valid assumption.
9	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	(9) The model can assume driver behavior on EB I-80. Adjust the reaction times so that more traffic stays in median lanes for a longer distance before merging over to exit Rt-65. Currently, they are merging to the right lane too soon in an unrealistic fashion.	F&P	8/1/2013	The test shows that changing lanes to the right too soon will cause congestion back at Eureka Rd. We also tested what happens if drivers waiting too long will cause problems, too. In either case, the behavior of current drivers is the basis for the VISSIM modeling and is our current best estimate of how future drivers would respond to the geometric changes.	8/16/2013	OK, Noted.
10	Caltrans	7/22/2013	2/22/13 Draft Traffic Report	The 3-lane loop connector is still off the table.	CH2M HILL	8/1/2013	The 3-lane loop discussed in the 7/23/13 Design and Traffic Review meeting will be eliminated from consideration	8/1/2013	Agreed.
11	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	<u>Additional items regarding the 2040 VISSIM model:</u> 1) There are now 11 lanes under the existing Taylor Road structure on I-80. The concept plans show 14 lanes. The model shows 14 lanes. There are currently 12 lanes under the Roseville Pkwy structure. The concept plans show 14 lanes, plus barrier, plus median, and the model shows 14 lanes. Widening of the existing structure has not been discussed. Structures has not voiced an opinion regarding any potential widening. There are existing objects in the vicinity of Roseville Pkwy and Taylor Road that may restrict potential widening of both structures. These items include the existing columns under the structures, the railroad, the water park, the Larkspur Hotel complex, and the towers that lie adjacent to EB I-80. If the assumed number of lanes under the structures in the model are not realistic, then the upstream operations are not being properly represented, i.e. potential bottlenecks.	F&P	8/1/2013	The final traffic analysis will include the revisions to the alternatives.	8/16/2013	Agreed.

Traffic and Design Review Comment and Response Summary

ITEM NO.	BY	DATE	Ref Doc	COMMENT	BY	DATE	RESPONSE/CLARIFICATION	DATE	RESOLUTION
12	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	<p><i>Additional items regarding the 2040 VISSIM model:</i></p> <p>2) On NB SR65, in advance of the Stanford Ranch Road off-ramp, the plans show a drop lane. Therefore, 5 lanes drop to 4 lanes, then continue on with an optional through, 2 lane off-ramp at Stanford Ranch, with three lanes continuing on under the structure. This is not a desirable design. Further review is needed to determine how the drop lane would affect weaving and upstream operations.</p>	F&P	8/1/2013	The traffic analysis to date has shown that the dropping of lanes on northbound SR-65 under design year conditions results in a bottleneck at the Pleasant Grove Blvd overcrossing. Construction year conditions results show minor bottlenecks at Stanford Ranch Road on-ramp and Blue Oaks Blvd on-ramp. To provide improved traffic operations, additional mainline capacity is needed between Galleria and Blue Oaks at a minimum. The PDT previously discussed this need as being addressed by the upcoming SR-65 widening project. If changes are made to this project design or assumed separate projects, they can be incorporated in the final traffic analysis.	8/16/2013	Agreed.
13	Caltrans	7/22/2013	2/22/13 Draft Traffic Report Review	<p><i>Additional items regarding the 2040 VISSIM model:</i></p> <p>3) In the a.m. peak hour, the queuing shown on the Douglas Road EB on-ramp appears unrealistic. The queuing continues back into the tunnel. This may be due to incorrect coding, or wrong assumptions regarding gap acceptance or driver behavior.</p>	F&P	8/1/2013	The coding of the Douglas Blvd eastbound on-ramp will be reviewed and adjusted as needed.	8/16/2013	Agreed.
					CT	8/28/2013	<p><u>Clarification to original comment:</u></p> <p>Regarding the EB Douglas Road on-ramp, in the a.m. peak VISSIM model, there appeared to be excessive queuing (back to tunnel). The gap acceptance or driver behavior may have to be modified in the model to achieve more reasonable results.</p>	8/30/2013	Complete. This observation was noted in the traffic team meeting and was due to the current VISSIM coding. The coding was updated in the revised No Taylor model that includes the two-lane off-ramp to Eureka Road.
<p>Responses and comments to 7/23/13 meeting minutes and initial 7/22/13 comments/responses</p>									
14	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	<p>1) Under <u>General Observations</u>, third paragraph: Fehr and Peers has made the forecast assumption that 70% of the trips entering I-80 from Eureka Road slip on-ramp are destined for NB SR65, Roseville. Caltrans would like to verify how this assumption was made in regard to the SACMET model and how this assumption relates to the figure 2-4 trip distribution percentage (47/53%) for EB pm peak hour trips on I-80 and SR65, dated years 2008 and 2035, found in the I-80/SR65 Interchange (PA&ED) Concept Screening and Concept Development Report. Please provide the necessary data to verify this assumption.</p>	F&P	8/22/2013	The forecasts do not involve assumptions. The forecasts are the result of applying the SACMET and VISUM models. Both models rely on capacity constrained equilibrium assignment methods to determine specific paths for trips between origins and destinations. This means that the path choices between origins and destinations are dependent on the level of congestion in the network. The 70 percent value noted above does apply to the trip entering EB I-80 from Eureka Road that are destined for NB SR-65. The 47/53 percent split is for a different location. This split refers to the trips on EB I-80 just prior to the loop off-ramp to NB SR-65. At this point in the network, 47 percent of p.m. peak hour trips on EB I-80 in 2008 were measured traveling to NB SR-65 with the remaining 53 percent continuing EB on I-80. In 2035, 53 percent of p.m. peak hour trips on EB I-80 are forecast to travel to NB SR-65 with the remaining 47 percent continuing EB on I-80. This forecast was discussed in detail with the PDT and is aligned with the future land use growth patterns in the area, which favor locations north and west of the I-80/SR-65 interchange.	8/28/2013	<p><u>PENDING.</u></p> <p>Travel Forecasting is continuing to review the response to comment #1, below, regarding the 70 % value for trips coming from EB Eureka Road, and destined for NB SR65. Please continue with the sensitivity tests.</p>

Traffic and Design Review Comment and Response Summary

ITEM NO.	BY	DATE	Ref Doc	COMMENT	BY	DATE	RESPONSE/CLARIFICATION	DATE	RESOLUTION
15	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	2) Under <u>General Observations</u> , fourth paragraph, first bullet: as per the July 30 Traffic Team Meeting, We concur that the Leisch method sensitivity tests are to include various splits for trip destination from the Eureka slip on-ramp to NB SR65 and EB I-80, i.e, a 65/35, 55/45%, 50/50% and 70/30%. Regarding the splits at the EB weaving section, please also include a sensitivity test to include both EB (not required by the Department from Riverside/Auburn to Douglas) and WB continuous auxiliary lanes between Eureka/Atlantic and Auburn/Riverside.	F&P	8/22/2013	<p><u>See Item 3 (comment 3) above.</u></p> <p>propose to conduct the following sensitivity tests. Please note the suggested changes in Test 2 directly related to this comment.</p> <p><u>Test 1</u> - Remove the WB slip off-ramp to Atlantic Street. This test will be based on AM peak hour volumes for the No Taylor Alternative. Fehr & Peers will assess the effect on the WB weaving section between SR-65 and Atlantic Street using the Leisch method plus test the effect on the ramp terminal intersection operations using SYNCHRO including off-ramp queuing from the signal and impacts to the adjacent intersections.</p> <p><u>Test 2</u> – Find the weaving volume combination using the Leisch method that causes LOS F conditions for the following weaving sections for the No Taylor</p> <ul style="list-style-type: none"> a) EB I-80 between Douglas Blvd and Eureka Rd b) EB I-80 between Eureka Rd and SR-65 c) WB I-80 between SR-65 and Atlantic Street d) WB I-80 between Douglas Blvd and Riverside Dr <p><u>Test 3</u> – Modify the No Taylor VISSIM model to include the two-lane off-ramp at Eureka and what happens with less aggressive and more aggressive drivers through the Eureka to SR-65 weaving section (this modeling is already complete – just documentation needed).</p>	8/23/2013	<p><u>Clarification for Test 2:</u></p> <p>Fehr & Peers will compare two different volume combinations for the sensitivity test of the EB I-80 weaving section between Eureka and NB SR-65.</p> <p>Split 1 = Test higher EB mainline volume with current on-ramp split of 70 percent to NB SR-65.</p> <p>Split 2 = Test change in on-ramp split with more vehicles from Eureka Road destined towards EB I-80. Fehr & Peers will include the sensitivity test information in the technical appendix for the Transportation Analysis Report.</p> <p>In addition to these tests, Fehr & Peers will also complete the following investigation and model refinements. Note that some of these refinements were already previously agreed to for purposes of finalizing the transportation analysis report.</p> <ul style="list-style-type: none"> · Test the removal of the WB slip off-ramp to Atlantic Street. This test will be based on AM peak hour volumes for the No Taylor Alternative. Fehr & Peers will assess the effect on the WB weaving section between SR-65 and Atlantic Street as well as the effect on the ramp terminal intersection operations including off-ramp queuing from the signal and impacts to the adjacent intersections. · Revise truck routing in the VISSIM model to ensure trucks remain on prescribed routes. · Revise the I-80/Rocklin Road interchange to maintain the current tight diamond configuration with minor modifications to account for future signal coordination and ramp widening associated with increased storage. This change will be subject to PDT approval. · Revised the EB off-ramp to Eureka Road to include two-lanes with a continuous auxiliary lane to the Douglas Boulevard on-ramp for the No Taylor alternative. · Update the VISSIM post-processor to report off-ramp queue lengths. · Add the optional EB exit lane (fourth through lane) at the NB SR-65 off-ramp for the Full Taylor alternative.

Traffic and Design Review Comment and Response Summary

ITEM NO.	BY	DATE	Ref Doc	COMMENT	BY	DATE	RESPONSE/CLARIFICATION	DATE	RESOLUTION
16	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	3) Under <u>General Observations</u> , fifth paragraph, third bullet: Regarding model refinements, please add ramp metering adjustments, as discussed in the meeting.	F&P	8/22/2013	If necessary, the WB on-ramp at Rocklin Road will include ramp metering adjustments to avoid queuing that could extend back onto Rocklin Road. This flexibility in operation may be needed to avoid queues extending into the roundabouts if they become the preferred alternative.	8/23/2013	Complete. Fehr & Peers will document the WB AM peak hour throughput volume at Elkhorn/Greenback for each project alternative. This is intended to provide a gauge for how upstream improvements may affect downstream conditions. PCTPA requested that this information be provided at the limits of the project in both directions for I-80
17	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	4) Under <u>General Observations</u> , fifth paragraph, fifth bullet: We concur that the VISSIM Model is to be revised to include a two lane EB slip off-ramp at I-80/Eureka Road interchange with an auxiliary lane from the EB Eureka Road off-ramp back to the Douglas Blvd. EB on-ramp for all alternatives for year 2040.	F&P	8/22/2013	Previously, we were directed to add the two-lane off-ramp for the No Taylor alternative only. This comment requires this change for ALL alternatives. Please confirm this new direction.		See Item 21 (comment 8) below. No additional response here.
18	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	5) Under the direct responses to previous Caltrans comments, dated July 22, 2013, response #1: In the current 2040 VISSIM Model that was sent to Caltrans for review, the vehicles are diverging to the right too soon to exit EB I-80 onto Taylor Road and NB SR65. Realistically some drivers will diverge later than others. As was discussed in the meeting, please adjust the model to show results of "queue jumping" driver behavior. It is agreed that longer weave lengths, within Caltrans standard are preferable for acceptable operations.	F&P	8/22/2013	...[T]he VISSIM model was calibrated to current driver behavior and we conducted sensitivity tests (Test 3) with both less and more aggressive drivers that were shared during the traffic meeting. Less aggressive drivers created more of a problem as would be expected. When drivers are more aggressive they take advantage of gaps faster and they have less headway between vehicles. While this behavior could lead to more collisions due to factors such as high speed differentials, it tended to improve traffic operations in simulations without any collisions. ...[W]e will document the results of both tests. Please confirm if the test information should be included in the final transportation analysis report. Since the main issue seems related to safety in the weaving sections that do not meet design standards, we could consider utilizing the FHWA Surrogate Safety Assessment Model (SSAM). This model can use simulation model output to help identify collision potential associated with the project design. More details about this model are available at this link. http://www.fhwa.dot.gov/publications/research/safety/08049/		Noted. Fehr and Peers to provide information to Caltrans for their independent check into SSAM.
19	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	6) Under the direct responses to previous Caltrans comments, dated July 22, 2013, response #2: Driver aggressiveness approaching the Eureka slip off-ramp on EB I-80 should be modeled using various aggression levels. As noted during the meeting, different assumptions produce different outcomes. Please increase the amount of familiar drivers, which would be an adjustment in regard to the above comment #4.	F&P	8/22/2013	See response to Item 18 (comment 5).		No other response here.
20	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	7) Under the direct responses to previous Caltrans comments, dated July 22, 2013, response #3: During the meeting, as sensitivity tests were being conducted regarding the Leisch method, the full demand on I-80, with the 1400 foot weave length, and certain percentage splits, resulted in LOS F. We concur that further sensitivity tests are to include the various splits as outlined in above comment # 2, as well as the additional adjustments regarding "familiar" drivers, as per comment #5.	F&P	8/22/2013	See response to Item 15 (comment 2) and item 18 (comment 5) above.		No other response here.

Traffic and Design Review Comment and Response Summary

ITEM NO.	BY	DATE	Ref Doc	COMMENT	BY	DATE	RESPONSE/CLARIFICATION	DATE	RESOLUTION
21	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	8) Under the direct responses to previous Caltrans comments, dated July 22, 2013, response #5: The addition to the model of the two lane Eureka off-ramp with auxiliary lane (Douglas to Eureka) is to be included for all alternatives.	F&P	8/22/2013	Repeat comment. See Item 5 (comment 5) and Item 17 (comment 4) above.	8/23/2013	Caltrans will review the need to include the two-lane EB off-ramp at Eureka for the project alternatives. The current direction is to include the two-lane off-ramp for the No Taylor and new CD alternative only. Due to the time and cost involved, testing a two-lane Eureka Rd off-ramp in the Vissim models for the "Full Taylor" alternatives will not be done at this time. However, we will conduct this sensitivity test as part of finalizing the traffic analysis. The results of this test will be included in the traffic report.
					CT	8/28/2013	<i>Clarification to original comment:</i> Please add to the sensitivity test #3 , to modify the two current "with Taylor" VISSIM models (as well as "no Taylor") to include the two lane EB off-ramp at Eureka Road, with the auxiliary lane back to Douglas Road, to determine the downstream effects on EB I-80 between Eureka Road and SR65.	8/30/2013	
22	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	9) Under the direct responses to previous Caltrans comments, dated July 22, 2013, response #6: Agreed.	F&P	8/16/2013	No response required. See Item 6 (comment 6).		Complete.
23	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	10) Under the direct responses to previous Caltrans comments, dated July 22, 2013, response #7: Agreed. In addition, it is important to understand the distribution of the trips. Were the assumptions and predictions made in regard to response # 7 based upon a trip distribution analysis?	F&P	8/22/2013	The VISUM and VISSIM models are integrated such that the demand volumes in origin-destination format and the paths are transferred to VISSIM. This approach ensures that weaving patterns are maintained in the VISSIM assignment. As discussed in the meeting (and in response to comment 1 above), the weaving patterns are reasonable when compared against current patterns and projected land use growth. Most growth is planned to occur in the SR-65 corridor or areas west of SR-65. The growth will contribute to increased peak hour volumes in the EB I-80 weaving section between Eureka Road and SR-65. However, most of the volume entering EB I-80 from Eureka Road will not be weaving since it is destined for NB SR-65. These vehicles will not have to make a lane change so weaving turbulence is less than might be expected in a typical weaving section.		Agreed.
24	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	11) Under the direct responses to previous Caltrans comments, dated July 22, 2013, response #8: As per the July 30 meeting, Caltrans has agreed that an HOV percentage of 22 % on I-80 and SR65 mainline is a valid assumption.	F&P	8/16/2013	No response required. See Item 8 (comment 8).		Complete.
25	Caltrans	8/16/2013	2/22/13 Draft Traffic Report Review	12) Response #9: noted.	F&P	8/16/2013	No response required. See Item 9 (comment 9).		Complete.

I-80/SR 65 Interchange Improvements: Caltrans/FHWA Traffic Focus Meeting #4

ATTENDEES: Luke McNeel-Caird/PCTPA
Scott Gandler/City of Roseville
Rich Moorehead/Placer County
Ray Leftwich/City of Lincoln
Cesar Perez/FHWA
Keith Mack/Caltrans
Christine Zdunkiewicz/Caltrans
Mike Smith/Caltrans

Cynthia Smith/Caltrans (tele)
Heidi Sykes/Caltrans HQ
Jim Deluca/Caltrans HQ
Rod Murphy/Caltrans
Chris Benson/CH2M HILL
Lauren Proctor/CH2M HILL
Ron Milam/Fehr & Peers
Dave Stanek/Fehr & Peers

COPY TO: File

PREPARED BY: Lauren Proctor/CH2M HILL, Ron Milam/Fehr & Peers

DATE: Tuesday, October 29, 2013

The purpose of this meeting summary is to highlight the major items discussed on Tuesday, October 29, 2013 at the Caltrans/FHWA Traffic Focus Meeting. For any comments or questions regarding information contained within this summary, please contact Lauren Proctor at lauren.proctor@ch2m.com or phone at (916) 286.0332.

Presentation of CD Concept Traffic Volume Forecasts

Ron and Dave presented the design and construction year forecasts for the new CD Alternative. The forecasts were generated using the meso-scale VISUM model following the same methodology used for the other alternatives. The CD roadway was modeled at a free flow speed of 55 mph.

Dave noted that one unique observation about the forecasts is that approximately 150 AM and 200 PM peak hour trips used the CD road from EB I-80 to NB SR-65 instead of staying on the mainline. The technical group was asked whether to keep the forecasts 'as is' or to shift the cut-through trips back to the mainline. No change was recommended.

Ron noted that some differences in the volumes compared to the No Taylor alternative were due to the previous VISUM modeling not including a two-lane off-ramp with a continuous auxiliary lane back to Douglas Boulevard. Ron explained that VISUM model for the No Taylor alternative would be updated as part of preparing the final transportation analysis report.

Ron also noted that some of the construction year volumes are higher than design year because of the construction year network congestion, especially along SR 65.

The CD Alternative will replace the Half Taylor Alternative in the traffic report.

Preliminary CD Alternative Traffic Operations Assessment

Ron and Dave noted that per lane volumes did not exceed capacities on the freeway, ramp, or CD links. The next check was the CD weaving section between the Eureka Road slip on-ramp and the Taylor Road off-ramp. A Leisch weaving analysis was conducted for this location. Given the unique geometrics of this weave and the limitations of the Leisch methodology, Dave explained the assumptions that were made for the analysis. The results indicated that the proposed design with the Eureka Road slip on-ramp entering from the left would operate best with LOS D or better. A sensitivity test was conducted with the slip on-ramp

moved to the right side. This configuration performed worse, including LOS F conditions during the PM peak hour. Based on these results, the proposed design is recommended from a traffic operations perspective. Jim Deluca said the right side slip option should be developed to show that it works.

Jim Calkins said consideration should be given to include conduit for potential future ramp metering for the Eureka/Atlantic on-ramps onto the CD link in case they are needed in the future.

Cesar Perez had questions about the calibration of the traffic model. Dave Stanek said the forecast model is based on traffic counts, the regional travel demand forecasting model, and the adjustment process described in the draft traffic report and traffic forecasting memo. Cesar Perez noted that travel time comparisons for select origin-destination (OD) pairs may be desirable to help explain the benefits of the project, particularly for paths that would be served by Taylor Rd ramps. Ron and Dave noted that travel times can be extracted from the VISSIM model if the PDT agrees that this information is needed.

CD Alternative Tests

During the meeting, refinements to the CD Alternative were tested using the VISUM model. The first two tests included adding a left-turn movement to the EB Taylor loop off-ramp and shifting the WB Taylor on-ramp upstream before the SB SR-65 connector ramp. The final test was removal of the EB Taylor loop off-ramp to create a modified version of the No Taylor Alternative. The first two tests showed little change to the traffic forecasts or traffic operations with the exception of lengthening the weaving distance on WB I-80. However, a traffic signal would be needed on Taylor Road at the entrance to the WB on-ramp, which would increase delays and emissions. Likewise, the Taylor Road EB off-ramp would likely warrant a signal that would increase delays on Taylor Road to allow the left-turn movement. Neither modification to the CD Alternative was recommended based solely on the traffic assessment.

Removal of the Taylor Rd EB off-ramp created more discussion about whether this is a modification to the CD Alternative or a 'better' No Taylor Alternative. Traffic volumes change as expected, but a more detailed VISSIM analysis would be needed to determine how increases in traffic volumes at the Eureka Road and Douglas Boulevard off-ramps would affect mainline operations. Keith Mack clarified Caltrans' comment that they would like to use the CD-like configuration to physically prevent the weave movement on eastbound I-80 between Eureka Rd and SR-65 under the No Taylor Alternative. Due to increased costs, it might be better to investigate this in addition to the current No Taylor Alternative. Everyone was agreeable to the CD Alternative as is.

Ron Milam raised a question about the Purpose and Need Statement agreed upon by the PDT related to the No Taylor Alternative. If needed, a separate time will be identified to discuss previous development of the Purpose and Need Statement.

There was a discussion about whether the other ramps can handle the traffic for the added movements in the Full Taylor Alternative. Ron said that Douglas Blvd cannot handle additional traffic since congestion occurs in all alternatives at this interchange during the PM peak hour. Improvements will also need to be made to the intersections along Taylor Road and could impact existing right of way. The Full Taylor Alternative distributes traffic more evenly.

Final Transportation Analysis Report and Next Steps

Ron noted that once all geometric refinements have been made to the project alternatives, Fehr & Peers could then update the VISUM and VISSIM models and prepare the final transportation analysis. Heidi Sykes asked about the barrier treatment on EB I-80 to prevent Eureka Road on-ramp traffic from trying to access the HOV lanes. Chris Benson explained that the barrier would likely be striping due to right-of-way constraints. Heidi asked if any vehicles are assumed to violate the striping barrier. Dave explained that the current VISSIM model does not allow any violators but that it could be modified. Ron noted that the SACMET model includes estimates of SOV violators using HOV lanes and that a similar percentage of traffic could be assumed to violate the striping barrier. Once a buffer design, if any, is determined, the need to add violators to the VISSIM model will be assessed.

CH2M HILL will investigate modifying the No Taylor Alternative to have physical separation in the eastbound direction similar to the CD Alternative.

Luke McNeel-Caird outlined the five alternatives that PCTPA intends to move forward: Full Taylor, No Taylor (w/ EB Eureka braided ramps), Collector-Distributor, TSM, and No-Build. Refinements to these alternatives, based on discussions to date, will be reviewed at the next design focus meeting to be held the week of 11/11/13.

MEETING MINUTES

Date: February 20, 2014, 1:30 PM

I-80/SR 65 Interchange – Traffic Focus Meeting

Attendees

Andrew Gaber
 Chris Zdunkiewicz
 Cynthia Smith
 Dave Stanek
 Keith Mack
 Lauren Proctor
 Leo Heuston
 Luke McNeel-Caird
 Mike Smith
 Rhon Herndon
 Ron Milam
 Sam Jordan
 Scott Gandler

Meeting Summary

Topic	Discussion
1. Design year traffic volume forecasts are complete.	<ul style="list-style-type: none"> - Action: Fehr & Peers will distribute traffic volume graphics to traffic focus meeting distribution list. - Action: Fehr & Peers will send SACMET and VISUM files to Cynthia Smith.
2. Construction year forecasts are under development.	<ul style="list-style-type: none"> - Action: Fehr & Peers will distribute traffic volume graphics to traffic focus meeting distribution list when complete.
3. The assumption of one-lane westbound on-ramps at Douglas Blvd and Atlantic St was questioned.	<ul style="list-style-type: none"> - Current plans (MTP 2035) do not include these improvements, so no change will be made to the Vissim model.
4. New design year forecasts and interchange alternative at Rocklin Road result in higher WB I-80 peak period volumes. The volumes warrant the addition of a continuous WB auxiliary lane	<ul style="list-style-type: none"> - This condition will be acknowledged in the traffic report but any mainline improvements in this freeway section will be considered after the alternative for the I-80/Rocklin Road

<p>between Rocklin Road and SR 65.</p>	<p>interchange has been determined.</p>
<p>5. New design year forecasts show bottlenecks forming on WB I-80 downstream of SR 65 for both No Taylor and CD alternatives. The group revisited the question of whether the SB SR 65 connector should be only two lanes or include a meter.</p>	<ul style="list-style-type: none"> - No change to the previous discussion in the traffic report. The three-lane connector should be environmentally cleared. The three-lane connector would not preclude future metering, if needed.
<p>6. The Taylor Road westbound on-ramp design (CD Alternative) is not yet final. The options include a merge with a short taper or relocated the on-ramp upstream of the SR 65 southbound on-ramp.</p> <p>The design also needs to consider whether the I-80 WB lane drop at Atlantic Street/Eureka Road occurs at the loop ramp or just beyond the interchange.</p>	<ul style="list-style-type: none"> - The project team has proposed a merge for the WB Taylor on-ramp at the existing ramp location and a WB I-80 lane drop just beyond the interchange. Action: Caltrans will review the proposed design and provide a timeline for a final recommendation on the Taylor Road on-ramp and I-80 WB lane drop at Eureka Road. This recommendation is necessary to finalize the traffic operations analysis. - Action: Fehr & Peers will update the VISSIM model once a final design is confirmed.
<p>7. The project design includes a two-lane off-ramp to Stanford Ranch Road/Galleria Boulevard. This off-ramp includes a two-lane branch exit to Stanford Ranch Road and a one-lane branch exit to Galleria Boulevard.</p>	<ul style="list-style-type: none"> - Action: Fehr & Peers will update the VISSIM model to match the proposed design.
<p>8. Modifying the design for the EB I-80 Taylor Road off-ramp would reduce the need for a five lane Taylor Road bridge over I-80. The design would be modified to include a yield or stop approach with a 15-degree maximum entrance angle. Taylor Road will have a median to prevent left-turn movements from the off-ramp.</p>	<ul style="list-style-type: none"> - Action: F&P will verify the traffic queue on the ramp will not impact the CD road. - Action: CH2M HILL will adjust the Alt 2 design accordingly. - Action: Fehr & Peers will update the VISSIM model to match the proposed design.
<p>9. The traffic report is being revised to reflect the updated forecasts and VISSIM operations analysis. The main changes affect the build alternatives. One option for modifying the report is to add a new chapter on the refined build alternatives analysis. A second option is to update the forecasting and operations analysis for the build alternatives in the current report.</p>	<ul style="list-style-type: none"> - Fehr & Peers will use the second option to revise the report subject to confirmation from Caltrans. The No Build and TSM alternatives do not meet purpose and need and the additional time and effort that would be required to update these alternatives would not change this finding.

The following is the list of items awaiting Caltrans decision/concurrence:

1. NB SR 65 HOV Terminus

- Proposed design will show 2+1 continuous lanes conforming to the assumed future SR 65 Widening project. There will not be an HOV lane drop.
2. Physical barrier along SR 65 from system interchange to just past Galleria Blvd/Stanford Ranch Road (Not discussed during the meeting)
 - Proposed design uses signing and striping to prohibit weaving between the HOV and general purpose lanes. A physical barrier would add significant cost and potential R/W issues to the project.
 3. WB I-80 lane drop
 - Proposed design provides an optional exit at the Eureka Rd loop off-ramp followed by a lane drop on mainline to increase weaving length and reduce number of lane changes required within the critical weave section. Previous discussions with CT in the design focus meetings established the current design (see item 6 above).
 4. WB Taylor On-Ramp (Alternative 2)
 - Proposed design positions the WB Taylor on-ramp in its existing location with a merge into the 6+1 facility. Another option to consider is to relocate the Taylor Road on-ramp upstream of the SR 65 on-ramp (see item 6 above).
 5. EB Taylor Loop Off-Ramp (Alternative 2)
 - The existing loop off ramp alignment to EB Taylor road requires an additional lane on the Taylor Rd OC. CH2M HILL is proposing an alternate design to eliminate the need for the additional lane on the structure. The proposed design for the EB I-80 Taylor Road off-ramp would be modified to include a yield or stop approach at Taylor Rd with a 15-degree maximum entrance angle. Taylor Road will have a median to prevent left-turn movements from the off-ramp (see item 8 above).