

Purpose of the State of the Corridor Report:

The annual State of the Corridor (SOTC) Reports further the momentum started by the completion of the 2009 CSMPs, and the 2010 and 2011 SOTC Reports by monitoring and reporting annual corridor performance and ongoing implementation of CSMP strategies. The first two SOTC Report editions covered fiscal year activity from July 1st through June 30th. **This 2012 SOTC Report covers July 1, 2011 through December 31, 2011.** Future editions of this report will identify corridor performance and implementation of strategies on a calendar year rather than a fiscal year basis. The reason for this change is to utilize the performance data in the *District 3 Mobility Performance Report (MPR)*, which is reported by calendar year rather than fiscal year. The MPR, which is produced by the Division of Maintenance and Traffic Operations, evaluates the operational performance of freeways in the District. The major benefit of this reporting period change will be a SOTC report that contains more accurate and up-to-date reporting of corridor performance and eliminates redundancy.

The 2012 I-80/SR 51 SOTC Report includes the following components:

- Status of the Corridor Mobility Improvement Account Projects
- Major Corridor Accomplishments
- Performance Measures: State Highway System, Transit, and Bicycle
- Moving Forward: CSMP Strategies, Traffic Operations Improvement Strategies, and Micro-simulation Modeling

Corridor Mobility Improvement Account Bond Project Status:

CSMPs were developed for corridors associated with the Corridor Mobility Improvement Account (CMIA) Program supported by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, Proposition 1B. Two projects on I-80/SR 51 in District 3 were awarded CMIA funds. The status of these projects is as follows:

I-80 “Fixing the Bottleneck” Project: This expansion project widens the freeway from nearly a mile east of SR 65 to the Placer/Sacramento County line and is the result of over a decade of planning by local, state and federal officials. This project was completed in three phases, with the first phase completed in August 2007. Phase 2 and 3 were completed in Fall 2011. This I-80 Bottleneck expansion project will help reduce traffic congestion, increasing fuel efficiency and making it easier for people to spend time with their families, instead of in traffic. This project was originally estimated at \$210 million but ended up closer to \$89 million. Savings from this project are being used for other projects along the I-80 Bottleneck including improvements at the I-80/Eureka Road Interchange as well as environmental work on the I-80/SR 65 Interchange Improvements project. Savings from Phase I have been redesignated to do preconstruction for an eastbound auxiliary lane between SR-65 and Rocklin Road.

I-80 “Across the Top” HOV Lanes Project: In May of 2010, the California Transportation Commission (CTC) approved \$65 million of CMIA savings for the I-80 “Across the Top” HOV project that adds bus/carpool lanes and Traffic Operations Systems (TOS) elements between the Sacramento River Bridge and the Watt Avenue Sacramento Regional Transit (SacRT) light rail station. This project was identified in the 2009 I-80/SR 51 CSMP as a “Key Project” that will enhance mobility options along the corridor by providing significant travel time advantages for express bus services and carpools serving job centers in Downtown Sacramento and the Roseville areas. In August of 2010 the CTC voted to combine, for construction only, the I-80 maintenance project that rehabilitates 53 lane miles of pavement from the Sacramento River Bridge to Norwood Avenue with the existing CMIA project. The benefits of constructing the two projects simultaneously are a reduction of construction cost by avoiding duplicate work and a reduction of construction delay since travelers are only impacted once. The project construction contract was awarded on July 29, 2011. The project is now in construction and is expected to be completed by November 2015.

Major Corridor Accomplishments:

Dry Creek Parkway Class I Trail, Phase 1: This \$1.7 million extension of the Sacramento County trail from Dry Creek Road in the Rio Linda area to the Cherry Island Soccer Complex near Placer County, was completed in February 2011. Completion of this Phase contributes towards the goal of achieving a seamless Class I trail from downtown Sacramento to the trail network in southwest Placer County.

I-80 Eureka Road Interchange Improvements: Construction of this \$9.2 million City of Roseville project to add a 4th westbound (WB) through lane from 500 feet East of N. Sunrise to eastbound (EB) I-80 on-ramp, including Miners Ravine

Bridge widening, and change the existing number one northbound (NB) and southbound (SB) through lanes at Sunrise/Eureka to left turn lanes as well as widening the Taylor Road off-ramp to provide two through lanes began in August 2011. This project augments the I-80 “Fixing the Bottleneck” project and is scheduled to be completed in the Fall of 2012.

I-80 to Royer Park Class I Bike Path: Construction of Segments 2 and 3 of this City of Roseville project was completed.

I-80 Bicycle and Pedestrian Bridge Project: Currently, the only I-80 crossing available to bicyclists commuting from Natomas are crossings east of Interstate 5 (I-5) at San Juan and Truxel Roads. Construction began in the Summer of 2010 that adds crossings over I-80 and the West Drainage Canal to link north Natomas to Downtown Sacramento. The project will reduce 3.2 miles of out of direction travel for bicyclists and was opened in the Fall of 2011 and should be officially completed by April 2012.

I-80 Eastbound Auxiliary Lane Project: The \$7.7 million project proposes to construct an EB auxiliary lane from SR 65 to Rocklin Road, including concrete barrier/retaining walls, widening the Rocklin Road off-ramp, and shoulder improvements. The Project Study Report (PSR/PDS) for this project is currently being prepared that will document agreement on the projects scope, schedule, and estimated cost.

I-80/SR 65 Interchange (IC) Project: The project includes constructing bi-directional HOV direct connector lanes between I-80 and SR 65, replacing the eastbound (EB) to northbound (NB) SR 65 loop connector with a flyover connector, structure widening of the east Roseville viaduct, possible relocation of the Taylor Road Interchange, and widening the southbound (SB) SR 65 and westbound (WB) I-80 to NB SR 65 connectors. In 2009, Caltrans initiated the project by completing a PSR that documents agreement on the projects scope, schedule, and estimated cost. In early Spring 2011, PCTPA began development of the Project Approval & Environmental Document (PA&ED). The PA&ED phase of the project includes the development of purpose and need, alternative analysis, preliminary design, environmental document/report, and public meetings. This phase is expected be completed in Spring 2015.

I-80 West El Camino Signal Project: In August of 2010 construction began on the West El Camino Signal Project. The project includes signalizing the I-80/ West El Camino IC off-ramps, widening the EB off-ramp, providing a continuous sidewalk along the north side of West El Camino Ave between Orchard Lane and El Centro Road, placing signal interconnection between ramp terminals signals and the Orchard Lane signal, and constructing a dedicated lane to the WB on-ramp from EB West El Camino Ave. The project will improve traffic circulation within the interchange area, relieve congestion on the off-ramp and improve bicycle and pedestrian movements. Construction was completed in October 2011.

Performance Measures:

A diverse mixture of transportation modes and roadways such as state highways, major arterial roadways, transit services and bicycle facilities, make up the managed network and combine to provide mobility in the I-80/SR 51 corridor. Continuous monitoring of the network through the use of performance measures is an integral part of corridor management and investment decision making by aiding in the identification of immediate, efficient, and effective system operational strategies, and capital improvements

State Highway System Performance Measures:

The District 3 MPR is now being used to track and report on highway performance in each CSMP corridor. This will ensure data and reporting consistency in the most efficient manner possible. Additional performance measures may be added to the I-80/SR 51 CSMP next fiscal year when it is updated.

Traffic Congestion:

- **Vehicle Hours of Delay (VHD):** Total VHD at 60 miles per hour in both directions decreased in 2011 over 2010 in all Counties, except for Sacramento County where it increased. The decrease in Placer County may be attributed to completion of the “Fixing the Bottleneck” project and the downturn of the economy. The results are as follows:

Route	County	2010	2011
I-80	YOL	649,350	550,135
	SAC	954,786	1,042,987
	PLA	527,435	446,213
SR 51	SAC	898,803	959,693

- **Top 10 Congested Freeways:** Based on the VHD of all State Highway urban corridors, the congestion comparison of I-80 and SR 51 for 2010 and 2011 were ranked with the other corridors. As identified below, both the I-80 and SR 51 corridors are becoming even more congested.

Route	County	2010 Rank	2011 Rank
I-80	YOL	7	6
	SAC	5	4
	PLA	8	7
SR 51	SAC	6	5

- **Top Bottleneck Locations:** The bottleneck comparisons of I-80 and SR 51 for 2010 and 2011 by locations and rankings listed below can change from year to year, and may be indicative of temporary bottlenecks (i.e. short-term construction activities or special events) rather than major geometric constraints that require major operational strategies or capital expansion. Rankings are in comparison to all state highways in the greater Sacramento area of District 3 during both the AM peak and PM peak time periods. I-80 at Northgate heading EB during the PM peak time period is still the number one bottleneck location. SR 51 at Glenrose (between El Camino and Marconi) heading NB during the PM peak time period is the number three bottleneck location. The congestion located at the I-80 at Enterprise bottleneck appears to be declining. Likewise, the bottleneck congestion on I-80 at Norwood as well as at Greenback is also declining. The decline in congestion in the PM EB direction on I-80 at Greenback may be due to the completion of the “Fixing the Bottleneck” project on I-80 further east in Roseville and the downturn of the economy.

I-80:

County	Approx. Location	AM/PM, Direction	2010 Av. Daily VHD	2011 Av. Daily VHD	2010 Av. Duration (min)	2011 Av. Duration (min)	2010 Rank	2011 Rank
YOL	Chiles Rd.	PM, EB	131	129	19	28	10	12
	Webster UC	PM, EB	193	90	28	20	8	--
	Enterprise Bl.	AM, WB	207	26	62	8	2	--
	Enterprise Bl.	PM, WB	330	70	94	25	5	22
SAC	Northgate Bl.	PM, EB	608	487	149	132	1	1
	Norwood Av.	AM, WB	158	29	68	18	5	--
	Greenback Ln.	PM, EB	267	38	112	15	8	--
PLA	-----							

SR 51:

SAC	A St., N. of A	PM, NB	278	241	86	73	4	4
	30 th & E	PM, NB	----	134	--	50	--	9
	EB Exposition	PM, SB	244	131	97	85	5	11
	Glenrose Av.	PM, NB	420	280	87	80	3	3
	Auburn Bl.	AM, SB	145	69	74	33	2	3

Transit and Bicycle Performance Measures:

Beginning with the 2011 SOTC Report, it was determined that the implementation of the infrastructure needs for transit and bicycles would be used as the performance measures for each. Although this is an “output” and not an “outcome” measure, it is considered the best indicator of increasing the contribution of each mode to corridor mobility at this preliminary stage of system management and reporting. The 2011 Report established the baseline by listing transit and bicycle system infrastructure needs and each SOTC Report reports on implementation progress. Projects selected as infrastructure needs connect to or are on the managed system network identified in the original 2009 CSMP and are included in Tables 1, 2, and 3.

The sources used for the identification of improvement needs were the 2035 SACOG Metropolitan Transportation Plan (MTP), 2035 Placer County Regional Transportation Plan (RTP), the Sacramento Regional Transit District 10-Year Capital Improvement Plan and 5-Year Capital Improvement Plan Master List of all Projects 2010-15, the Sacramento Regional Transit (SacRT) Action Plan, the Yolo County Transit District Long-Range Plan 2009-10 and 2018-19, the SACOG 2011 Regional Bicycle, Pedestrian, and Trails Master Plan, 2011 Sacramento County Bicycle Master Plan, the 2035 Placer County Regional Transportation Plan, and the 2009 Interstate 80 and Capital City Freeway CSMP.

Table 1: I-80/SR 51 CSMP Transit System Needs Update

Transit Operator	Project Description	Total Cost Estimate (1,000s)	Implementation Status
Sac RT	Light Rail (LR) Transit Blue Line extension to Citrus Heights (Tier 3 project in Transit Action Plan)	\$384,000	SacRT Transit Action Plan Proj ID:R310, not in 2035 SACOG MTP
Sac RT	LR Transit Blue Line extension to Roseville (Tier 3 project in Transit Action Plan)	TBD	SacRT Transit Action Plan Proj. ID: R312, not in 2035 MTP
SACOG	Connect Card (Universal Transit Fare Card or CC) implementation throughout the SACOG region	\$10,919	2035 SACOG MTP complete by 2020. Project in final system design; SacRT preparing LR stations to support CC infrastructure.
Roseville DPW	Improvements to Sierra Gardens Transfer Point, including new bus turn-outs, shelters, restrooms, landscaping, lighting, crosswalks, sidewalks, and other pedestrian improvements	\$2,542	2035 PCTPA RTP. City of Roseville plans on moving forward with engineering/environmental in 2014, and construction in 2015. Absent cost estimates based on construction drawings, their intention is to stay within the funding secured through FTA 5307 and LTF.
Roseville DPW	1. Bus stop, bike and pedestrian improvements along Riverside Av./Vernon St., Royer Park and Dry Creek Greenway and completion of bike trail segment; 2. Transfer point improvements to Sierra Gardens Transfer Point; 3. Includes bike lockers at various transfer points.	\$1,398	2035 PCTPA RTP . Vernon Street project is complete. Riverside Avenue is primarily done – there is a remainder amount of funding that will be used to install bike lockers at various transit transfer points within 2013.
PCTPA & Sac RT	I-80 BRT 1 & 3, Phase 1: Add BRT along Watt/80 LRT, SR 65, Roseville Galleria, Blue Oaks, Foothills, Sunset, and proposed CSU, in Placer County and along Sierra College Blvd.	\$4,755 (ph. 1 capital cost only)	2008 South Placer County Bus Rapid Transit Service Plan. City of Roseville is working to retain R/W as new development occurs along the potential BRT corridors, but funding and project status will need input from PCTPA when it occurs.
PCTPA	I-80 BRT-1: Add BRT along Watt/80 LRT, SR 65, Roseville Galleria, Blue Oaks, Foothills, Sunset, and proposed CSU, in Placer County; BRT -2: Add additional BRT routes along Watt Av.; and BRT 3: Add routes along Sierra College Blvd.	\$243,906 (Full build-out all 3 phases)	2008 South Placer County Bus Rapid Transit Service Plan. City of Roseville is working to retain R/W as new development occurs along the potential BRT corridors, but funding and project status will need input from PCTPA when it occurs.
Sac RT	Antelope Hi-Bus/BRT Corridor: Extend light rail from Watt Ave to Antelope Rd (Tier 2 project in Transit Action Plan)	\$23,861	Light Rail Transit Blue Line extension to Citrus Heights, not in 2035 MTP
City of Rocklin	Rocklin Rd adjacent to the UPRR tracks: Construct approximately 105 additional spaces, including lighting and landscaping, to the existing parking lot at the existing Rocklin Multi- Modal station	\$1,080	Phase 1 Completion date: 2014 (55 spaces), Phase 2 Completion date: 2015: (50 spaces)

Table 2: I-80/SR 51 CSMP Bicycle System Needs Update

County	Project Description	Total Cost Estimate (1,000s)	Implementation Status
YOL	Class I Bike Path from Sacramento/Reed Ave to Yolo Causeway	\$1,500	Completed in 2011
SAC	Auburn Blvd, Class II Bike Lane from Howe Ave to Citrus Heights city limits	\$1,831	2011 Sacramento County Bicycle Master Plan (SCBMP), not funded
SAC	I-80/UPRR-Roseville Rd Overcrossing (OC): Construct pedestrian and bicycle crossing	TBD	2011 SACOG Regional Bicycle & Pedestrian Master Plan (RBPMP)
SAC	I-80/W of Madison Av. Bicycle/Pedestrian OC, study only	\$550	2035 SACOG MTP complete by 2035, not funded
SAC	I-80/Foothill Golf Center OC: Construct pedestrian and bicycle crossing	TBD	2011 RBPMP
SAC	I-80/Saybrook/Misty Creek OC: Construct pedestrian and bicycle crossing	\$15,000	2035 SACOG MTP complete by 2035, not funded
SAC	Arcade Creek Path, Class I Bike Path between Winding Way and Citrus Heights city limits	\$11,368	2011 SCBMP, Feasibility Study in progress near American River College

Table 2: I-80/SR 51 CSMP Bicycle System Needs Update (continued)

County	Project Description	Total Cost Estimate (1,000s)	Implementation Status
SAC	Roseville Rd, Class II Bike Lane from Sacramento city limits to Antelope Rd	\$1,014	2011 SCBMP, not funded
SAC	Roseville Road, Class II Bike Lane from Antelope Rd to Roseville city limits	\$512	2011 SCBMP, not funded
SAC	Winding Way, Class II from Auburn Bl. to San Juan Av.	\$968	2011 SCBMP, not funded
SAC	SR 51 /Sutter's Landing: Construct bicycle and pedestrian bridge	\$30,000	2011 RBPMP, not funded
PLA	Dry Creek Greenway Trail in Roseville, Class I Bike Path along Dry, Cirby and Linda Creeks	\$2,266	2035 PCTPA RTP Preliminary design and environmental is underway. Funds are being sought for construction.
PLA	I-80 to Royer Park Class I Bike Path Phase 2 – Segment 2	\$414	2035 PCTPA RTP
PLA	I-80 to Royer Park Class I Bike Path Phase 2 – Segment 3	\$938	2035 PCTPA RTP

Table 3: I-80/SR 51 CSMP Rail Needs Update

County	Project Description	Total Cost Estimate (1,000s)	Implementation Status
YOL	Capitol Corridor: Provide crossover point to allow greater dispatching and increase track capacity	\$5,000	Completed in 2011, for \$5,150,000
SOL to PLA	Capitol Corridor Rail replacement and expansion: Davis to Colfax	\$204,125	Conceptual Project
SOL to PLA	Sacramento Intermodal Transportation Facility Phase 2: Incorporate components such as a transit way and circulation, site and parking improvements, passenger amenities and refurbishing of the depot to foster greater use of the building.	\$29,100	2035 SACOG MTP complete by 2020
SOL to PLA	Capitalized Maintenance Phase 3: Tie tamping and general track maintenance.	\$8,000	Conceptual Project
SAC-PLA	Sacramento to Roseville 3 rd Main Track	\$270,000	PA&ED began in 2011, PS&E programmed in STIP for FY2014/15

Moving Forward

Implementation of 2009 I-80/SR 51 CSMP Strategies:

During the development of the 2009 CSMP a number of strategies were identified to assist in the effort to enhance corridor mobility. The following strategies listed in Table 4 are a subset of the original strategies that were implemented from July 1, 2011 through December 31, 2011. The implementation actions do not represent the final enactments of individual strategies, but are part of the ongoing long-term implementation progress.

Table 4: I-80/SR 51 CSMP Strategies

Strategy	Description	Implementation Status	Implementation Challenges
Maintain and operate the existing corridor multi-modal transportation infrastructure.	Maintain the existing investment for all modes of the transportation system and provide adequate resources for daily operations, including operating subsidies for transit services.	Close coordination between Planning & Traffic Operations to identify detection need locations. Incorporated corridor needs into 3-Year PID Program, TSDP, and seeking funding opportunities.	Funding availability, funding competition within the region.
Construct planned and programmed key capital projects along the State Highway System and parallel roadways that serve to reduce congestions along I-80	Implementation of the capital improvements identified in the 2009 CSMP Key Programmed and Planned Project lists and approved in the regional transportation plans for all transportation modes within the scope, schedule, and cost specified.	Completed widening of ramps and adding traffic signals to the I-80/West El Camino interchange. Completed improvements to the I-80/Eureka Road interchange.	Funding availability, funding competition within the region
Fully coordinate the delivery of transportation services and facilities in the corridor, including daily operations and system planning for enhancements.	Interagency operational coordination to maximize the efficiency and effectiveness of all modes operating in the corridor with a focus on the CSMP transportation network defined in this CSMP. Use of an existing group or committee to provide initial oversight for this strategy.	Developed the 2012 I-80/SR 51 SOTC report.	Diverse interests and competing priorities and limited resources.
Complete Bus/Carpool lane network.	Complete the regional express bus/carpool lane network, including freeway-to-freeway HOV lane connectors.	Completed the I-80 HOV Lanes "Fixing the Bottleneck" Phases 2 and 3, and continued work on the I-80 "Across the Top" HOV Lanes Project.	Funding availability, funding competition within the region. Public agency and public acceptance of network.
Expand P&R lots at key locations	Add additional capacity to existing Park and Ride (P&R) lots at or approaching capacity near transit stations and other locations.	Updated the gap analysis for transit and bicycle projects for inclusion into the 2012 SOTC reports. Transit gap analysis includes P&R lots.	Funding availability, funding competition within the region, and available land.
Improve bike-pedestrian access in the CSMP transportation network.	Construct additional bicycle paths / lanes, and related improvements to improve access and connectivity to transit, P&R lots, and destination points.	Updated the gap analysis for transit and bicycle projects for inclusion into the 2012 SOTC Report.	Funding availability and funding competition within the region.

Traffic Operational System (TOS) Improvements and Intelligent Transportation Systems (ITS) Plans and Studies:

The primary and highest priority method for I-80/SR 51 corridor system management is the development, implementation, and use of system and operational management strategies to facilitate efficient and effective transportation network use. These strategies include TOS projects such as ramp metering, auxiliary lanes, transition lanes, bus/carpool (a.k.a. HOV) lanes, and short mixed flow lane extensions, and ITS projects such as Closed Circuit Television Systems, Changeable Message Signs, Blue Tooth Readers, Highway Advisory Radio, and Traffic Monitoring Stations. Plans and studies are utilized to identify needed TOS and ITS improvements. Several plans and studies underway are as follows:

District 3 ITS/Operational Improvement Plan: An improvement plan will be prepared that will identify and prioritize new TOS and ITS projects for urban highway corridors within District 3. TOS and ITS improvements utilize very low cost strategies that allow the system to operate at optimal performance without adding significant through-capacity. Currently, there are numerous individual TOS and ITS plans that were prepared by different District 3 Divisions, Caltrans Headquarters, and various local and regional agencies. The purpose of the Plan will be to provide a unified document that can be used by all District Divisions, and local and regional agencies for programming and deployment of projects identified in the Plan.

SR 51 Preliminary Investigation: A development plan is currently being prepared that is identifying and prioritizing needed TOS and ITS improvement projects along SR 51 from US 50 to I-80, including ITS, bus/carpool and auxiliary lanes,

and widening of the American River Bridge. The plan will include a project delivery phasing plan that identifies and prioritizes capital projects. Once the plan is completed, the highest priority projects will be pursued based on funding availability.

I-80/US 50 Davis to Downtown Sacramento Feasibility Study: A feasibility study began in December 2011 to identify and analyze congestion relief mobility enhancement projects on I-80 from the Solano/Yolo County line to US 50 and on US 50 from I-80 to the Yolo/Sacramento County line. Some of the projects that will be analyzed include bus/carpool lanes, auxiliary lanes, mix flow lanes and ramp meters. Once the analysis is completed, a phasing plan will be developed and the identified projects will be programmed based on the priority status and funding availability. The study is scheduled for completion by June 2013.

Project Initiation Documents (PID) Work Program for Corridor Projects: The District’s System Planning process identifies a spectrum of projects to address deficiencies on the transportation system. The bridge between the identification of needed system improvements and the actual programming (funding) of these projects is the PID. The PID provides refined information regarding the specific scope, schedule, and cost of the proposed improvement, thereby providing critical information for decision makers and assuring the efficient delivery of capital improvement projects. The selection of PIDs for development and inclusion in the annual 3-Year PID Work Program is based on the prioritization of the project through the System Planning process, a comprehensive dialogue with our local and regional partner agencies, and the likelihood of the project being programmed for at least project development work. Before a project can be programmed to receive funding for project development and construction, a PID must first be prepared. High priority projects included in the 2009 I-80/SR 51 CSMP as well as new projects that may be identified in aforementioned plans and studies are included in the 3-Year PID Work Program. TOS and ITS projects being considered for inclusion into the Work Program are listed in Table 5.

Table 5: Proposed PID Work Program

Non-SHOPP (Lead Agency)	Project Description	Total Cost Estimate (1,000s)	Estimated PID Completion Year
Caltrans	Caltrans preliminary investigation to determine operational strategies and capital projects to reduce congestion on I-80 from Davis to Downtown	TBD	2014
Placer County	I-80/Rocklin Road: Reconstruct interchange	\$38,800	2012
SHOPP	Project Description	Total Cost Estimate (1,000s)	Estimated Completion Year
Caltrans	I-80 in West Sacramento at Sacramento River Bridge: Replace bearing pads/cables	\$15,600	2013
Caltrans	Detection Repair and Upgrade Communications at 178 locations on Routes 5, 65, 80, 50, 51, 89, 99	\$2,700	2013
Caltrans	CCTV Camera System Upgrade at 80 locations on Routes 5, 65, 80, 50, 51, 89, 99	\$1,900	2013
Caltrans	HAR Upgrade at 25 locations on Routes 5, 65, 80, 50, 51, 89, 99	\$1,500	2013
Caltrans	RWIS Upgrade at 18 locations on Routes 5, 65, 80, 50, 51, 89, 99	\$1,500	2013
Caltrans	Upgrade CMS panels to LED at 40 locations on Routes 5, 65, 80, 50, 51, 89, 99	\$2,600	2014

Micro-simulation Modeling:

Since the beginning of the development of the CSMPs, Caltrans has been developing micro-simulation traffic models for several CSMP corridors, including the I-80/SR 51 corridor. These CSMP models include a calibrated 2006 base model, a future 2020 No Build model, and several 2020 scenario models that evaluate the traffic impacts of programmed, planned, and key CSMP projects. Caltrans is now in the process of using these models for feasibility studies that will analyze the traffic impacts of specific projects. The models will also allow Caltrans to evaluate project sequencing and prioritization strategies.