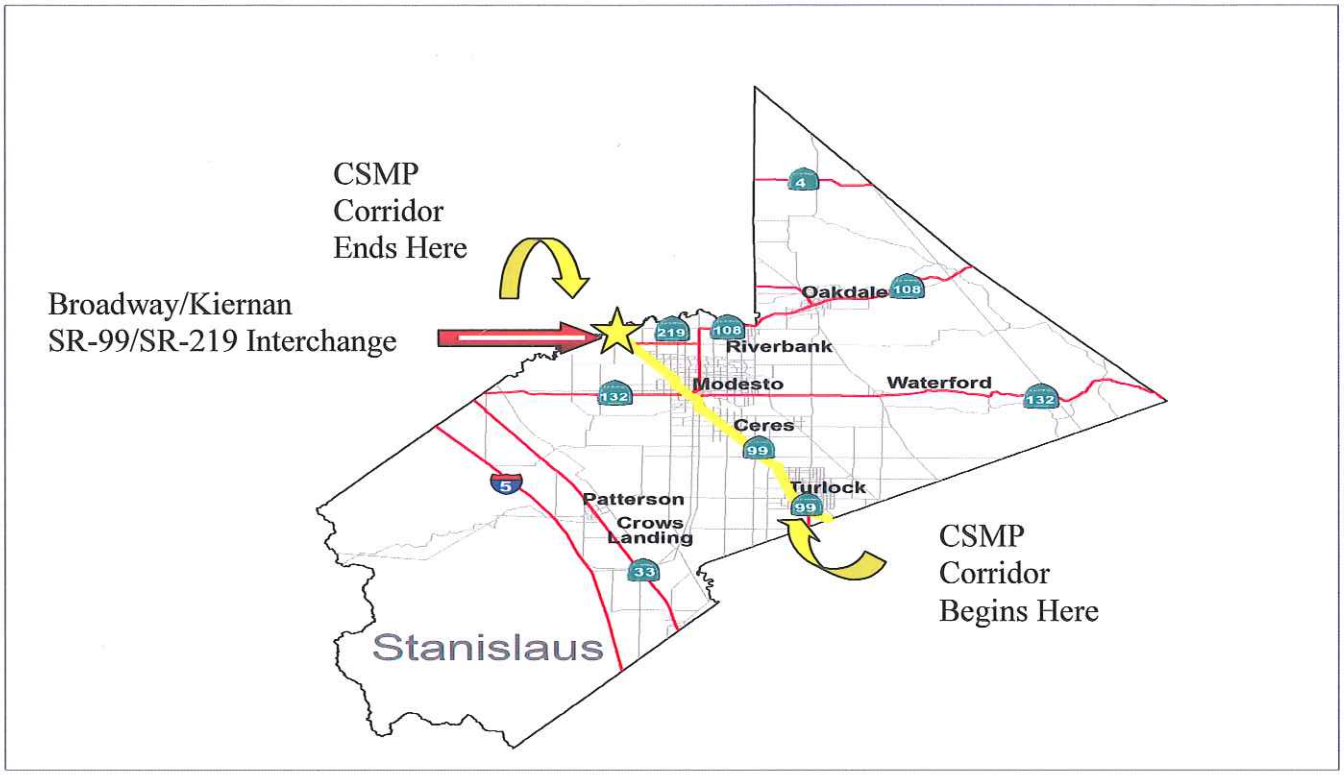
State Route 99
Stanislaus County
Corridor System Management Plan



April 2011

District 10
State Route 99
Corridor System Management Plan
Post Mile: R0.00 through R24.749

Recommend Approval:

Ken Baxter 4/15/11

KEN BAXTER ***Date***
Deputy District Director Planning and
Local Assistance
California Department of Transportation
District 10

Recommend Approval:

Dennis T. Agar 4/15/11

DENNIS T. AGAR ***Date***
Deputy District Director
Maintenance and Traffic Operations
California Department of Transportation
District 10

I approve this Corridor System Management Plan as the overall Policy Statement and Strategic Plan that will guide transportation decisions and investments for this State Route 99 Corridor.

Carrie L Bowen 4/26/11

CARRIE BOWEN ***Date***
District Director
Caltrans – District 10

Vincent D Harris May 6, 2011

VINCE HARRIS ***Date***
Executive Director
Stanislaus Council of Governments

Prepared in cooperation with:

CITY OF CERES TOGETHER WE ACHIEVE

CITY of MODESTO

Stanislaus County

CITY OF TURLOCK INC. 1908

Caltrans

StanCOG Stanislaus Council Of Governments

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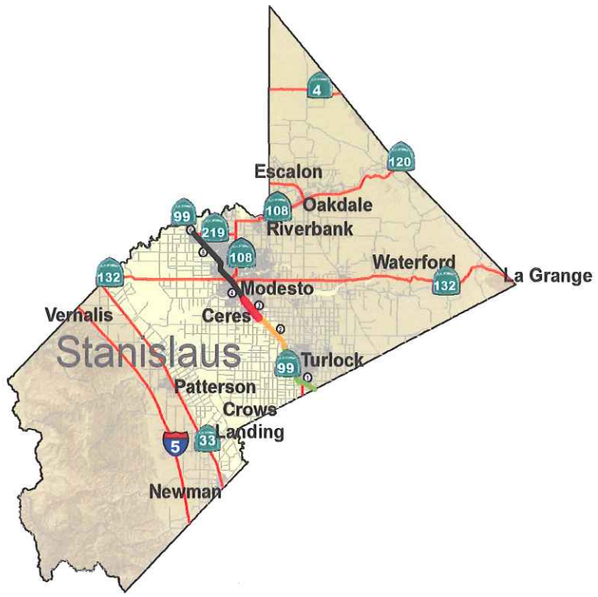
The purpose of this Corridor System Management Plan (CSMP) is to determine the concept facility improvements within the twenty year planning horizon (2030), to define the Ultimate Transportation Corridor (UTC) needed for the preservation of future right of way (ROW) within the SR-99 corridor in Stanislaus County beyond the twenty year planning horizon, and to develop congestion management strategies to maintain an appropriate Level of Service (LOS) without resort to future investment in capacity increasing improvements. SR-99 is a High Emphasis and Focus Route on the Interregional Road System (IRRS), and the concept LOS standard for facilities with this designation is 'C' for rural and 'D' for urban.

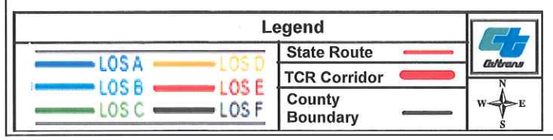
This CSMP outlines the necessary and needed facilities and route management efforts needed to retain the system operations relief provided by the construction of the SR-99/ Kiernan Avenue Interchange. The interchange is a programmed project with the intended benefit of reduced traffic congestion, improved operations, and increased vehicle capacity. The current LOS for the interchange is 'E'/'F' during peak traffic hours. The project proposes widening current on- and off-ramps, improving local road intersections adjacent to the project, and installation of auxiliary lanes. The CSMP will benefit additional interchange projects upon the project corridor.

Consideration is also given to the effect that the North County Corridor (NCC) may have on congestion management. The high-priority 25 mile project, would connect SR-99 to SR -120 near Oakdale. The NCC is currently undergoing environmental analysis and one alternative under consideration is to employ the SR 99/SR 219 Interchange. The NCC will construct a two to six lane west to east expressway which would improve and modify circulation on the regional transportation network, alleviate traffic congestion on local streets and roads, and in turn reduce traffic delays. This would accommodate future development and population growth and would benefit local and regional commerce with improvements to freight traffic; and which would enhance commuter safety.

Current or future LOS for all highway segments on SR-99 were found to be below LOS 'D' before 2030, see Figure ES-1 on page 8. The concept facility to address this deficiency is to construct an eight lane freeway with recommended High Occupancy Vehicle (HOV) lanes with ramp metering. Although the concept facility demands a twelve to ten lane freeway, expansion will require further study. Current planned projects include capacity increasing projects on segments of SR-99 beginning from Hatch Road north to the San Joaquin County Line, with construction dates slated for the year 2027. These projects anticipate widening the existing facility to eight lanes which will potentially require HOV lanes and ramp metering. Available studies beyond the 2030 planning horizon of this document have not been completed, so there is no available UTC determined. Currently, there are no capacity increasing projects planned for the segment of SR-99 south of Hatch Road.

With construction of the programmed and planned intersection and capacity increasing projects within the SR-99 segment, ramp metering can be implemented, along with an expansion and enhancement of the network of Intelligent Transportation System elements. Traffic incident response will be constrained as available parallel facilities with comparable capacities for commuter and truck traffic within a short travel time are currently limited to local roads and streets, but may improve with the construction of the NCC.





STANISLAUS COUNTY
SR-99 CORRIDOR SYSTEM MANAGEMENT PLAN (CSMP)
EXISTING AND FUTURE CONDITIONS
EXECUTIVE SUMMARY

Table ES-1: Projected Changes in Segment Level of Service on SR-99

LOS and Concept Facility Needs									
Segment	SR-99 Post Mile	Description	Existing Facility	LOS w/ Existing Facility (2007)	LOS w/Existing Facility (2015)	LOS w/ Existing Facility (2030)	Rural/ Urban	Concept LOS	Caltrans Concept Facility (Lanes)
1	0.00-08.16	Merced County Line to 0.4 miles north of Keyes Road	6F	C	E	F	U	D	10-F*
2	8.16-10.90	0.4 miles north of Keyes Road to 0.3 miles North of Service Road	6F	D	F	F	U	D	10-F*
3	10.90-13.26	0.3 miles north of Service Road to Hatch Road	6F	E	F	F	U	D	10-F*
4	13.26-16.12	Hatch Road to JCT SR-132	6F	F	F	F	U	D	12-F*
5	16.12-22.55	JCT Sta-132 to JCT SR-219	6F	F	F	F	U	D	12-F*
6	22.55-24.74	JCT SR-219 to San Joaquin County Line	6F	F	F	F	U	D	12-F*

*Not feasible with existing ROW.

Table ES-2: Projected Changes in Traffic Volume 2007-2030 for SR-99

Traffic Volumes												
Segment	SR-99 Post Mile	Description	2007 AADT	2015 AADT	2030 AADT	2007.. Peak Hour Volume	2015 Peak Hour Volume	2030 Peak Hour Volume	Truck Volume (2007)	5- Axle Truck Volume (2007)	Truck Volume Peak Hour %	Truck Volume % of Total ADT
1	0.00-08.16	Merced County Line to 0.4 miles north of Keyes Road	78,620	97,230	146,800	8,335	10,300	14,970	13,360	8,310	12.8	17
2	8.16-10.90	0.4 miles north of Keyes Road to 0.3 miles North of Service Road	105,800	125,050	173,680	9,630	11,380	15,800	13,380	8,830	9.5	12.6
3	10.90-13.26	0.3 miles north of Service Road to Hatch Road	104,430	121,620	161,870	10,130	11,800	15,700	13,900	8.835	5.6	12.8
4	13.26-16.12	Hatch Road to JCT SR-132	116,820	135,080	177,340	11,450	13,240	17,380	14,600	9,350	9.5	12.5
5	16.12-22.55	JCT Sta-132 to JCT SR-219	125,780	145,060	189,520	12,830	14,800	19,330	16,980	10,780	10.1	13.5
6	22.55-24.74	JCT SR-219 to San Joaquin County Line	115,560	139,860	201,390	10,515	12,730	18,320	15,600	9,905	10.1	13.5

April 2011

1. Introduction and Background

SR-99 Near Broadway/Kiernan Avenue Interchange

1.1 Introduction

A CSMP provides for the integrated management of travel modes and roadways in order to facilitate the efficient and effective movement of people and goods within our most congested transportation corridors. Based on the integration of system planning and system management, each CSMP analyzes existing and future traffic conditions and proposes transportation management strategies, capital and operational improvements to maintain and enhance mobility within each corridor.

1.2 Route 99 Overview

State Route 99 begins at Interstate 5 (I-5), near the base of the Tehachapi Mountains in Kern County, passes through the counties of Tulare, Fresno, Madera, Merced, Stanislaus, San Joaquin, Sacramento and Sutter counties, and ends at SR-36 near Red Bluff in Tehama County.

SR-99 serves the primary population centers in the San Joaquin Valley (SJV), as well as much of the rural agricultural areas. It is the major transportation backbone for the movement of agricultural products and other commercial goods, and also serves as a

major link for recreation-bound traffic. SR-99 is the primary link that connects the SJV with the Sacramento metropolitan area and, via I-5, with the Los Angeles area. In its capacity as an interregional thoroughfare for the movement of people and goods, it is critical to the economic vitality of the State.

This SR-99 CSMP focuses on the portion of state highway that is between the Merced County Line and the San Joaquin County Line within Stanislaus County. This CSMP encompasses the existing urban land uses along SR-99 and it identifies the transportation-related needs along the corridor for congestion relief, improvement in the movement of goods, and the promotion and enhancement of economic development.

1.3 Purpose and Need

Over the next 30 years, California's population is expected to increase by an average of 500,000 residents per year. This means by 2020, the State's population will reach nearly 44 million, and by 2030, nearly 48 million. The preparation of the CSMP is a California Transportation Commission (CTC) requirement for the use of "Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006" funds, approved by the voters as Proposition 1B on November 7, 2006. The purpose of the CSMP is to reduce congestion within the SR-99 CSMP corridor limits, improve safety, and to preserve the mobility gains of the Proposition IB investments. Since the funding of the Proposition 1B Transportation Bond Act State Route 99 funds, there was achieved some fund savings, and it is anticipated a portion of these savings fund the SR-99/Kiernan Avenue Interchange Reconstruction Project. This improvement project in Stanislaus County is funded through this program: *The SR-99/Kiernan Interchange Reconstruction Project – construction to begin in 2012.*

1.4 Stakeholder Participation

The CSMP for SR-99 was prepared by Caltrans Planning staff in cooperation with the regional and local agencies that have jurisdiction within this corridor. The development and successful implementation of this CSMP is dependent upon the participation and cooperation of all stakeholders. This consists of Caltrans District 10 Planning, Traffic Operations, Traffic Safety, Maintenance, and Program Project Management and the Office of System and Freight Planning in Headquarters. Also included are Stanislaus Council of Government (StanCOG), Stanislaus County and the cities of Modesto, Turlock and Ceres.

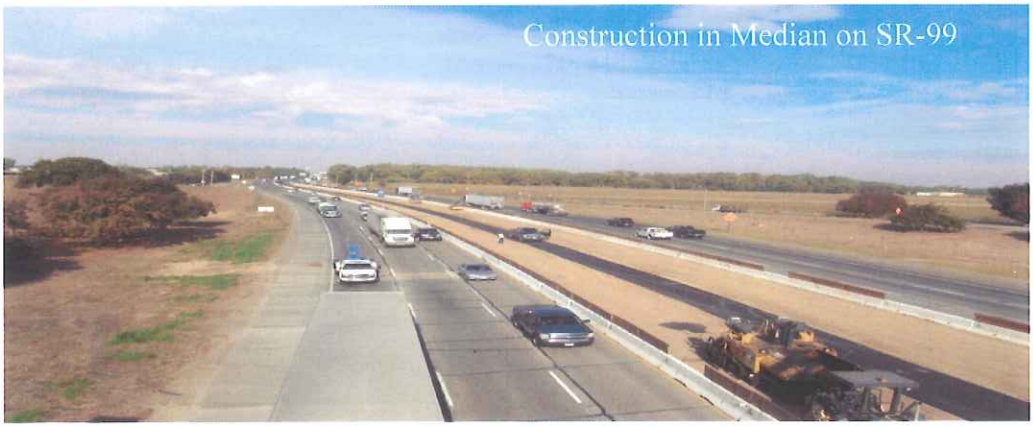
A project development team of key stakeholders formed and meets periodically to discuss, provide technical assistance, review, and comment on the development of the CSMP. Caltrans District 10 and StanCOG have signed a Letter of Intent to demonstrate the commitment to participate in this collaborative effort. This letter is included in Appendix G.

1.5 What is a Corridor System Management Plan?

A transportation corridor is not limited to the highway but encompasses all jurisdictions and transportation components. This includes the highway system, major local parallel

arterials, local road intersections, ramps, signal controls, transit, bicycle, pedestrian and rail. A CSMP delineates the recommended management strategies for a given transportation corridor. It identifies existing and future bottlenecks, and identifies what system management strategies (in the mobility pyramid) relieve/mitigate them (see Figure 1.6, The System Management Pyramid on the following page). Section 4 of the CSMP provides one unified concept for managing, operating, improving, and preserving a corridor across all modes and jurisdictions for the highest productivity, mobility, reliability, accessibility, safety and preservation outcomes.

The CSMP allows the State, along with the regional agencies and local jurisdictions, to manage and operate the transportation corridor for the highest sustained productivity and reliability based on the assessment and evaluation of performance measures. The strategies include both operational and more traditional longer-range capital expansion strategies. This represents a shift from the traditional approach of identifying localized freeway problem areas and finding solutions that are often expensive and focused on capital improvements. The CSMP approach places greater emphasis on performance assessments and operational strategies that yield higher benefit-to-cost results.



1.6 Consistency with the Governor's Strategic Growth Plan

The Governor's *Strategic Growth Plan* is committed to reducing congestion. The key steps are further described below. Corridor productivity can only be restored and maintained through a coordinated planning and management effort of all transportation partners. This CSMP identifies a number of elements essential for this goal. The System Management Pyramid (Figure 1.6) can best visualize these elements. Each element, while represented separately, works as an essential part of the whole.

1.6.1 System Monitoring and Evaluation

The basic foundation of successful system management is system monitoring and evaluation. This is accomplished through comprehensive performance assessment and analysis. Understanding how a corridor performs and why it performs the way it does is critical to developing appropriate strategies.

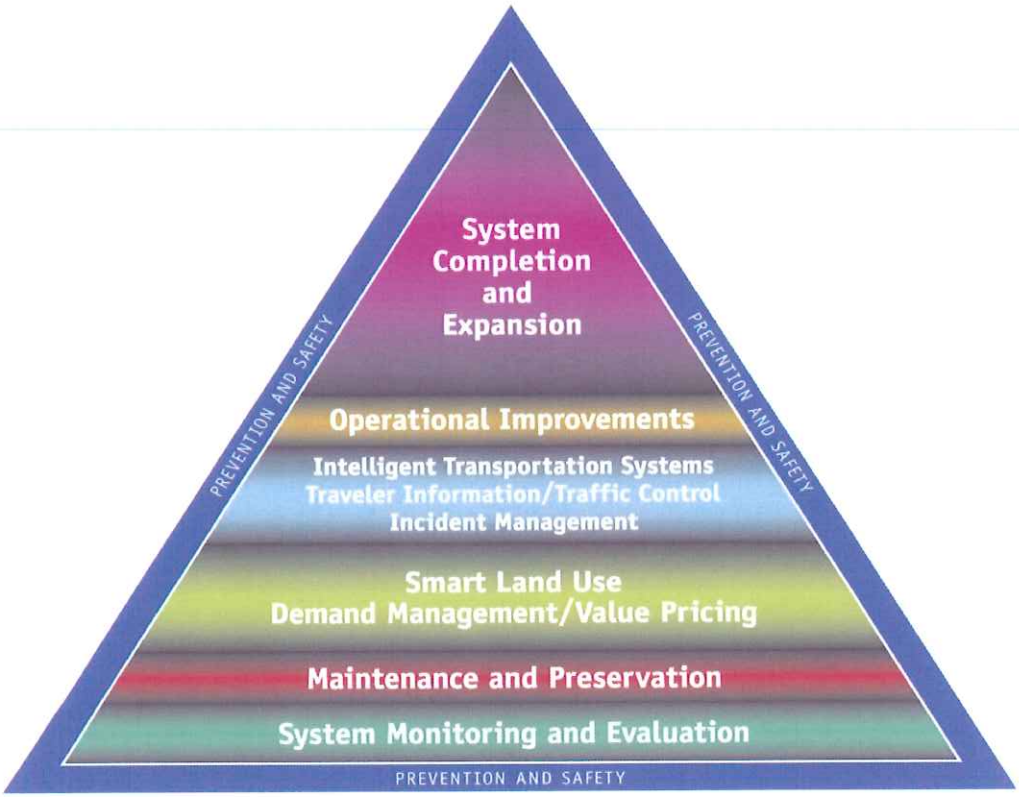


FIGURE 1.6: The System Management Pyramid

The first step in this effort is to analyze the system that we now have available. This will include an analysis of incidents, what types are occurring and their locations, and an identification of current bottlenecks (areas of congestion), their causes, and the impact that these individual bottlenecks have on the whole of the corridor.

The SR-99 CSMP evaluates congestion, delay, safety, and performance of the corridor by analyzing the existing and future LOS and accident rates. It also provides the expected benefits from the Proposition 1B Transportation Bond Act State Route 99 (SR-99/Kiernan Avenue Interchange project).

The CSMP also lists improvements already identified in programming and planning documents that impact SR-99. It is expected that improvements proposed by the CSMP development team will be evaluated and considered at the next available update of planning and programming processes.

1.6.2 Maintenance and Preservation

Maintaining an optimal system will require the participation of all partners. The corridor does not operate in isolation, but is part of an overall transportation/circulation network. All transportation partners must work together to determine the best strategies to maximize operations of the entire system.

1.6.3 Smart Land Use, Demand Management/Value Pricing

Land use decisions are the prerogative of local government. These decisions impact the transportation system. Appropriate planning can reduce this impact. Preserving ROW to allow for future, planned, capacity-enhancing projects will reduce the time to deliver projects and their overall cost. Approving only those developments that are compatible with an adjacent or nearby transportation system, be it a freeway, airport, or transit station, will help to protect the system.

The extent of the usefulness of demand management strategies, and which ones will be most effective, will be part of the process of describing the current system and the current Intelligent Transportation Systems (ITS) components available on the system. Demand Management strategies may be more available to the corridor in the future, depending on the priority placed on ITS by Caltrans and the partner agencies.

1.6.4 Operational Improvements

Operational improvements such as the use of auxiliary lanes, ramp improvements including ramp metering, improved signs and lights, and other system refinements help to reduce delay, and enhance performance.

1.6.5 System Completion and Expansion

System completion and expansion provides the connectivity originally envisioned for the State Highway System (SHS) and expands the overall capacity of the transportation system to accommodate growing demands. These projects include the addition of new highway or roadway lanes, transit facilities and other projects.

While this item is at the top of the System Management Pyramid, the process of system management does not stop here. Effective system management will be an ongoing process, and may in fact begin all over again at the bottom of the pyramid. New needs will be identified; new technology available, and Caltrans and the local partners will need to remain flexible and responsive. The CSMP is to be a living document and must also remain flexible and responsive, with updates as necessary.

2. Route Description

SR-99 begins at I-5, near the base of the Tehachapi Mountains in Kern County, passes through the counties of Tulare, Fresno, Madera, Merced, Stanislaus, San Joaquin, Sacramento, and Sutter and ends at State Route 36 near Red Bluff in Tehama County. This CSMP document covers the portion between the San Joaquin County Line and the Merced County Line.

SR-99 serves the primary population centers in Stanislaus County as well as much of the rural agricultural areas. It is the major transportation backbone for the movement of agricultural products and other commercial goods, and also serves as a major link for recreation-bound traffic. SR-99 is the primary link that connects Stanislaus County with the Sacramento metropolitan area and, via I-5, with the Southern California area. In its capacity as an interregional thoroughfare for the movement of people and goods, it is critical to the economic vitality of the State.

SR-99 is considered the "Main Street" of the SJV and a corridor of statewide and national significance. SR-99 serves an essential connectivity function throughout Stanislaus County. Urban areas tend to be widely separated from one another and SR-99 provides the conduit for travel between many of these communities. Stanislaus County is tied primarily to agricultural production, and SR-99 serves as a "farm-to-market" transportation route. The facility provides mobility of goods and services in a north-south direction throughout the Valley. It is used by interregional travelers, commuters, recreational travelers, and to move goods by truck and rail. SR-99 faces many challenges now, and in the years ahead. The most significant of these include: increases in AADT and truck traffic, encroaching development, and lack of adequate funding. In Stanislaus County the AADT on SR-99 ranges from 78,000 to 125,000 with trucks constituting 12.5– 17 percent of the AADT in some sections.

Merced/Stanislaus County Line – Near Rest Area

2.1 CSMP Corridor Limits

This CSMP begins at the Merced County/Stanislaus County Line and continues to the Stanislaus/San Joaquin County Line. The CSMP corridor is 23.12 miles long traversing through the cities of Turlock, Modesto, Ceres, and Salida. For consistency, CSMP efforts have been coordinated across jurisdictional boundaries. This CSMP document is filling the gap in Caltrans District 10 where two CSMP's were completed for SR-99: (1) for the Merced Area, from the Junction of SR-152 in Madera County south of the City of Chowchilla to the Junction of SR-165 in Stanislaus and (2) in San Joaquin County from the Stanislaus/San Joaquin County Line to the San Joaquin/Sacramento County Line.

2.2 CSMP Corridor Width

In further defining the CSMP corridor, all parallel facilities within approximately one-mile parameter of SR-99 and all modes of transportation serving SR-99 will be included. Transit lines run the entire length of the CSMP corridor, there are three park and ride lots along the corridor, and the Modesto Airport and major inter-modal facilities are in close proximity. SR-99 connects with SR-120 in Manteca to serve as the major connector to I-205/I-580 and to the San Francisco/San Jose/Bay Area with additional connections via SR-132 in Modesto and SR-165 in Turlock. A description of the land uses located near the SR-99 corridor and development projects impacting the CSMP corridor are provided in Section 2.11 (see page 35).

2.3 Existing Facility

Within the CSMP corridor, SR-99 is a six lane freeway from the Merced County/Stanislaus County Line to Stanislaus County/San Joaquin Line.

2.4 Route Designation

SR-99 is on the Freeway and Expressway System in its entirety and is part of the National Highway System (NHS). It is on the National Network of the Surface Transportation Assistance Act (STAA), it is an Intermodal Corridor of Economic Significance (ICES) between I-5 South of Bakersfield and SR-50 in Sacramento, and it is designated a "Priority Global Gateway" for goods movement in the Global Gateways Development Program. SR-99 is a designated Strategic Highway Network (STRAHNET) route. The Department of Defense has identified STRAHNET routes as critical for supporting defense requirements and they are mandatory components of the NHS.

SR-99 is identified as a High Emphasis, Focus Route on the Interregional Road System (IRRS), making it eligible for Interregional Improvement Program (IIP) funding as part of the State's 25 percent share of State Transportation Improvement Program (STIP) funds. The Focus Route designation is the highest category of importance on the IRRS. This designation highlights just how critical SR-99 is to interregional travel and the state as a whole. Refer to Table 2.5 for additional information on SR-99 corridor designation.

2.5 Route Functional Classification

The Federal Highway Administration (FHWA) identifies functional classification as a key item in transportation data. Streets and highways are grouped into classes according to the service they provide and this is used in determining federal funding to maintain the roads. There are three highway functional classifications: arterial, collector, and local roads. All streets and highways are grouped into one of these classes, depending on the character of the traffic (i.e., local or long distance) and the degree of land access that they allow. Corridor designation and functional classification of SR-99 through the CSMP corridor limits is identified in Table 2.5 below.

Table 2.5: Corridor Designation and Functional Classification

Segment/ Postmile	Description	Functional Classification	Rural /Urban Urbanized	National Highway System (Y/N)	Freeway/ Expressway System (Y/N)	STRAH-NET (Y/N)	IRRS (Yes: HE=High Emphasis, F=Focus, G=Gateway or No	STAA National Truck Network/ Terminal Access) or No	Scenic (Yes: OD-Officially Designated, E=Eligible) or No	Bike Use Allowed (Y/N)
Seg. 1 R00.00/ R08.16	Stanislaus County Line to 0.4 miles north of Keyes Road	Principal Arterial	Urban	Y	Y	Y	HE/G	Y	N	N
Seg. 2 R08.16/ R10.90	0.4 miles north of Keyes Road to 0.3 miles north of Service Road									
Seg. 3 R10.90/ R13.26	0.3 miles north of Service Road to Hatch Road Overcrossing									
Seg. 4 R13.26/ R16.12	Hatch Road Overcrossing to Jct. 132									
Seg. 5 R16.12/ R22.55	Jct. 132 to E. Jct. Rte 219									
Seg. 6 R22.55/ R24.75	E. Jct. Rte 219 to San Joaquin County Line									

2.5.1 SR-99 Interstate Status

In August 2005, legislation was enacted that designated the section of SR-99 from Bakersfield to Sacramento as a potential future interstate corridor. The statutory language is contained in Section 1304 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). At this time, it is unclear how the existing non-standard features will be addressed.

The regulations do make a "provisional" interstate designation available, provided that the facility is brought up to standards within 25 years. The San Joaquin Valley Regional

SR-99/SR-219 Interchange on Far Western Portion

Transportation Planning executive directors recently conducted a study to determine the economic benefit of designing SR-99 as an interstate corridor.

2.6 Existing Route Concept Facility and Rationale

The route concept is comprised of two factors:

1) The minimum LOS tolerable for peak hour conditions
2) The type of facility necessary to provide the concept LOS
   (Refer to Appendix A-1 for LOS definitions)

The IRRS is a series of interregional state highway routes outside urbanized areas that provide access to, and links between, the State's economic centers, major recreational areas, and urban and rural regions. The concept LOS for an IRRS route in rural areas is 'C,' and 'D' in urban and developing areas. The concept LOS for routes that are not on the Interregional Road System is 'D.' The Interregional Transportation Strategic Plan for the entire SR-99 route is to provide a four to eight lane freeway from south of Bakersfield to the Route 99/70 junction. The concept LOS is 'D' for the entire corridor within Stanislaus County.

Projecting traffic volumes to the year 2030 indicates the need for a twelve lane freeway facility from Hatch Road north to the San Joaquin County Line, and a need for a ten lane freeway facility from the Merced County Line north to Hatch Road. Included in the projected facility are HOV lanes, along with ramp metering.

The UTC is the ultimate facility envisioned beyond the 20-year planning horizon. The UTC is identified to assist in the preservation of adequate ROW to accommodate future widening. The UTC for SR-99 is consistent with the concept facility (see page 44).

Keep in mind that the Concept Facility and the UTC only represent the future needs and may not represent future improvements that remedy deficiencies in a corridor.

2.7 CSMP Transportation Network

The CSMP transportation network includes all modes of transportation: The SHS, major connecting arterials and parallel roads, rail and transit, park and ride lots, and bike and pedestrian routes.

2.7.1 State Highways, Connecting Routes

State highways serve to facilitate faster travel between adjacent cities and for longer distance inter-regional travel. The following interstates and highways connect with SR-99 along the CSMP corridor:

- Interstate 5 (I-5) alignment parallel to the CSMP corridor throughout Stanislaus County.
- State Route 165 (SR-165) alignment perpendicular to the CSMP within Stanislaus County.
- State Route 132 (SR-132) alignment perpendicular to the CSMP within Stanislaus County.
- State Route 219 (SR-219) alignment perpendicular to the CSMP within Stanislaus County.
- State Route 108 (SR-108) coincides with the north/south junction in Modesto.

2.7.2 CSMP Transportation Network - Transit, Park and Ride, Bikeway Facilities and Passenger Rail

2.7.2.1 Transit

Communities in Stanislaus County adjacent to the corridor are served by four separate transit services operated by the following providers:

Stanislaus Regional Transit (StaRT)
- http://www.srt.org/

Modesto Area Express (MAX)
- http://www.modestorareaexpress.com/

Ceres Area Transit (CAT)
- http://www.ci.ceres.ca.us/CeresAreaTransit/CAT.html

Bus line Service of Turlock (BLAST)
- http://www.transitunlimited.org/Bus_Line_Service_of_Turlock

SR-99 Existing Park and Ride Ahead

2.7.2.2 Park and Ride

Currently there are three existing park and ride lots on SR-99 in Stanislaus County. They are located at Sisk Road at the Vintage Fair Mall; and, at SR-99 and I Street and 6th Street in Modesto and at SR-99 and Pelandale Road at the Denny's parking lot. All are privately owned. The existing park and ride facilities along the SR-99 corridor are listed in Table 2.7.2.2a below.

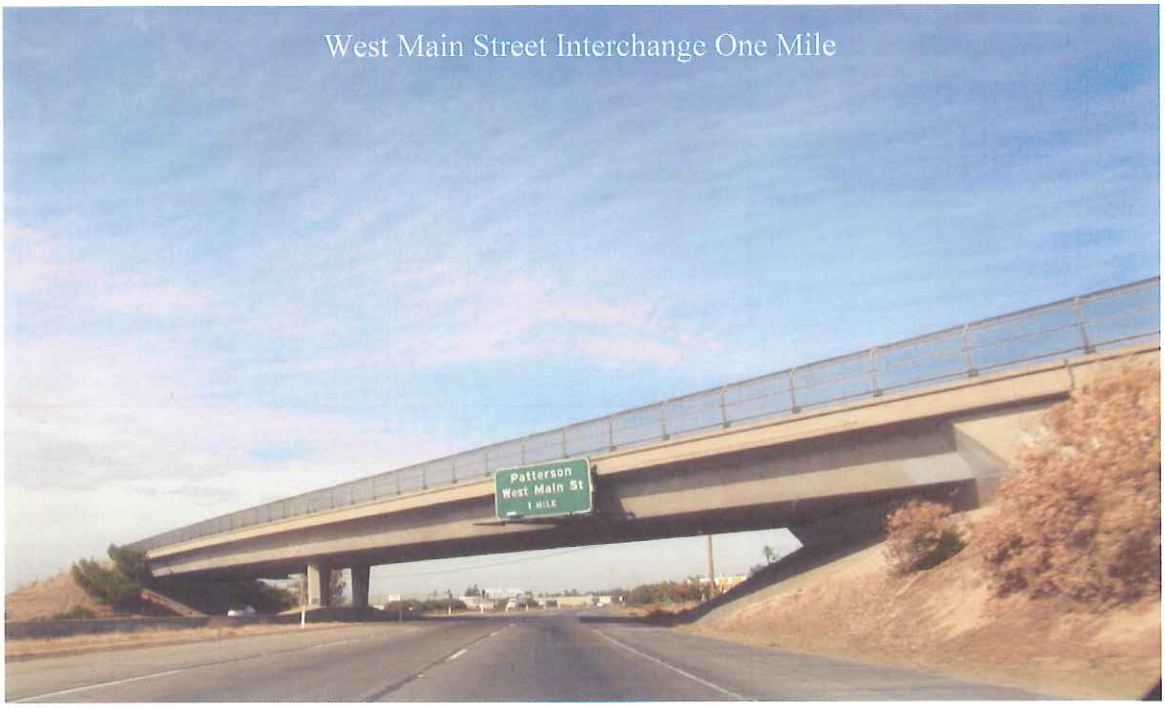
Table 2.7.2.2a: Existing Park and Ride Facilities

Post Mile	Location	Spaces
15.85	SR-99 and I St./6th Street in Downtown Modesto	80
20.60	SR-99 East/Sisk Road (Vintage Faire Mall) in Modesto	135
21.743	Denny's Restaurant 4325 Salida Boulevard, Salida (lease agreement) at Pelandale	50

According to the StanCOG Park and Ride Plan, there are locations that require park and ride lots as a condition of new interchange projects or new development along SR-99. In order to provide easy access for transit buses through park and ride areas, new park and ride facilities should be located in areas that meet requirements for transit bus accessibility and maneuverability. The planned park and ride facilities along SR-99 are listed in Table 2.7.2.2b on the following page.

Table 2.7.2.2b: Planned Park and Ride Facilities

Post Mile	Location
3.45	SR-99 and West Main Street in Turlock
6.75	SR-99 and Taylor Road in Turlock
11.91	SR-99 and Whitmore Avenue in Ceres
13.26	SR-99 and Hatch Road in Ceres
18.52	SR-99 and Briggsmore Avenue/Carpenter Road in Modesto
20.22	SR-99 and Beckwith Road/Standiford Avenue in Modesto
21.74	SR-99 and Pelandale Avenue in Modesto
24.27	SR-99 and Hammett Road in Salida



2.7.2.3 Bikeway and Pedestrian Facilities

Caltrans views all transportation improvements as opportunities to improve safety, access and mobility for all travelers in California and recognizes bicycle, pedestrian and transit modes as integral elements of the Deputy Directive 64-R1, *Complete Streets-Integrating the Transportation System,* as policy to develop integrated multimodal projects in balance with community goals, plans and values. The connectivity of all modes of transportation including bikeway and pedestrian facilities should be considered when planning improvements along SR-99. Typically, if there are no alternative routes available for bicycles, bicycle access is permitted on freeways. Pedestrians are generally not permitted on freeways where bicycles are allowed. Bicycles are not allowed on SR-99. The Stanislaus Council of Governments Regional Bicycle Action Plan adopted in July of 1996 and updated in 2008, developed goals, objectives and policies that are intended to implement the Regional Bicycle Transportation Master Plan. This plan serves as a blueprint, bringing together the needs, costs and benefits of expanded bicycle facilities as part of Stanislaus County Regional Transportation System. According to 2000 US Census data, bicycle commuting in Stanislaus County has declined for the last several

decades. Bicycle commuting shrank from 4.4 percent in 1970 to 0.71 percent in 2000. While the amount of bicycle commuting is falling, Stanislaus County is also reported to have a safety problem for bicycle riders. Unfortunately, although many county residents enjoy recreational bicycling, few chose to use the bicycle for commuting to work. Bicycle use will become safer as more people ride and motorists become accustomed to encountering bicycle riders. Existing bike facilities within the CSMP corridor are found in Table 2.7.2.3a below.

Table 2.7.2.3a: Existing Bike and Pedestrian Facilities Crossing SR-99

Post Mile	Class Type	Location		
		Street Name	From	To
R5.637	Class II	West Monte Vista Avenue	NorthTegner Road	Crowell Road
R4.540	Class II	Fulkerth Road	Dianne Drive	North Daubenberger Road
R11.908	Class III	Whitmore Avenue	Blaker Road	Central Avenue

Planned bicycle facilities within the CSMP corridor are found in Table 2.7.2.3b.below.

Table 2.7.2.3b: Planned Bike and Pedestrian Facilities Crossing SR-99

Post Mile	Class Type	Location		
		Street Name	From	To
Tier 1				
R4.013	Class I	West Canal Drive	SR-99	Tegner Road
R11.908	Class II	Whitmore Avenue	Blaker Road	Mitchell Avenue
R15.665	Class II	G Street	1st Street	9th Street
R21.746	Class II	Pelandale Avenue	SR-99 overpass	SR-99 overpass
R20.222	Class II	Standiford Avenue	Dale Road	Future Brink Road
M18.52	Trail Improvement	Tuolumne River Restoration Project	Mitchell Road	Carpenter Road
Tier 2				
R4.540	Class II	Fulkerth Road	Fulkerth Road	At SR-99
R4.450	Class II	Fulkerth Road	Dianne Road	SR-99
R4.012	Class II	West Canal Drive	SR-99	Tegner Road
R6.750	Class II	Taylor Road	Golden State Boulevard	SR-99

2.7.2.4 Passenger Rail

In 1987, members of the Caltrans San Joaquin Task Force formed a committee to take a more active role in developing suggestions for improving the Amtrak San Joaquin service. This committee, known as the San Joaquin Valley Rail Committee is comprised of representatives from each of the counties served by the trains, and representatives of interested counties served by the connecting bus network. The committee serves as an advisory body to Caltrans and Amtrak on issues pertaining to the San Joaquin rail corridor.

2.7.2.4.1 Amtrak

The Amtrak San Joaquin runs north-south, linking Bakersfield and the Bay Area with stops in Fresno, Madera, Merced, Turlock/Denair, Modesto, Stockton, Lodi and

Sacramento. San Joaquin trains operate six times in each direction 365 days per year. At the present time, four round trips operate daily between the Bay Area and Bakersfield, and two round trips operate directly between Sacramento and Bakersfield. Some portions of the trip may be provided via Amtrak Motorcoach. Adding additional trains to the existing San Joaquin line has been considered.

2.7.2.4.2 High Speed Rail

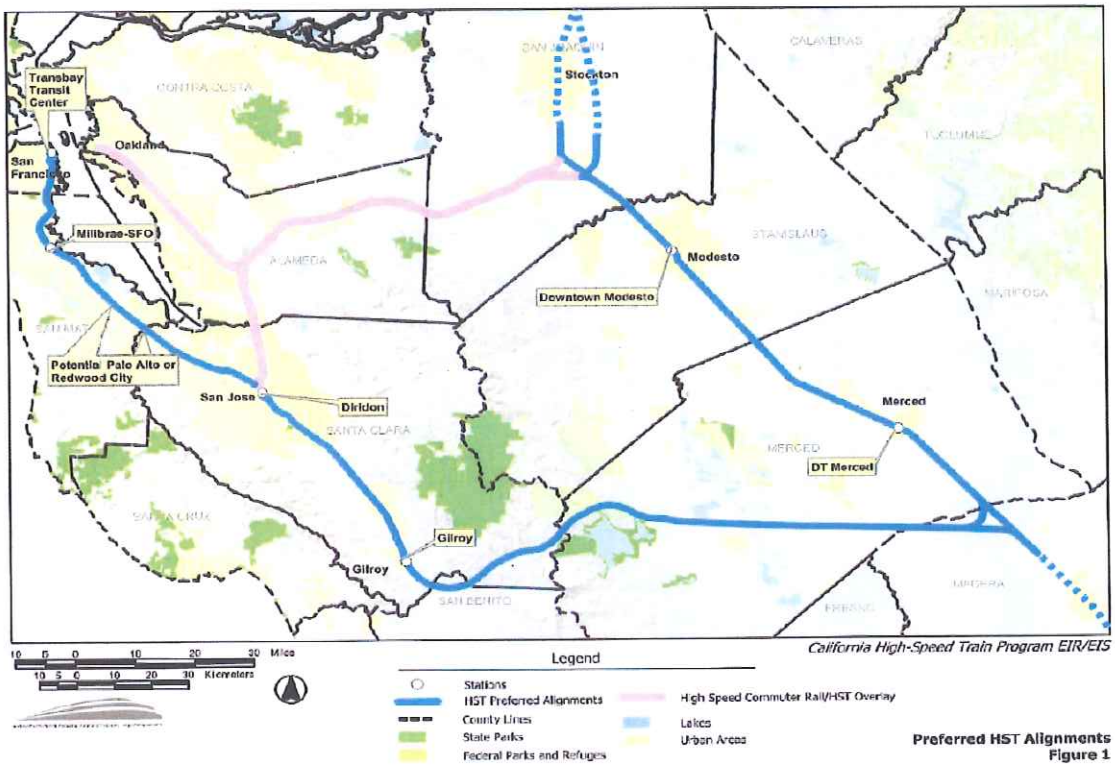


Figure 2.7.3.4.3 Preferred High Speed Rail Alignments

The California High Speed Rail (HSR) Authority is currently studying two separate rail corridors that run along the SR-99 corridor in San Joaquin County. The study areas include the Merced to Sacramento, and the Altamont Corridor sections. Both are Phase II corridors.

Merced to Sacramento

The HSR Authority proposes to construct, operate and maintain an electric powered steel-wheel-on-steel-rail High Speed Train System, from both Sacramento and San Francisco, via Fresno and Los Angeles, to both San Diego and Anaheim, capable of operating speeds of 220 mph on mostly dedicated, full grade separated track. The Merced to Sacramento section would include stations in downtown Sacramento, downtown Stockton, and either downtown Modesto or the Modesto Amtrak Station. The first tiered programmatic Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the entire statewide system was completed in 2005 and the notice of preparation and notice of intent on the Merced to Sacramento section EIR/EIS was released on December 23, 2009. The study will consider the operation of a regional

passenger train service running on the High Speed Train System track with its own regional stations, in cooperation with the San Joaquin Regional Rail Commission. This project would provide a new high speed transit alternative on the I-5/SR99 corridor.

Pacheco Pass Alignment

In December 2007, the HSR Authority selected the Pacheco Pass alignment as part of the required environmental studies for the San Francisco Bay Area-Central Valley connection. It would sweep into the San Francisco Bay Area over the pass between the Los Banos area (Merced County) and Gilroy, head north to San Jose, then up the Peninsula along the Caltrain ROW to San Francisco. The Altamont proposal will cross the pass west of Tracy and connect to the Bay Area in San Jose (see Figure 2.7.2.4.3).

Altamont Corridor

The HSR Authority proposes to upgrade the ACE regional rail service, including a new branch line allowing service between Tracy and Modesto. When the Authority chose the Pacheco Pass for the High Speed Train alignment between the Bay Area and the Central Valley, it decided to study the Altamont Corridor for a joint-use rail infrastructure project that would pursue a different purpose and need from the high speed train system. This study is being conducted by the HSR Authority because passenger trains on this improved corridor may reach speeds of 125 miles per hour.

2.8 Goods Movement

State Route 99 is the main inland route through the center of the State connecting major cities throughout the SJV region, which is one of the four major international trade regions in California, designated in the 2002 Global Gateways Development Program. The SJV Goods Movement Study, prepared for Caltrans and the eight counties of the SJV (Kern, Fresno, Tulare, Kings, Madera, Merced, Stanislaus and San Joaquin), determined that trucking is the dominant mode for moving freight. The increase in freight movement by trucks on State highways is growing faster than can be accommodated by the existing capacity. The 2006 AADT on SR-99 ranged from 64,000 to 118,000 vehicles with trucks constituting 14.4 percent of the AADT in some sections. Truck volumes ranged from 8,800 to 15,900 with five axle truck volumes representing approximately 53 percent of total truck volumes.

The California Transportation Commission has awarded Trade Corridor Improvement Funds (TCIF) for the development of the SJV Short Haul Rail/Inland Port Project located in Crows Landing, within Stanislaus County at the Crows Landing Air Facility. It involves the development of an inland port logistics center, and the construction of a short haul rail service. The project railroad ROW acquisition and construction of 170-acre rail inter-modal facility will provide for the loading and unloading of containers from rail cars. This project will provide a rail link between the SJV and Oakland. There will be an air facility for future corporate air traffic made possible. The project is currently under California Environmental Quality Act (CEQA) review and National Environmental Policy Act (NEPA) review following. It has also been discussed that by

lowering the railroad tracks that the rail cars can be double stacked to increase bulk transport and help reduce emissions and increase throughput.

2.8.1 Trade Corridor

The California Transportation Commission has awarded Proposition 1B CMIA TCIF which serves to extend benefits to SR-99 in Stockton. The project will be to extend SR-4 Cross-town Freeway in Stockton to improve goods movement and access to and from the Stockton Port. The Port of Stockton was also awarded TCIF funds to deepen the Stockton Ship Channel for improved access to the San Francisco Bay.

2.8.2 Freight

State Route 99 is vital to the goods movement network in between the SJV and the San Francisco/San Jose/Bay Area. Over 90 interstate truck lines and 100 contract carriers operate in the Stanislaus region. These operators, distributed throughout the region, rely on the regional system of state highways, expressways, and major arterials to move supplies and product to the backbones of the highway freight system. Trains provide an economical means of transporting bulk goods. The Stanislaus region is serviced by two transcontinental railroad systems, the Union Pacific (UP) and the Burlington Northern Santa Fe (BNSF) Railway, and two local railroad systems, the Modesto and Empire Traction Company and Sierra Railroad. Within the last ten years, SR-99 has experienced dramatic traffic growth and levels of congestion with truck traffic at volumes much higher than the statewide average for the highway system. The corridor is heavily used by trucks for both interregional goods movement throughout the state and movement to eastern and northern states, and for local farm and commercial truck trips.

2.8.3 STAA and Truck Parking Issues

The region is currently experiencing goods movement constraints due to the lack of local STAA routes and available truck parking. These issues are currently being evaluated by the San Joaquin Goods Movement Task Force. Local, regional, and state STAA maps can be located at: http://www.dot.ca.gov/hq/traffops/trucks/truckmap/index.htm.

2.8.4 Union Pacific and Burlington Northern Railroads

Several major railways stretch through large portions or the entire Stanislaus County, including the UP and BNSF Railroad. The UP and BNSF inter-modal terminals serve both SJV and Sacramento regions. Stockton serves as a hub for many of these railways and acts as a major distribution center for freight shipped to locations throughout California and the United States.

2.8.5 Airport

In Stanislaus County, the Modesto City-County Airport is a commercial and general aviation airport with 458 acres, 5,911 foot air carrier runway, and 3,459 foot general aviation runway. Improved passenger air service from the Modesto City-County Airport has been an ongoing consideration for the City of Modesto and Stanislaus County.

Currently, air service provides passenger connections to long distance flights at the San Francisco International Airport. The potential benefits of providing improved air service directly from Modesto include greater passenger convenience and reduced vehicle miles of travel and emissions as fewer trips are made to nearby airports in Sacramento and the Bay Area.

General aviation operations comprise the majority of local aircraft activity in Stanislaus County, and this trend is expected to continue over the next 25 years. The difficulty of general aviation airports in obtaining the funding necessary to maintain existing facilities and construct additional facilities for aircraft parking are the single most significant issue identified in StanCOG's Regional Aviation Systems Plan, 1998. Ground transportation also poses an issue for the Oakdale and Turlock Municipal Airports.

A variety of aviation facilities are available in the San Joaquin Valley. A few of these facilities serve interregional aviation needs. Local public use airports serve the county's general aviation needs. Kings County's Lemoore Naval Air Station is the only remaining military airport in the San Joaquin Valley. Castle Air Force Base in Merced and Crows Landing Naval Air Station in Stanislaus County were converted to civilian use airports in 1995. There are four facilities in the Valley that provide interregional commercial aviation service; Modesto airport, Fresno Yosemite International airport, Meadows field (Kern County), and Visalia Municipal Airport. Stockton Airport does not carry commercial services, however Farmington Fresh a local produce packaging business, has located at the airport to transport fresh produce around the world.

2.8.6 Warehousing and Distribution

Off of SR-132 in Modesto is the Beard Industrial District and truck and rail are used to transport goods. The Modesto and Empire Traction (MET) Company is owned by the Beard Industrial Park. The MET operates on five miles of track in the Beard Industrial Park. The MET interchanges freight with the Union Pacific at Modesto with the BNSF railway. In Patterson there is an industrial park that will be tied with the SJV Short Haul Rail/Inland Port Project in Crows Landing. In Ceres and Turlock there are industrial parks using truck distribution. As part of the Salida Specific Plan, an industrial park is being planned which will also use trucks for the distribution of goods.

2.9 Transportation System Management

Stanislaus County has grown significantly in recent years and is projected to experience continued significant growth in the coming decades. While several freeway improvement projects are planned within the county, traffic forecasts indicate that the planned construction of new highway capacity will not keep pace with this growth, and additional capacity-increasing projects are subject to funding and environmental constraints. As a result, proper management of the region's freeways can provide practical and cost-effective alternatives (potentially in combination with capacity improvements) for addressing freeway problems.

Freeway traffic management and operations is the implementation of policies, strategies and technologies to improve freeway performance. Ramp metering and HOV lanes

represent two potential strategies in a comprehensive or integrated approach to managing the region's freeways. Other potential elements include incident management, traveler information, traffic surveillance and detection, and advanced traffic signals. The overriding objectives of any freeway management program are to minimize congestion (and its side effects), improve safety, enhance overall mobility, and provide support to other agencies during emergencies. Often, a combination of strategies is needed to effectively and efficiently achieve these objectives. StanCOG and MCAG teamed with SJCOG and Caltrans District 10 to develop a *Northern San Joaquin Regional Ramp Metering and HOV Master Plan Study*. The study originally developed by San Joaquin County and also was extended to include Stanislaus and Merced counties.

2.9.1 Intelligent Transportation Systems

Intelligent Transportation Systems technology is used for incident notification and freeway management through technologies such as dynamic message and warning signs, highway advisory radio (HAR), roadside weather information systems (RWIS), closed circuit television (CCTV) cameras that monitor traffic, and changeable message signs (CMS) that generally display road closure/road condition information. In addition to the cameras, traffic monitors are located in specific locations to feed traffic data to the Transportation Management Centers (TMC) in each Caltrans district. Some traffic monitors are linked to the University of California (U.C.) Berkeley Performance Monitoring System (PeMS) for use in distribution of data to many users.

Deployment of ITS technology will enhance traveler information services as well as the operational efficiency of the corridor by informing motorists of traffic congestion, inclement weather, incident management, emergency response and highway construction and/or closings. This information assists motorists to make informed decisions regarding their travel. Intelligent Transportation Systems include traffic signals, CCTV, CMS, ramp meters, weigh-in-motion devices, freeway service patrols, weather stations, and HAR stations. Also included is the centralization and control of many of these components from TMCs.

Traveler information broadcast systems, traffic signal priority for emergency or transit vehicles, ITS data archive management, and vehicle safety warning systems are all part of ITS.

The "511" system is a new three-digit phone number program to access traveler information that is being implemented throughout the state. All eight SJV counties, San Joaquin, Stanislaus, Merced, Kern, Tulare, Kings, Fresno and Madera have recently made the decision to partner with the Sacramento Area Council of Governments (SACOG) to join the 511 system in the northern Sacramento area region which will provide wireless (cell phone) service only. Enabling the 511 information via the telephone and an internet 511 website is funded through a grant that was received by Caltrans, District 6, Traffic Operations Division to build out a pilot fog warning system along 12 miles of SR-99 in Tulare and Fresno counties. The 511 telephone service will be activated where possible based on funding availability for all of the eight counties in the San Joaquin Valley as well as the mountain counties. The City of Fresno has offered to provide website hosting and ten hours of in-kind technical support per month for the next three years starting on

July 1, 2010. Thereafter, it will become the responsibility of the San Joaquin Valley to find funding sources for the maintenance, operation and development of the SJV 511 system. Nationwide 511 deployment by 2010 was legislated in the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETY-LU Section 5201 (B)).

SACOG is currently looking at future plans to integrate 511 with a Sacramento Transportation Area Network or STARNET. It is an information exchange network and operations coordination framework that will be used by the operators of transportation facilities and emergency responders. STARNET will build upon previous ITS investments by using, with little to no modifications, the existing field infrastructure (cameras, changeable message signs, traffic signals, vehicle location systems, etc) and central systems (freeway management systems, traffic signal systems, transit management systems, computer aided dispatch systems, etc) already operated by each agency. As part of the STARNET implementation, interfaces will be developed to these existing systems to enable them to share data and video with each other, provide data and video to the public via the 511 regional travel information system, and provide operations and emergency response personnel with a map based regional transportation management display.

The communication lines necessary to transmit all of the ITS data will be enhanced by the fiber optic network planned along the SR-99 corridor, along with the other corridors in the SJV area. The fiber optic network to the Caltrans District 10 TMC in Stockton will relay this data. From this location, the TMC can monitor transportation system conditions and provide for rapid response when conditions deteriorate. There is a methodology established which provides for cooperation and electronic sharing of information between the District 6 TMC in Fresno and the District 10 TMC in Stockton.

Currently, there is a regional architecture in existence called the "SJV ITS." This architecture covers the eight counties within the SJV, (San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare, and Kern). This plan is available online at: http://www.kimley-horn.com/Caarchitecture/task9/sjintor.htm.

There are six ITS elements along the SR-99 corridor shown in Table 2.9.1a. The map is located in Appendix C. The elements programmed and funded are shown in Table 2.9.1b. The map is located in Appendix D-1. There are 20 ITS elements that are planned for the corridor but not yet funded in Table 2.9.1c.

Table 2.9.1a: Existing ITS Elements

No.	Postmile	Direction	Location	Equipment/Description
1	R0 .160	Not Assigned	Turlock Rest Stop	RWIS
2	R07.48	South Bound	N/O Taylor Road	CMS
3	8.56	North Bound	S/O Faith Home Road OC	CCTV
4	8.60	North Bound	N/O Keyes Road	CMS
5	8.70	Not Assigned	Faith Home Road OC	RWIS
6	R9.48	South Bound	S/O Mitchell Road	CMS

Table 2.9.1b: Programmed ITS Elements

No.	Post Mile	Direction	Location	Equipment/Description
1	R8.20	South Bound	N/O Keyes Road OC	CMS
2	R8.70	South Bound	Faith Home Road OC	CCTV
3	R8.70	n/a	Faith Home Road OC	RWIS
4	R9.20	South Bound	N/O Faith Home Road OC	CMS
5	11.7	North Bound	SR-99 and 2nd Street	CCTV
6	11.7	n/a	SR-99 and Whitmore Avenue	CMS
7	12.81	North Bound	SR-99/Whitmore Avenue-	CCTV
8	12.81	North Bound	SR-99/Whitmore Avenue	CMS
9	R13.85	South Bound	SR-99 and Modesto UC	CCTV
10	R13.85	South Bound	SR-99 and 9th Street	CMS
11	R14.84	North Bound	Tuolumne Bridge	CCTV
12	R14.84	North Bound	Tuolumne Bridge	CMS
13	R15.84	South Bound	SR-99/6th Street and I Street	CMS
14	R15.84	n/a	North of Tuolumne Bridge	RWIS
15	R16.6	North Bound	SR-99/Kansas Avenue	CCTV
16	R16.6	North Bound	SR-99/Kansas Avenue	CMS
17	R17.1	n/a	SR-99/Woodland Avenue	RWIS
18	R17.6	North Bound	SR-99/Woodland Avenue	CCTV
19	R17.6	South Bound	JSO Briggsmore Avenue	CCTV
20	R17.6	North Bound	JSO Briggsmore Avenue	CMS
21	R17.6	South Bound	SR-99/Woodland Avenue	CMS
22	M18.61	n/a	N/O Carpenter/Briggsmore Road OC	RWIS
23	M19.75	North Bound	JCT-N/O Briggsmore Avenue	CCTV
24	M19.75	North Bound	S/O Beckwith Road	CMS
25	M19.75	South Bound	JCT-N/O Briggsmore Avenue	CMS
26	M19.75	n/a	S/O Beckwith Road	RWIS
27	R20.86	n/a	S/O Pelandale Avenue OC	HAR
28	R21.28	North Bound	S/O Pelandale Avenue OC	CCTV
29	R21.36	South Bound	S/O Pelandale Avenue OC	CCTV
30	R21.36	North Bound	JCT-N/O Beckwith Rd.	CMS
31	R22.05	North Bound	N/O Pelandale Avenue	CCTV
32	R22.05	North Bound	N/O Pelandale Avenue	CMS
33	R23.05	n/a	S/O Hammett Road OC	RWIS
34	R23.30	South Bound	S/O Hammett Road OC	CCTV
35	R23.30	South Bound	S/O Hammett Road OC	CMS

Table 2.9.1c: Planned ITS Elements

No.	Post Mile	Direction	Location	Equipment/Description
1	R1.45	n/a	SR-99 and Lander Avenue	RWIS
2	R2.28	South Bound	SB SR-99 N/O SR-165 (Landers Avenue)	CCTV
3	R2.28	South Bound	SB SR-99 N/O SR-165 (Landers Avenue)	CMS
4	R23.0	North Bound	S/O Hammett Road	CCTV
5	R23.0	Both	S/O Hammett Road	CMS
6	R4.34	n/a	SR-99 and Fulkerth Road	RWIS
7	R6.36	n/a	SR-99 and Taylor Road	RWIS
8	R7.45	South Bound	S/O Keyes Road	CMS
9	10.9	n/a	SR-99 and Service Road	RWIS
10	R12.0	North Bound	NB SR 99, N/O Whitmore Avenue	CCTV
11	R12.0	North Bound	NB SR 99, N/O Whitmore Avenue	CMS
12	R12.2	South Bound	SB SR 99, S/O 9th Street onramp	CCTV
13	R12.2	South Bound	SB SR 99, S/O 9th Street onramp	CMS
14	R13.35	n/a	SR-99 and Hatch Road	RWIS
15	R14.0	North Bound	NB SR 99, Near South Modesto OH	CCTV
16	R14.0	North Bound	NB SR 99, Near South Modesto OH	CMS
17	R17.0	North Bound	NB SR 99, N/O Kansas Avenue	CCTV
18	R17.0	North Bound	NB SR 99, N/O Kansas Avenue	CMS
19	R19.0	South Bound	SB SR 99, N/O Carpenter	CCTV
20	R19.0	South Bound	SB SR 99, N/O Carpenter	CMS

Potential locations for implementation of ramp meter infrastructure along the corridor were identified with the completion of the *2009 Northern San Joaquin Regional Ramp Metering and HOV Master Plan* recently completed.

The major challenge deploying new ITS facilities is lack of funding. Intelligent Transportation System elements are proposed through the State Highway Operations and Protection Program (SHOPP) with minimal funding for ITS deployment. Caltrans District 10 requests the installation of ITS elements on STIP projects, but more frequently than not, when project costs need to be reduced, ITS elements are the first to go. There needs to be more support from all project partners to promote and fund ITS elements on STIP projects.

Technology advances are also a challenge for ITS deployment. Technology is always changing, which makes it very difficult to integrate with existing technologies; and the lack of power and communication in remote areas impedes implementation in rural areas. Intelligent Transportation System operating, utility, and maintenance expenses are costly along with high bandwidth communications for video. It is also a challenge to sustain the level of expertise that is needed to operate and maintain the complex ITS equipment.

2.9.2 Detection

Detection is one of the most important components of ITS. Detection refers to the real-time measurement of transportation movements and conditions. In the past, measurements have been conducted periodically (such as once per year) and those measurements were used to determine the need for infrastructure expansion. Optimized corridor management strategies will require more accurate, on-going data collection that will be provided by detection systems placed throughout the corridor. Without detection systems, transportation agencies cannot implement advanced traffic control strategies, cannot inform the public about traffic conditions, expected delays and options, and cannot detect and react to incidents quickly enough to minimize the impacts created by those incidents.

Caltrans District 10 requests traffic monitoring stations on a project by project basis depending on fund availability and type of work involved in the project. Some traffic monitors are linked to detection for use in distribution of data to many users. The locations of PeMS elements currently existing on the SR-99 corridor in Stanislaus County are found in Table 2.9.2a. The map is located in Appendix C. There are currently 16 PeMS stations and the majority of the stations are spaced approximately ¼ of a mile apart. The PeMS elements currently programmed and funded are located in Table 2.9.2b. The map is located in Appendix D-2. There are currently 37 PeMS stations programmed. Currently planned PeMS elements are located in Table 2.9.2c. The map in Appendix D-3 shows both the ITS and PeMS elements planned on the SR-99 corridor.

Table 2.9.2a: Existing Detection

No.	Dir.	Post Mile	Location
1	NB	R0.16	Turlock Rest Stop
2	NB	R0.41	Turlock Rest Stop
3	NB	R0.66	N/O Golf Road OC
4	Both	R7.81	Keyes Road
5	SB	R8.493	N/O Faith Home
6	NB	8.593	N/O Faith Home Road OC
7	SB	8.69	S/O Faith Home Road OC
8	Both	8.69	Faith Home Road OC (Weigh In Motion Station)
9	NB	8.79	N/O Faith Home Road OC
10	SB	8.89	S/O Mitchell Road
11	NB	9.093	S/O Mitchell Road
12	SB	9.193	S/O Mitchell Road
13	NB	9.293	S/O Mitchell Road
14	Both	R13.26	Hatch Road
15	Both	R16.12	JCT SR-132
16	Both	R24.27	NB Hammett Road

Table 2.9.2b: Programmed Detection

No.	Dir.	Post Mile	Location Description
1	Both	R0.116 –R8.132	Merced/Stanislaus County Line (31)
2	SB	8.45	N/O Keyes Road OC
3	SB	R8.20	N/O Keyes Road OC
4	Both	R8.20 – R9.2	Merced/Stanislaus County Line (10)
5	Both	R8.70	Faith Home Road OC
6	Both	R8.95	N/O Faith Home Road OC
7	SB	R9.20	N/O Faith Home Road OC
8	Both	R10.9 – R13.6	Merced/Stanislaus County Line (10)
9	NB	R13.3	N/O Hatch Road OC
10	Both	R13.31 – R16.05	Merced/Stanislaus County Line (25)
11	SB	R13.71	S/O South Modesto UC
12	SB	R13.85	S/O South Modesto UC
13	SB	R14.52	N/O Crows Landing Road OC
14	Both	R14.7	Crows Landing Road IC
15	Both	R14.84	Tuolumne Bridge
16	Both	R15.34	Sierra Drive OC
17	NB	R15.85	S/O Sierra Drive OC
18	Both	R16.23 –R22.38	Merced/Stanislaus County Line (22)
19	Both	R16.6	SR-99/Kansas Avenue
20	Both	R17.6	SR-99/Woodland Avenue
21	NB	R18.11	N/O West Modesto OH
22	Both	M18.61	N/O Carpenter/Briggsmore Road OC
23	Both	M19.75	S/O Beckwith Road OC
24	SB	R21.0	S/O Pelandale Avenue OC
25	Both	R21.28	S/O Pelandale Avenue OC
26	Both	R21.30	S/O Pelandale Avenue OC
27	Both	R21.36	S/O Pelandale Avenue OC
28	NB	R21.53	NB off ramp to Pelandale Avenue OC
29	NB	R21.55	SB on ramp from Pelandale Avenue OC
30	Both	R21.75	N/O Pelandale Avenue OC
31	Both	R22.28	N/O Pelandale Avenue
32	Both	R22.36 –R24.49	Merced/Stanislaus County Line (11)
33	Both	R22.59	N/O Broadway/JCT SR-219
34	Both	R22.78	S/O Hammett Road OC
35	Both	R23.05	S/O Hammett Road OC
36	Both	R23.55	S/O Hammett Road OC
37	Both	R24.05	S/O Hammett Road OC

Table 2.9.2c: Planned Detection

No.	Dir.	Post Mile	Location Description
1	Both	R1.65	JCT SR-165 South, Lander Avenue
2	Both	R2.28	Linwood Avenue OC
3	Both	R3.45	West Main Street IC
4	Both	R3.84	S/O Canal Drive OC
5	Both	R4.54	Fulkerth Road
6	Both	R4.84	N/O Fulkerth Road
7	Both	R5.64	Monte Vista Avenue IC
8	Both	R5.86	S/O North Turlock OH
9	Both	R6.75	Taylor Road
10	Both	10.04	Mitchell Road
11	Both	11.91	Whitmore Avenue
12	Both	R11.4	S/O Second Street UC
13	Both	R15.09	Tuolumne Boulevard
14	NB	R17.1	NB SR 99, N/O Kansas Avenue

2.9.3 Traffic Control

Another element of ITS is traffic control. Traffic control includes signal strategies for managing traffic flows on arterials as well as metering ramps on to the freeway system. These strategies offer great promise to improve the productivity of the transportation system. There are, however, challenges for the State in utilizing some of these options. Local agencies are often concerned that traffic control devices will cause additional traffic to use local streets as an alternative. This is an area where Caltrans is working with its local partners to reach a solution that will be agreeable to all parties.

2.9.4 Incident Management

Incident Management is a significant component of ITS. Studies suggest that half of the delay experienced on freeways is attributable to accidents, special events, and severe weather conditions. Motorists are accustomed to normal delays. However, traffic incidents disrupt the motorist's normal routine, creating unplanned delays. This can create a negative impact to the traveling public. Unanticipated delays may also create frustration and aggressive driving. Such aggressive behavior poses a danger not only to other motorists but also to emergency response and law enforcement personnel. The goal of effective Traffic Incident Management (TIM) is to reduce the time it takes to clear traffic incidents from the roadway. The less time it takes to clear an incident, the less congestion and delay the motorist experiences. Safety for both the emergency response personnel and the traveling public is improved. Even small improvements in this process can yield significant benefits.

Effective TIM relies on advanced technologies to allow for expedited incident detection, verification, coordination among necessary emergency response agencies, and the subsequent

clearance of the incident as rapidly as possible.

2.9.5 Advanced Traveler Information Systems

One of the more progressive components of ITS is the Advanced Travel Information Systems (ATIS). Most commuters get information about traffic conditions from the media such as radio and television stations. ATIS will provide modal-specific, time-of-day demand data that will allow travelers to get the most out of the transportation system. The system would allow travelers to manage their trips in the most efficient manner. Implementing ATIS requires a partnership between transportation agencies and the public. However, it is clear that the framework is not yet fully developed and that, at this time, current detection systems are not adequate for real-time, tailored information.

2.9.6 Transportation Management Centers

Effective ITS implementation requires coordination of all components. The TMC plays an important role in day-to-day system management, providing coordinated incident responses, as well as integration of various systems. An example of integration would be the coordination of ramp metering and arterial signal management. Traveler information also requires sharing data with public and private partners. Within Stanislaus County, Caltrans District 10, the City of Modesto, the CHP, and the media play different roles in incident management. The Caltrans District 10 TMC and the City of Modesto TMC, while separate systems, integrate these roles and systems in central locations to optimize performance.

TMCs are used in emergencies, Amber Alerts, and provide an Emergency Operations Center function during natural disasters, such as earthquakes. TMCs also serve a security preparedness function; staff can monitor the urban freeway system, quickly activate response strategies (such as CMS), or notify the proper authorities when security risks are identified.

Logical phasing for implementing the components of an effective Transportation Management System would be:

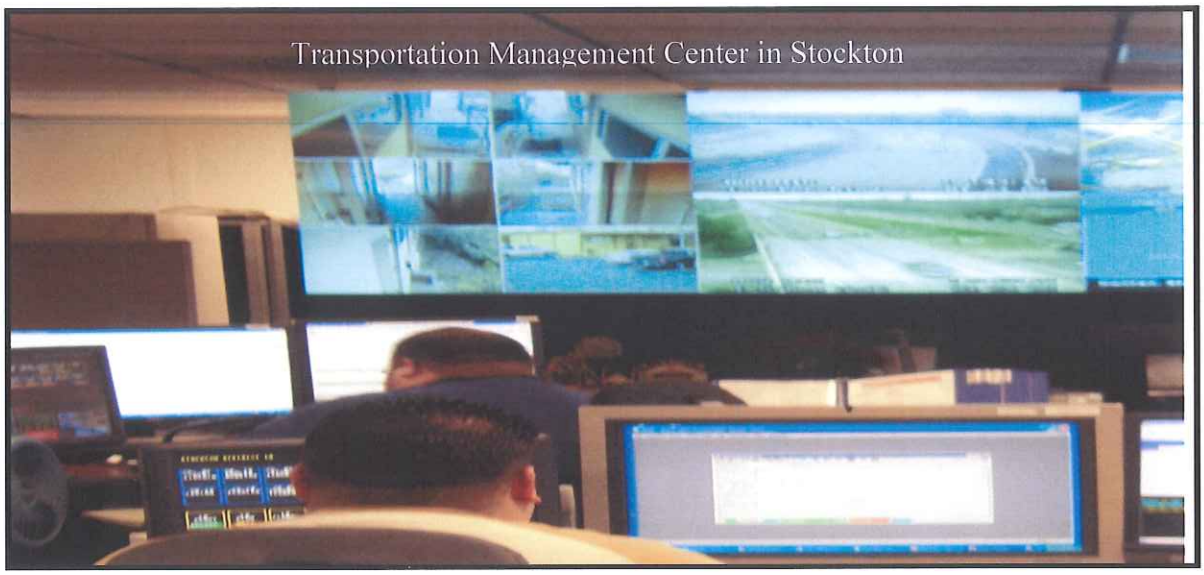
a) Installing simple, adaptive-scheme ramp metering;

b) Optimizing the meter rates;

c) Implementing a corridor adaptive ramp-metering scheme;

d) Advanced arterial signal actuation strategies and improved incident management; and

e) With all of these in place, a comprehensive traveler information system would be the final goal.



Monitoring and evaluation is the foundation for sound management of the corridor to identify the optimum strategies to improve the transportation corridor. Strategies range from system maintenance and preservation to expansion, but focus on optimization of the existing system by fully incorporating operational strategies into the management plan. Implementation of ITS strategies will complement other improvements, including transit, light rail, and improvements on the local road system. The goal is that the transportation system, as a whole, including highways, local roads, and alternative modes of transportation, operate as one seamless network.

2.10 Transportation Demand Management

Transportation Demand Management (TDM) is designed to reduce vehicle trips during peak hours. TDM is specifically targeted at work force commuters who generate the majority of peak hour traffic. Strategies include:

a) Rideshare programs
b) Transit usage
c) Flex hours
d) Vanpools
e) Bicycling and walking
f) Telecommuting
g) Mixed land uses (job/housing balance)

Incorporating these strategies would be part of land use decisions, the prerogative of local government. TDM programs could be required by local jurisdictions for any large commercial or office project and could be tied to incentives of some sort to encourage the development of such programs.

2.10.1 Rideshare Programs

StanCOG administers a rideshare program together with SJCOG known as Commute

Connection. This rideshare program includes carpool matching, vanpool matching and assistance, media promotion of ridesharing, distribution of brochures at employment sites and other locations as necessary, program monitoring and recording, public education, and community outreach.

2.11 Land Use

SR-99/ SR-219 (Kiernan Avenue) Interchange

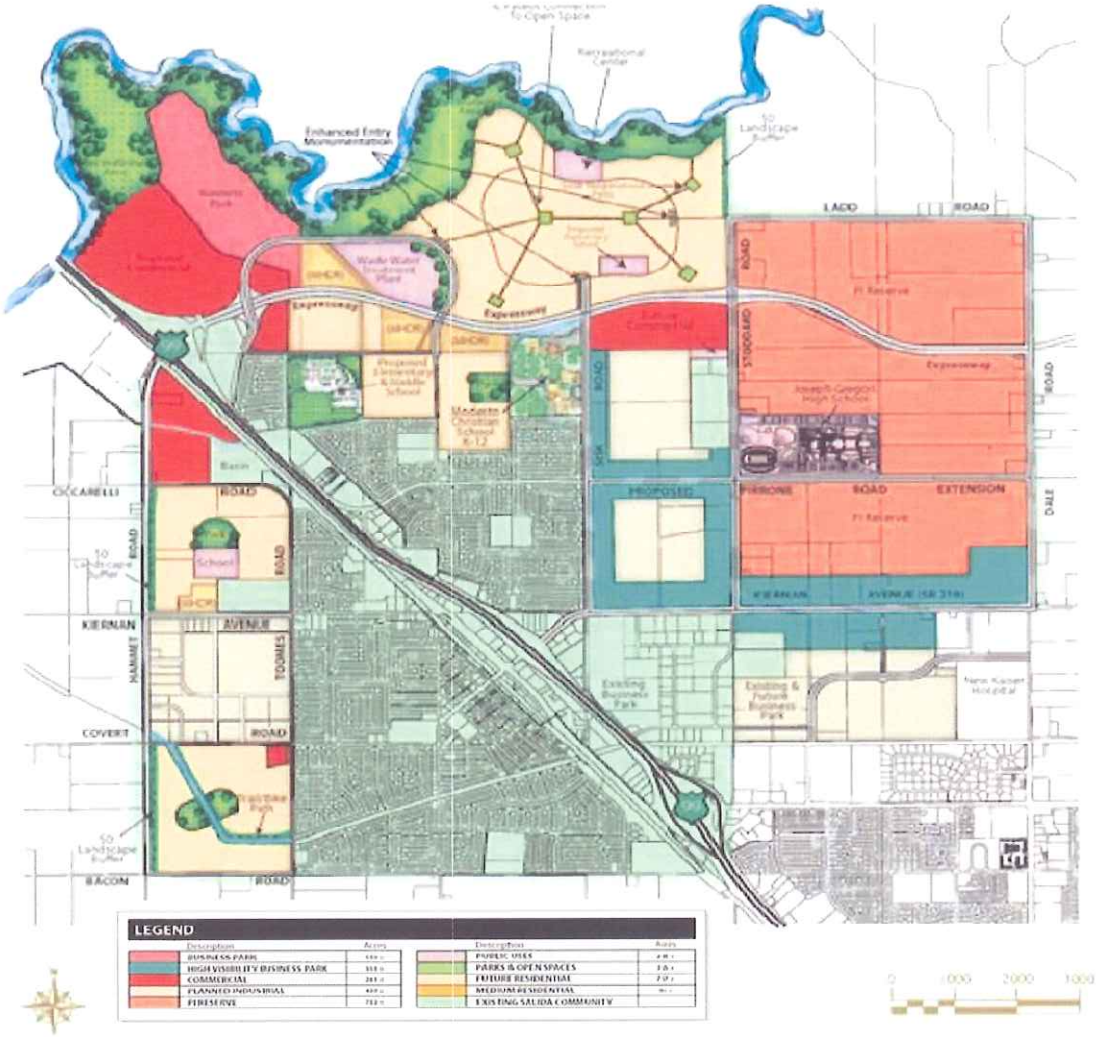


Figure 2.11a SR-99/Kiernan Land Use Development Map

The SR-99/ SR-219 (Kiernan Avenue) interchange is located in the north part of Stanislaus County and on the northern edge, but outside of, the City of Modesto, providing access to commercial and residential properties in the community of Salida. This area is undergoing commercial and residential development and has resulted in generating considerable traffic to the interchange.

The Stanislaus County Board of Supervisors adopted the "Salida Now" initiative in August 2007 which provides infrastructure funding for industrial and commercial development. With a population of about 14,000, Salida is the largest town in unincorporated Stanislaus County. Salida's location along SR-99 at the far northern end of the county puts it within long-distance commuting range of the Bay Area. The County is now underway with the adoption of the Salida Community Plan, which will define the growth parameters for the next 20 years of the Salida Area.

Due to projected housing and commercial growth in the Salida area, the existing interchange is not adequate to accommodate forecasted traffic. The proposed interchange improvements include widening of SR-219 (Kiernan Avenue) ramps to and from SR-99, as well as associated local road improvements at adjacent intersections. The proposed project consists of two components: 1) reconstruction of the interchange at SR-99/SR-219 (Kiernan Avenue) and associated local roads at adjacent intersections; and, 2) construction of auxiliary lanes in each direction on SR-99 between Kiernan Avenue and Pelandale Avenue.

San Joaquin Valley and Stanislaus County

The San Joaquin Valley has historically grown at a faster rate than the rest of California and will likely continue to do so. Growth and land use patterns have a vast and far-reaching effect on the transportation system. Long-term planning, coordination amongst local governments, and innovative solutions will be needed to keep transportation viable. The area encompassed by this CSMP is becoming more urbanized and is gradually replacing rural agricultural lands. Over the past decade, the population of the Stanislaus region grew almost 20 percent from 370,522 in 1990 to approximately 447,000 in 2000. Much of the new growth occurred on the outer edges of existing urban centers, putting pressure on existing urban growth boundaries and lengthening driving distances on local streets and roads. Although many local jobs were added during the decade, the lucrative job opportunities and high housing costs of the Bay Area exacerbated the job/housing imbalance. According to the Census 2000, as many as 43,000 Stanislaus residents commute by car over the Altamont Pass to Bay Area jobs each day.

Today, the Stanislaus region is developing aggressive strategies to attract a mix of high-tech and industrial manufacturing and related support jobs. The success of these strategies relies on providing higher quality transportation infrastructure, and community amenities that can help attract new businesses and highly qualified workforce recognizing these needs, many Stanislaus communities have initiated efforts to reinvent themselves by investing in community facilities, such as performing arts centers and community parks. Long term planning and coordination amongst local governments and innovative solutions is needed to keep transportation viable. Caltrans provided a planning grant to the Merced County Association of Governments (MCAG) on behalf of the eight SJV regional planning agencies to develop a Regional Blueprint Planning Program intended to better inform regional and local decision-making, through pro-active engagement of all segments of the population as well as critical stakeholders in the community, business interests, academia, builders, environmental advocates, and to foster consensus on a vision and preferred land use pattern. Now, as. the Valley Blueprint .Planning .Process enters .its fourth year, regional planners are

now shifting focus on how to implement smart growth strategies in regions where development currently exists and to encourage the utilization of less land.

Table 2.11 lists the planned and recently built developments along SR-99 along the CSMP corridor, and Figure 2.11 below is a land use map for SR-99 for Stanislaus County.

Table 2.11: Planned/Recent Developments on SR-99 CSMP Corridor

Development	Location	Square Feet/Acres	Units
Tivoli	West side of Rosella Avenue North of Sylvan Avenue and East of Oakdale Road	454 Acres	32,00 DU
Kaiser Medical Center	SR-219 and Dale Road	1,425,000 Square Feet	-
Kansas Woodland Business	Bounded North by Woodland Road and South by Kansas Avenue	45 Acres	-
Pelandale Commercial	North East Corner of Pelandale Road and Sisk Road	8.71 Acres + 107,000 Commercial Square Feet	Seven Commercial Buildings

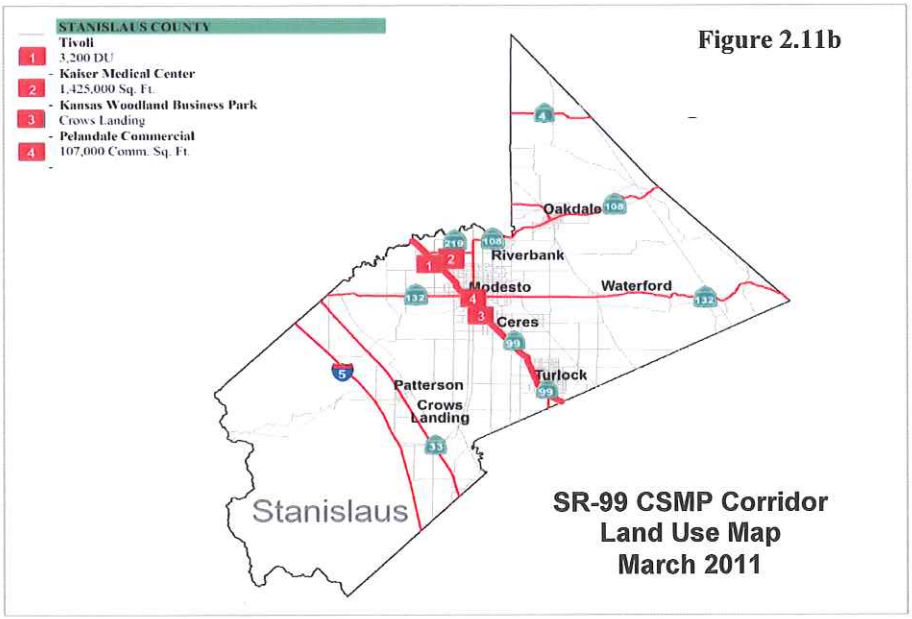


Figure 2.11b

2.12 Environmental Scan

A scan of potential environmental impacts has been completed along the CSMP corridor (Table 2.12). The corridor traverses local 100-year flood plain areas at the Tuolumne River in Modesto and at the Stanislaus River/San Joaquin County Line. The Federal Emergency Management Agency is revising flood insurance rate maps to include lower-risk areas such as small streams and 500-year flood plains. Adoption of revised maps may identify additional flood risks along the corridor. Along the SR-99 CSMP corridor, there are potential low and low to moderate degrees of impacts to wetlands, low degree of impacts to special status species, and low degrees of impacts to cultural resources. There are potential low and moderate degrees of impacts due to leaking underground tanks, and low to moderate degree of impact due to possible hazardous waste from lead. Regarding air quality, Stanislaus County is

in non-attainment for Particulate Matter $(PM)_{2.5}$ and Ozone and is in attainment with maintenance for PM_{10} and carbon monoxide. Ozone is a poisonous gas, formed in the atmosphere by chemical reactions between reactive organic gasses (ROG) and oxides of nitrogen (NOx) whereas particulate matter comes from a variety of sources including dust from agricultural equipment and automobile exhaust and tires.

Table 2.12 Environmental Scan

<table>
<tr><th rowspan="2">Post Mile</th><th rowspan="2">Description</th><th rowspan="2">Flood Plains</th><th rowspan="2">Wet-land</th><th rowspan="2">Special Status Species</th><th rowspan="2">Cultural Resources</th><th rowspan="2">Leaking Underground Tanks</th><th rowspan="2">Possible Hazardous Waste</th><th colspan="4">Air Quality</th></tr>
<tr><th>Ozone</th><th colspan="2">Particulate Matter</th><th>Carbon Monoxide</th></tr>
<tr><td>R0.00/ R08.16</td><td>Merced/Stanislaus County Line to 0.4 miles N/O Keyes Road</td><td rowspan="3">N/A</td><td rowspan="5" colspan="3">Low</td><td>Mod</td><td>Mod-ADLead and HC</td><td rowspan="6">Non-Att.</td><td rowspan="6">PM-10 Maint.</td><td rowspan="6">PM 2.5 Non-Att.</td><td rowspan="6">Maint.</td></tr>
<tr><td>R08.16/ R10.90</td><td>0.4 miles N/O Keyes Road 0.3 miles N/O Service Road</td><td>Low</td><td>Low/Mod-ADLead</td></tr>
<tr><td>R10.90/ R13.26</td><td>0.3 miles N/O Service Road to Hatch Road OC .</td><td>Low/Mod</td><td>Low/Mod-ADLead and HC</td></tr>
<tr><td>R13.26/ R16.12</td><td>Hatch Road OC to East JCT SR-132</td><td>100 yrs. Tuolumne River</td><td>Mod</td><td>Mod-ADLead And HC</td></tr>
<tr><td>R16.12/ R22.55</td><td>East JCT SR-132 to East JCT SR-219</td><td>N/A</td><td>Mod</td><td>Mod-ADLead and HC</td></tr>
<tr><td>R22.55 R24.75</td><td>East.JCT SR-219 to San Joaquin County Line</td><td>100 yrs. Stanislaus River</td><td>Mod</td><td>Low</td><td>Low</td><td>Mod</td><td>Low/Mod ADLead</td></tr>
</table>

The NEPA and CEQA and other related federal and state environmental laws and regulations require environmental studies and public participation for all projects for which a public agency has a discretionary action. Resources and issues requiring environmental study may include historical structures, protected animals and plants, social and economic impacts, wildlife refuges and public parks, archaeological sites, hazardous waste, paleontological sites, air and water quality, and noise.

Appropriate environmental studies would need to be conducted whenever any of the SR-99 CSMP improvements proposed are implemented if state or federal funding is involved. Project level analysis may be required and depending on the funding source may involve compliance with NEPA and/or CEQA.

Projects that may potentially cause an increase in traffic may require air quality and noise impact studies to determine if effects of increased traffic would cause a significant reduction of air quality and/or substantial increase in noise level. Hazardous waste studies may be indicated if the project area would include gas stations or other businesses that use or generate potential hazardous waste.

2.12.1 Title VI and Environmental Justice

Title VI of the Civil Rights Act of 1964 set a standard that authoritatively outlawed discrimination in the conduct of all federal activities. It reads as follows: "No person in the United States shall, on the ground of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." Although considerable progress has been made during the 1990s, individuals both inside and outside government are troubled by the high and adverse environmental impacts of private or governmental actions that fall disproportionately on populations protected by laws such as the civil rights act. The California Department of Transportation Title VI Program coordinates and implements federal requirements to ensure the transportation planning program is in compliance with those requirements.

The term "environmental justice" was created by people concerned that everyone within the United States deserves equal protection under the nation's laws. Executive Order 12898 issued in 1994, responded to this concern by organizing and explaining in detail the federal government's commitment to promote environmental justice. Each Federal agency was directed to review its procedures and to make environmental justice part of its mission by identifying and addressing the effects of all programs, policies, and activities on minority and low-income populations. The California Department of Transportation Environmental Justice Program promotes context sensitive planning and interdisciplinary effort to addressing the interests and concerns of low-income and minority populations in transportation planning and project development. The effort includes reaching out to low income and minority communities; identifying and engaging underrepresented communities early in the transportation planning development process.

2.12.2 Importance of CSMPs for Sustaining the Environment

CSMPs will complement an effective response to implementation of Assembly Bill (AB) 32 and Senate Bill (SB) 375. Regional Blueprints, and the Smart Mobility Framework. Summarized below are major areas where they will add value.

AB 32- California Global Warning Solutions Act of 2006. AB 32 requires the State Air Resources Board (ARB) to adopt a statewide greenhouse gas emission limit equivalent to the statewide greenhouse gas emission level in 1990 to be achieved by 2020. Effective system management will smooth speeds to reduce or ultimately eliminate the "stop/start" and slowing conditions experienced by motorists on the freeway. This will reduce emissions rates of pollutants caused by congestion.

SB 375- This new law supports compliance with AB 32. This law is complex and places

responsibilities primarily on the MPOs. The law requires the MPOs to prepare a Sustainable Communities Strategies (SCS) that among other considerations set forth a forecasted development pattern for the region, which when integrated with the transportation network, and other transportation measures and policies, will reduce greenhouse gas emissions. CSMPs will contribute to the development of the SCS and as applicable the alternative planning strategy by providing information on the most effective projects, strategies, and actions to restore throughput thus reducing emissions.

California Regional Blueprint Planning Program - Regional blueprint planning is a critical tool for implementing the Governor's Strategic Growth Plan to build the infrastructure needed to accommodate California's future growth, reduce congestion and support economic vitality. It can lead to more transportation and housing choices so that Californians have options to walk, bicycle, or take transit to reduce green house gases while sustaining air quality, equitable transportation and housing choices, vibrant communities, and the environment.

Smart Mobility Framework – This project is an innovative effort to develop a measurement framework based on best practices across California and the nation. It provides an evaluation framework to assess how well plans, proposals, or projects meet principles of Smart Mobility. The projects, strategies, and actions in the CSMPs will be reviewed for effectiveness based on these principles.

Complete Streets – Instituting a complete streets policy in the State of California ensures that transportation agencies routinely design and operate the entire ROW to enable safe access for drivers, transit users and vehicles, pedestrians, and bicyclists, as well as for older people, children, and people with disabilities.

3. Performance Management and Maintenance Assessment

The following performance assessment is based on existing data from various sources. It evaluates existing and projected traffic volumes to determine existing and future LOS on SR-99 and its connecting highways, and identifies the Concept Facility needed for the 20 year planning horizon to operate at Concept LOS 'C' in rural areas and 'D' in urban areas. It identifies the programmed and planned ITS, operations, maintenance, and capacity increasing projects that are currently identified in programming and planning documents within Stanislaus County. It also identifies existing and future corridor management strategies.

3.1 Traffic Volumes

The 2007 AADT on SR-99 ranged from 78,000 to 125,000 with trucks constituting up to 14.4 percent of the AADT in some sections. It is projected that by 2015 AADT will be up to 139,860 at the most northern end of the corridor within Stanislaus County.


Truck Traffic on SR-99

The highest 2007 AADT volumes on SR-99 ranged from 78,000 at the Merced County/ Stanislaus County Line to 115,000 at the San Joaquin County/Stanislaus County Line; and peak hour volumes ranged from 8,335 to 12,830. For additional information regarding traffic volumes on SR-99 see Table 3.1 on the following page.

3.1.1 Truck Volumes

Based on 2007 volumes, Segment 5 on SR-99 through Stanislaus County experienced the highest truck volumes of 16,980 of which includes 10,780 five-plus axle trucks. The 2007 truck volume peak hour percentage through the segment was 12.8 percent, and truck volume of total ADT represented 13.5 percent. Refer to Table 3.1 on the following page for additional information regarding truck volumes on the SR-99 corridor.

Table 3.1: Traffic Volumes

Seg.#/ Postmile	Description	2007 AADT	2015 AADT	2030 AADT	2007 Peak Hour Volume	2015 Peak Hour Volume	2030 Peak Hour Volume	Truck Volume (2007)	5+ Axle Truck Volume (2007)	Truck Volume Peak Hour % 2007	Truck Volume % of Total ADT 2007
#1 R0.00/ R8.16	Merced/ Stanislaus County Line to 0.4 miles N/O Keyes Road	78,620	97,230	146,800	8,335	10,300	14,970	13,360	8,310	12.8	17
#2 R8.16/ R10.90	0.4 miles N/O Keyes Road To 0.3 miles N/O Service Road	105,800	125,050	173,680	9,630	11,380	15,800	13,380	8,830	9.5	12.6
#3 R10.9/ R13.26	0.3 miles N/O Service Road to Hatch Road	104,430	121,620	161,870	10,130	11,800	15,700	13,390	8,835	9.6	12.8
#4 R13.26/ R16.12	Hatch Rd. to JCT SR-132	116,820	135,080	177,340	11.450	13,240	17,380	14,600	9.350	9.5	12.5
#5 R16.12/ R 22.55	JCT SR-132 to JCT.SR-219	125,780	145,060	189,520	12,830	14,800	19,330	16,980	10,780	10.1	13.5
#6 R22.55/ R24.75	JCT SR-219 to San Joaquin County Line.	115,560	139,860	201,390	10,515	12,730	18.320	15,600	9.905	10.1	13.5

3.2 Level of Service

The concept LOS for SR-99 in Stanislaus County is 'C' in rural areas and 'D' in urban and developing areas. According to these findings the majority of the segments will be operating at LOS 'F' by the year 2015 between the Merced County Line and the San Joaquin County Line.

- On Segment #1, between the Merced County Line and 0.4 miles north of Keyes Road, the projected AADT in 2030 will be 146,800 and the LOS will be degraded to LOS 'E' in 2015.

- On Segment #2, between 0.4 miles north of Keyes Road to 0.3 miles north of Service Road, the projected AADT in 2030 will be 173,680 and the LOS will be degraded to LOS 'F' in 2015.

- On Segment #3 between 0.3 miles north of Service Road and Hatch Road, the projected AADT in 2030 will be 161,870 and the LOS will be degraded to LOS 'F' in 2015.

- On Segment #4, between Hatch Road and SR-132, the 2007 AADT is 116,820,

and the LOS is already degraded to LOS 'F.'

- ❖ On Segment #5, from SR-132 to SR-219, the 2007 AADT is 125,780 and is expected to reach 189,520 by 2030. The LOS is already degraded to LOS 'F.'

- ❖ On Segment #6, from SR-219 to the San Joaquin County Line the AADT is projected to be 201,390 by 2030. The LOS is already degraded to LOS"E."

The concept facility that is needed for the traffic demand is ten lanes between the Merced County Line and Hatch Road and is twelve lanes between Hatch Road and the San Joaquin County Line; however, due to financial and environmental and ROW constraints twelve to ten lanes is currently infeasible.

Table 3.2: Level of Service and Concept Facility

Segment/ Postmile	Description	Existing Facility	LOS (2007) Existing Facility	LOS w/Existing Facility (2015)	LOS w/Existing Facility (2030)	Concept LOS	Concept Facility/ F=Freeway
# 1 R0.00/ R8.16	Merced County Line to 0.4 miles N/O Keyes Road	6 Lane Facility	D	E	F	D	10F*
#2 R8.16/ R10.90	0.4 miles north of Keyes Road to 0.3 miles N/O Service Road	6 Lane Facility	D	F	F	D	10F*
# 3 R10.90/ R13.26	0.3 miles N/O Service Road to Hatch Road	6 Lane Facility	E	F	F	D	10F*
#4 R13.26/ R16.12	Hatch Road to JCT SR-132	6 Lane Facility	F	F	F	D	12F*
#5 R16.12/ R22.55	JCT SR-132 to JCT SR-219	6 Lane Facility	F	F	F	D	12F*
#6 R22.55/ R24.75	JCT SR-219 to San Joaquin County Line	6 Lane Facility	E	F	F	D	12F*

* This will demand dedicated HOV lanes and ramp metering for the eight-lane facility.

3.2.1 SR-99 Connecting Highways, Corridor Volumes and LOS

A performance assessment has been completed for highway connections along SR-99 to evaluate existing and projected connecting highway LOS. The existing and future projected LOS along the SR-99 connecting highways is identified in Table 3.2.1 below.

TABLE 3.2.1: SR-99 Connecting State Highways Volumes and LOS

State Route 99 Corridor		Connecting Highway		Connecting Corridor ADT 2007	Existing Facility LOS 2007	Connecting Corridor ADT 2015	Existing Facility LOS 2015	Connecting Corridor ADT 2030	Existing Facility LOS 2030
Segment. / Postmile	Description	PM	Description						
#1/ R0.00-R8.16	Merced County Line to 0.4 miles north of Keyes Road	0.45-1.45	SR-165 from SR-99 South 1.0 mile.	19,700	E	23,100	F	31,050	F
#5 R16.12/ R22.55	From JCT SR-132 to JCT SR-219	13.73 - 14.73	SR-132 from SR-99 West 1.0 mile	15,500	C	17,000	C	15,125	C
#5 R16.12/ R22.55	From JCT SR-132 to JCT SR-219	14.73 - 15.73	SR-132 from SR-99 East 1.0 mile	16,500	C	17,850	C	20,750	C
#5 R16.12/ R22.55	From JCT SR-132 to JCT SR-219	0.12-1.12	SR-219 from SR-99 East 1.0 mile	22,600	B	38,500	C	64,900	E

3.3 CSMP Concept Facility

Based on projected corridor performance over the next 20 years, demand will continue to exceed capacity. It is projected that more than eight lanes will be needed from the Merced County/Stanislaus County to Stanislaus County/San Joaquin County Line.

There is a demand for a concept facility of ten lanes from the Merced County/Stanislaus County Line to Hatch Road, and a concept facility of twelve lanes from Hatch Road to the Stanislaus County/San Joaquin County Line; however, only an eight lane facility that will include recommended HOV and ramp metering is planned for between Hatch Road and the Stanislaus County/San Joaquin County Line. The concept facility will possibly demand ramp metering and HOV lanes when the freeway is widened to eight lanes.

Other strategies will include expansion of incident management, traveler information, traffic surveillance and detection, advanced traffic signals, and operational improvements. It is recommended that the local jurisdictions consider the connectivity of existing and construction of new frontage roads in future commercial and residential development along SR-99.

The *2009 San Joaquin Regional Ramp Metering and HOV Master Plan* recommends ramp metering between the Merced/Stanislaus County Line to the Stanislaus County/San Joaquin County Line and HOV Lanes when the corridor is widened to four lanes.

3.3.1 Ultimate Transportation Corridor

Identification of the UTC ensures that adequate ROW will be preserved to accommodate facility improvement projects beyond 2030. Following the same reasoning as provided for the concept facility due to ROW, environmental, and financial constraints no current planning study addresses capacity needs beyond 2030 even though there exists a capacity shortfall within the twenty year planning horizon. Local land use planning agencies within the corridor would need to plan to preserve future ROW consistent with the concept facility, and include their ROW preservation plans in their general plans.

Without the development of a planning study and plans by the local agencies to preserve future ROW consistent with the concept facility, non-capacity increasing improvements to the existing facility will otherwise have to be implemented. These would include some but not all of the following: (1) improvements to the HOV and ramp metering facility, (2) the addition of freeway service patrol, (3) expansion of ITS elements to enhance incident management and traveler information and (4) transportation demand management strategies which includes improved transit services including enhancements with HOV facilities and rideshare. These and other opportunities will be explored as solutions to addressing the ultimate transportation corridor's serious traffic demand issues.

3.4 SR-99 CSMP Corridor Programmed and Planned Projects

The SR-99 CSMP includes improvements directly or indirectly impacting the transportation network that are under development or in construction. These improvement projects are either fully or partially programmed (funded) or planned (usually without specific funding sources identified).

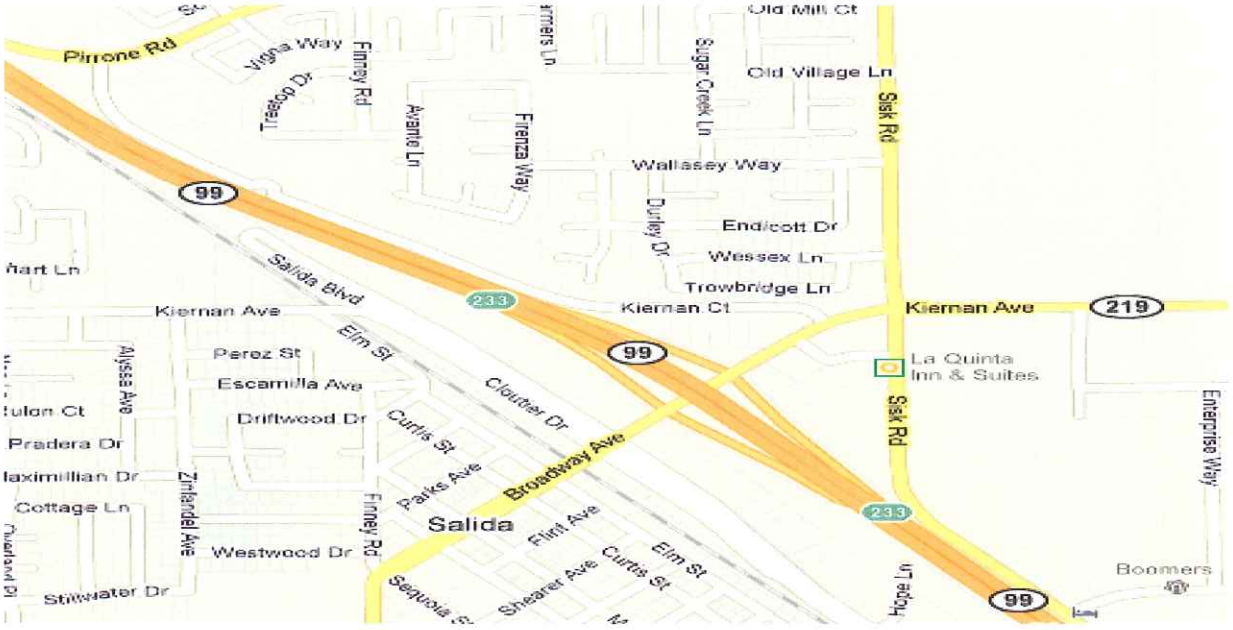


Figure 3.4: SR 99/Kiernan Avenue Interchange Project Vicinity Map

3.4.1 Programmed Capacity and Interchange Projects

The RTP identifies four programmed projects on the SR-99 corridor. Table 3.4.1 below shows the programmed capacity and interchange projects on the corridor.

Table 3.4.1: Programmed Capacity and Interchange Projects

Primary Funding Source	RTP Y/N Tier I Tier II	RTP MPO ID EA	Postmile		Location	Description	Total Cost ($1, 000)	Begin Const.
STIP	No	2A770	R11.9	R11.9	Whitmore Avenue and SR-99	Reconstruct Interchange	$28,071	2010
STIP, RSTP	Y Tier 1	47210	R21.0	R22.4	Pelandale Avenue and SR-99	Modify Interchange	$74,607	2014
99Bond	Y Tier 1	0L330	R21.9	R23.1	In Stanislaus County at SR-99 and Kiernan Avenue	Interchange Replacement	$59,300	2012
Local	Y Tier 1	0L320	R23.9	R25.1	SR-99/Hammett Road	Interchange Replacement	$61,000	2015

3.4.2 Planned Capacity and Interchange Projects

Planned improvements are those projects without guaranteed funding. There are 16 planned capacity and interchange projects on SR-99 in Stanislaus County. 2011 StanCOG RTP identifies long term Tier II financially unconstrained plans to construct four to eight lane Expressway (North County Corridor) from SR99 to McHenry Ave (SR-108). There are also other projects such as interchange ramp and auxiliary lane improvements at SR 99/Hammett Road, construct a new overpass at SR-99/Hatch Road, and reconstruct SR 99/Briggsmore interchange to eight lanes. See Table 3.4.2: Planned Capacity and Interchange Projects for the listing of projects on the following page.

The selection of the various programmed and planned projects are indicative of the impact that population growth has had upon the regional transportation system.

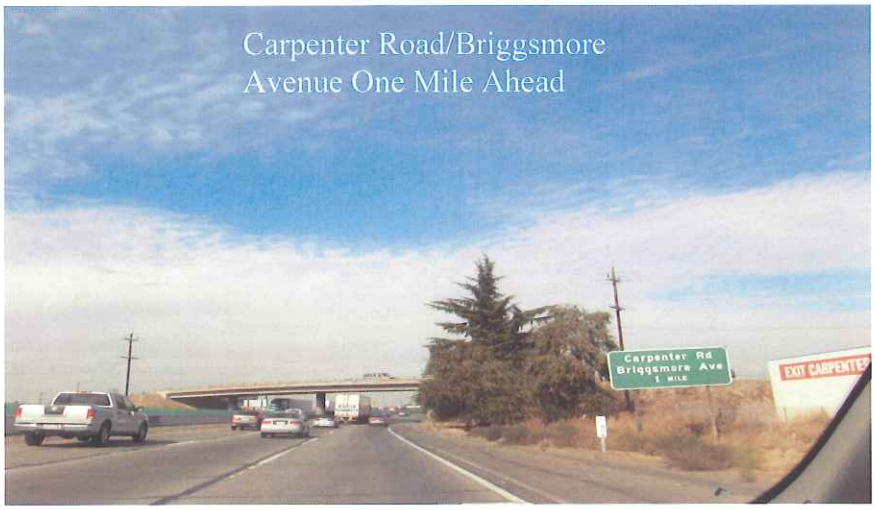


Table 3.4.2: Planned Capacity and Interchange Projects

Primary Funding Source	RTP Y/N Tier I Tier II	RTP MPO ID	Postmile		Location	Description	Total Cost ($1, 000)	Begin Const.
CMAQ, Dev. Fees, STIP	Y Tier 1	-	R1.4	R1.4	SR-99 and SR-165	Construct New Interchange	$52,000	TBD
CMAQ, Dev. Fees, STIP	Y Tier 1	T-30	R3.2	R4.0	SR-99 and W. Main Street	Construct New Interchange	$20,861	2025
CMAQ, Dev. Fees, RSTP	Y Tier 1	-	R4.3	R4.3	SR-99 and Fulkerth Road	Reconstruct Interchange	$13,842	2014
CMAQ Dev. Fees, STIP	Y Tier 1	T31	R6.7	R6.7	SR-99 and Taylor Road	Reconstruct Existing Interchange	$8,407	2025
Developer/ Local	Y Tier 1	1A690	R9.7	R10.9	Mitchell Road/Service Road	Reconstruct Interchange	$60,196	TBD
STIP, IIP, Tax Measure	Y Tier 1	ST02	R10.158	R13.26	Mitchell Road to Hatch Road	Widen to 6 to 8 lanes	$263,877	2027
TBD	Y Tier 2	-	R13.263	R13.26	Hatch Road and SR-99	City of Ceres – Construct new Overpass	$55,808	2030
STIP, IIP, Tax Measure	Y Tier 1	ST03	R13.26	R15.09	Hatch Road to Tuolumne Road	Widen to 6 to 8 lanes	$144,706	2027
STIP, IIP, Tax Measure	Y Tier 1	-	R14.9	R15.6	SR-99 at SR-132 West to SR-132 East	New Freeway to Freeway Interchange – Construct full Interchange at SR-132W/SR-99. Construct full SR-132 East Interchange.	$377,000	TBD
STIP, IIP, Tax Measure	Y Tier 1	ST04	R15.098	R16.82	Tuolumne Road to Kansas Avenue	Widen to 6 to 8 lanes	$170,243	2027
STIP, IIP, Tax Measure	Y Tier 1	ST05	R16.825	R18.52	Kansas Avenue to Carpenter Road	Widen to 6 to 8 lanes	$102,146	2027
STIP, IIP, Tax Measure	Y Tier 1	ST06	R18.52	R24.75	Carpenter Road to San Joaquin County Line	Widen to 6 to 8 lanes	$124,277	2027
TBD	Y Tier 2	-	R18.52	R18.52	SR-99 and Briggsmore Avenue	City of Modesto – Reconstruct to 8 lane Interchange	$104,306	2025
STIP, IIP, PFF, Tax Measure, Demo	Y Tier 1	SC03	R22.55	R22.55	North County Corridor SR-99 to SR-120/ SR-108	Construct 2-6 lane Expressway	$533,693 (Estimate - Actual TBD)	2020
TBD	Y Tier 2	-	R22.55	R22.55	North County Corridor SR-99 to McHenry Avenue	Construct 4-8 lane Expressway	$1,488,235 (Estimate - Actual TBD)	2030
TBD	Y Tier 2	-	R24.27	R24.27	SR-99 and Hammett Road	Interchange Ramp and Auxiliary Lane Improvements	$27,684	2020

3.5 Corridor Collision and Incidents

Based on the Traffic Accident Surveillance and Analysis System (TASAS) database information for the three year period (January 1, 2004 through December 31, 2006), collision rates within the 25.058 mile-corridor, were lower than average statewide collision rate for 5.24 miles. More specific accident data is provided in Table 3.5.

Table 3.5: Corridor Collision and Incidents

Segment	Postmile	Description	Traffic Collision Rate (per million vehicle miles traveled) TASAS Table B (Jan 1, 2004-December 31, 2006)	
			Collision Rate	Statewide Average Rate
1	R0.00/ R8.16	Merced/Stanislaus County Line to 0.4 miles north of Keyes Road	0.90	0.65
2	R8.16/ R10.90	0.4 miles north of Keyes Road to 0.3 miles north of Service Road	0.76	0.83
3	R10.90/ R13.26	0.3 miles north of Service Road to Hatch Road OC	0.99	0.88
4	R13.26/ R16.12	Hatch Road OC to JCT SR-132	2.31	0.96
5	R16.12/ R22.55	JCT SR-132 to East JCT SR-219	1.18	1.03
6	R22.55/ R24.75	East JCT SR-219 to San Joaquin County Line	0.85	0.89

3.6 Existing Corridor Transportation Management Strategies

3.6.1 Incident Management

The standard operating procedure and protocol for incident management of collisions and closures for natural causes on SR-99 is coordinated between the CHP and the Caltrans District 10 Transportation Management Center. Semi-annual team meetings are held with CHP, Caltrans, and San Joaquin County agencies to discuss incident, construction, maintenance, and special event traffic management including permit related issues. Communication with the media is coordinated through the CHP.

Key ITS elements are strategically placed at major decision points and areas with high incident rates where extensive data is gathered through traffic monitoring stations, roadside weather information systems (RWIS), and closed circuit television. Caltrans District 10 communicates road and weather information via the Caltrans Highway Information Network (CHIN), changeable message signs, and highway advisory radio. Advanced traveler information systems are available through the telephone and internet via the Performance Measurement System, RWIS, and other statewide databases.

3.6.2 Transportation Management Plan

The transportation management plan for projects through the CSMP corridor area includes

educating the traveling public through CMS's, HAR's, roadside signs and the media prior to and during construction. During construction, traffic will be managed through the use of k-rail barriers, temporary road alignments, and temporary signing/pavement delineation to provide a safe environment for both construction crews and the traveling public. Construction is typically performed during the night to avoid peak demand periods. The use of park and ride lots, carpools and transit will be encouraged. Public transit may be subsidized with a portion of the construction resources to promote the use of transit by providing discount prices during construction.

3.6.3 Freeway Service Patrol

Freeway Service Patrol (FSP) is a program run jointly by Caltrans, the CHP and the respective Metropolitan Planning Organization (MPO). The program offers free service to motorists provided by privately owned tow trucks that patrol designated routes on congested urban California freeways. This reduces delay for other motorists, maintains the capacity of our highway system and increases safety for motorists by clearing hazards that may cause secondary incidents. There currently is not a FSP program on SR-99 in Stanislaus County.

3.6.4 Ramp Metering and HOV Strategies

Rapid growth in the SJV has produced significant congestion on the regional routes connecting the population centers in the SJV with job locations in the SJV and in the neighboring Sacramento and San Francisco/San Jose/Bay areas. Although commitments have been made for funding of transportation improvements, the funds are not likely to be sufficient to provide the highway capacity needed to meet the growth forecasts for the next twenty to twenty-five years. Stanislaus County is also part of the eight-county SJV Air Basin, which is in non-attainment for two of the six criteria pollutants specified by the Clean Air Act: ozone and $PM_{2.5}$. There is urgent need to ensure that future travel is accommodated in the most efficient manner possible with the least impact on air quality.

Caltrans contracted with SJCOG to develop the *2009 Northern San Joaquin Valley Regional Ramp Metering and High Occupancy Vehicle Lane Master Plan,* for the northern San Joaquin region including the counties of San Joaquin, Stanislaus, and Merced in 2006, the plan was completed in 2009. HOV lanes and ramp metering are effective operational tools for managing congestion on freeways and thereby improving regional and interregional mobility. HOV lanes are common in metropolitan areas and are the basis for innovation with the recent implementation of High Occupancy Toll (HOT) lanes. California implements ramp metering in highly congested corridors during peak traffic hours to improve freeway speeds and safety. However, in Stanislaus County there are no ramp meters or HOV lanes in operation.

The purpose of this joint Caltrans/StanCOG effort is to develop a ramp metering and HOV master plan through system analysis and political consensus, resulting in a product that all stakeholders will be able to adopt and implement, in collaboration with State and local partners. The final *2009 Northern San Joaquin Regional Ramp Metering and HOV Master Plan* identifies that ramp metering can be effective for mitigating bottleneck impacts and avoiding the breakdown of mainline flow in both northbound and southbound directions of SR-99 in Stanislaus County during both the morning and afternoon peak periods as early as

2015. The final *2009 Northern San Joaquin Regional Ramp Metering and HOV Master Plan* also identifies that HOV lanes would be beneficial in all areas of SR-99 when widened to four lanes in each direction. The potential benefits of vanpools, buses, motor cycles and approved hybrid and low emitting vehicles, overall reduction in person hours of travel, reduced vehicle miles of travel, reduced gasoline consumption and reduced pollutant emissions.

3.7 Corridor Rehabilitation and Maintenance Strategy

The current rehabilitation strategy is to maintain and rehabilitate the existing facility. Projects from the SHOPP are prioritized by the needs of the State Highway. These projects maintain or improve the condition, safety, and operation of the highway, and protect the investment that has been made on the facility. The SHOPP program includes six types of projects that would affect SR-99: collision reduction; roadway preservation, bridge preservation, roadside preservation, mobility improvements and mandates (e.g. storm water requirements, emergency projects).

Nominated projects within each category compete for available dollars with other projects on a statewide basis. Collision reduction improvements that meet certain thresholds of cost-benefit criteria are funded first from the SHOPP before other needs are addressed.

The 10-year SHOPP includes investments in projects in both the rehabilitation and preventive maintenance categories. This investment is expected to provide highway appearance and condition ratings similar to current conditions, which are less than Caltrans performance targets and the desires of the communities served by SR-99.

3.7.1 Programmed Operational Improvement Projects

There are three programmed operational improvements on the SR-99 corridor. See Table 3.7.1 below for the programmed operational improvements on SR-99 in Stanislaus County.

Table 3.7.1: Programmed Operational Improvements

Primary Funding Source	RTP Y/N Tier I Tier II	RTP MPO ID	Postmile		Location	Description	Total Cost (1,000)	Begin Const.
SHOPP - MINOR	N	OT840	R13.2	R20.2	SR-99 from Hatch Road to Beckwith Road/Standiford Avenue	Install rumble strips on the inside and outside shoulders	$429	11/18/2011
SHOPP	N	OA671	R15.1	R17.0	Tuolumne River Bridge (PM15.1) to Kansas Avenue (PM 17.0)	Rehabilitate Multiple Ramps	$8,608	3/23/2011
SHOPP	N	OK700	R21.9	R22.3	SR-99 and SR-219	Widen Roadway and Ramps	$1,853	7/1/2011

Caltrans developed a SR-99 Feasibility Study which identified Crow's Landing curve improvement as the highest safety priority, however it is currently inactive.

3.7.2 Planned Operational Improvement Projects

The CSMP development team has proposed four operational improvements along the SR-99

CSMP corridor. These improvements are proposed and currently not funded. See Table 3.7.2 for the planned operational and rehabilitation projects on SR-99 in Stanislaus County.

Table 3.7.2: Planned Operational Improvement Project List

Primary Funding Source	RTP Y/N Tier	Postmile	Location	Description	Cost (K)	Construction Date
SHOPP	N	R 13.14/R18.8	SR-99/Hatch Road	Construct N/B Auxiliary Lane	$1,070	TBD
TBD	Y—Tier 1	R 18.7/R 19.9	Carpenter Road-Briggsmore Avenue	Improve Ramps/ Construct N/B and S/B Auxiliary Lanes	$9,600	TBD
SHOPP	N	R 20.5/R21.5	Beckwith Road/ Standiford Avenue-Pelandale Avenue	Improve Ramps/ Construct N/B and S/B Auxiliary Lanes	$8,500	TBD
SHOPP	N	0.00/24.8	Merced to San Joaquin County Line	Restore and Resurface	$91,400	TBD

3.7.3 Corridor Maintenance Conditions and Preservation

3.7.3.1 Pavement Conditions

The Caltrans Division of Maintenance conducts a Pavement Condition Survey (PCS) annually to identify pavement distress. Based on the most recent survey, the SR-99 corridor exhibits structural distress needing pavement rehabilitation. The PCS is used to identify needs in the roadway preservation programs (Roadway Rehabilitation and Pavement Preservation). Based on 2008 maintenance pavement condition data, 32.4 lane miles of the 77.56 corridor lane miles are identified for rehabilitation strategies. The segments identified for rehabilitation strategies along the SR-99 corridor are found in Table 3.7.3.1 below.

Table 3.7.3.1: Existing Corridor Pavement Distress

Seg.	Post Mile	Description	2008 Maintenance Conditions Distressed Lane Miles
1	R0.00/R08.16	Merced/Stanislaus County Line to 0.4 miles N/O Keyes Road	16.8
2	R08.16/R10.9	0.4 miles N/O Keyes Road to 0.3 miles N/O Service Road	5.5
3	R10.9/R13.26	0.3 miles N/O Service Road to Hatch Road OC	6.2
4	R13.26/R16.12	Hatch Road OC to JCT SR-219	7.5
5	R16.12/R22.5	JCT SR-132 to East JCT SR-219	13.2
6	R22.5/R24.75	East JCT SR-219 to San Joaquin County Line	7.3

3.7.3.2 Bridge Conditions

Office of Structures Maintenance and Investigations of the Engineering Service Center conducts periodic inspections of all State structures. The Structures Replacement and Improvement Needs (STRAIN) report is used to identify needs for the Bridge Preservation Programs (Bridge Replacement/Rehabilitation, Scour Mitigation, Rail Replacement/Upgrade, Seismic Restoration and Widening). Based on the most recent reports, there are currently nine bridges identified on the STRAIN. Additional information on bridges identified for replacement and or improvement needs on the SR-99 corridor are found below in Table 3.7.3.2.

TABLE 3.7.3.2: SR-99 Corridor Bridge Needs

Post Mile	Description	SR-99 Maintenance Bridge Data	
		Bridge Name	Bridge #
R10.6	Seismic Retrofit (Estimated cost = $755,000)	Service Road OC	38 0094
R17.9	Seismic Retrofit (Estimated cost = $2,085,000)	West Modesto OH	38 0083

3.7.4 Right-of-Way, Preservation of Ultimate Transportation Corridor

Identification of the UTC and subsequent preservation of the ROW will ensure adequate ROW will be preserved to accommodate facility improvement projects beyond 2030. The ultimate corridor concept is ten lanes from the Merced County Line to Hatch Road and twelve lanes from Hatch Road to the San Joaquin County Line. Efforts will need to be made by the local agencies to preserve ROW for these future projected needs by restricting developments and incorporating plans and restrictions for use on this future ROW.

There are many existing ramps and bridges along the CSMP corridor that do not meet current standards. Extensive development has occurred that will impact expansion of the freeway due to the heightened cost of ROW acquisition. Local agencies should begin now to work with Caltrans in a team effort to establish plan lines and interchange "footprints" so that local agencies can use their land-use authority to preserve the necessary ROW for the corridor. Local agencies must also work together with Caltrans now to have plan lines adopted into those jurisdiction's General Plan circulation elements. This will also accelerate the necessary environmental clearances. District 6 is currently in the process working on a test model in Madera to verify the existing ROW information and the amount needed to accommodate the UTC. The expectation is that the model will eventually expand throughout the entire SR-99 corridor.

The frontage roads along SR-99 are fragmented and do not serve the corridor for any extended length. It is recommended that local jurisdictions consider the connectivity of existing and the construction of new frontage roads in future commercial and residential development along

SR-99. A connected frontage road system will serve to relieve the corridor of congestion and may serve to preserve future needed ROW.

3.7.5 Access Control

The California Freeway and Expressway System have made a large financial investment in access control to insure safety and operational integrity of the highways. The Freeway Agreement documents the understanding between Caltrans and the local agency relating to the planned traffic circulation features of the proposed facility. In the event that the freeway is fully constructed, it shows which streets may be closed or connected to the freeway; it shows which streets and roads may be separated from the freeway; it shows the location of frontage roads; and it shows how streets may be relocated, extended or otherwise modified to maintain traffic circulation in relation to the freeway. Agreements are often executed many years before construction is anticipated and they form the basis for future planning, not only by Caltrans, but also by public and private interests in the community.

A freeway agreement secures local agency support for local road closures and changes to the local circulation system and to protect property rights and to assure adequate service to the community. Access control is necessary on the freeway or expressway so that current and future traffic safety and operations are not compromised.

3.8 Smart Land Use Management Practices

StanCOG has been successful in developing procedures and processes that address regional transportation planning issues. By focusing on growth and its related impacts, StanCOG has encouraged the involvement of partner agencies, local jurisdictions, citizens and the State to focus resources on the most pressing regional issues and activities. This effort assures that the transportation network will move people and goods safely and efficiently while improving both air quality and overall quality of life for the residents of the region. The 2011 RTP embodies these efforts and shows planning consistency and coordination with the following planning documents and efforts. Land use patterns affect the region's transportation, air quality, housing, open space and other resources. StanCOG, through the RTP and other efforts, analyzed the effects of the proposed projects on these resources. StanCOG is committed through the Blueprint and general plan process to strengthen transportation land use planning.

3.8.1 2009 Stanislaus County Regional Congestion Management Program

The 2009 Congestion Management Process for the Stanislaus County Region, which was approved on January 20, 2010 by the StanCOG Policy Board was funded in part through grants from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation.

The 2009 StanCOG Congestion Management Process (CMP) for the Stanislaus County Region is an essential component of StanCOG's metropolitan planning process and an important element of the development of the Regional Transportation Plan in its functionality as a filter for project selection, programming and performance monitoring. The CMP has

been developed to improve multimodal mobility and avoid the creation of deficiencies. One means to this end is the evaluation of multimodal system performance for the movement of people and goods. The performance measures of the CMP support mobility, air quality, land use, and economic objectives, and are used to determine whether projects are to be included in the CMP Capital Improvement Program for consideration for inclusion in the Regional Transportation Plan. The CMP is thus a performance-based program which is consistent with and assists in the implementation of the Regional Transportation Plan's goals, objectives, and policies.

3.8.2 Developer Contributions

The Stanislaus County Board of Supervisors approved entering into an Administrative Agreement with StanCOG for the formal administration of the RTIF portion of the County's Public Facilities Fees on March 21, 2006. Just recently, Stanislaus County has completed a new program. The current fee schedule can be found online at the following URL:

http://www.stancounty.com/CEO/econ-dev/pdf/county-impact-fee.pdf

3.8.3 Local Agency Transportation Impact Fees

In Stanislaus County, all cities, and the county collect traffic impact fees for the transportation system including the SHS. The fees are generally charged to new development projects or development expansion projects to offset the cost of needed roadway capacity improvements due to the auto trips generated from the development.

3.8.4 Regional Planning and Coordination

Transportation planning efforts should be coordinated in geographically defined air basins. Within the SJV, eight counties share an air basin between them. Although there are also significant differences in the context of transportation planning the counties have already implemented an aggressive program of coordinated Valley wide planning within the context of regional blueprint planning.

3.8.4.1 North County Corridor

The NCC project will provide approximately 25 miles of roadway on new alignment to enhance local traffic circulation, to reduce congestion, improve safety, and preserve the mobility gains of the Proposition 1B CMIA investments of SR-219. The primary intent of the NCC project is to provide a high capacity/high speed east-west roadway to accommodate anticipated traffic growth in the area to alleviate traffic on parallel roadways and to accommodate multi-modal travel. The intersection of SR-120 and SR-108, and the at-grade rail road line, causes a traffic congestion situation which has influenced the development of the NCC.

To plan for the new route, the North County Corridor Transportation Expressway Authority (NCCTEA) was formed. The NCCTEA consists of Caltrans, StanCOG; the cities of Oakdale, Riverbank, Modesto; and the County of Stanislaus.

The NCC Corridor B Alternative (Figure 3.8.4.1) is the selected route adoption by the California Transportation Commission at their May 2010 meeting. It is described as follows: it will possibly begin at the eastern end of SR-219 to follow to the south of Riverbank and Oakdale and would merge at a location where SR-120 is concurrent with SR-108 to the east of the City of Oakdale. Corridor B alternative only represents the eastern corridor portion of the NCC. The western portion runs from SR-99 out to McHenry Avenue is still under study by the local agencies.

Traffic through the corridor is a combination of commuter, local commerce, and goods movement, with a large component of recreational traffic. This traffic currently conflicts with local traffic on the existing facilities, creating congestion and safety concerns, as well as, local traffic on the existing facilities, creating congestion and safety concerns, as well as, elevated noise and air pollution levels. These conditions are expected to worsen significantly over time as development continues and traffic increases within the corridor.

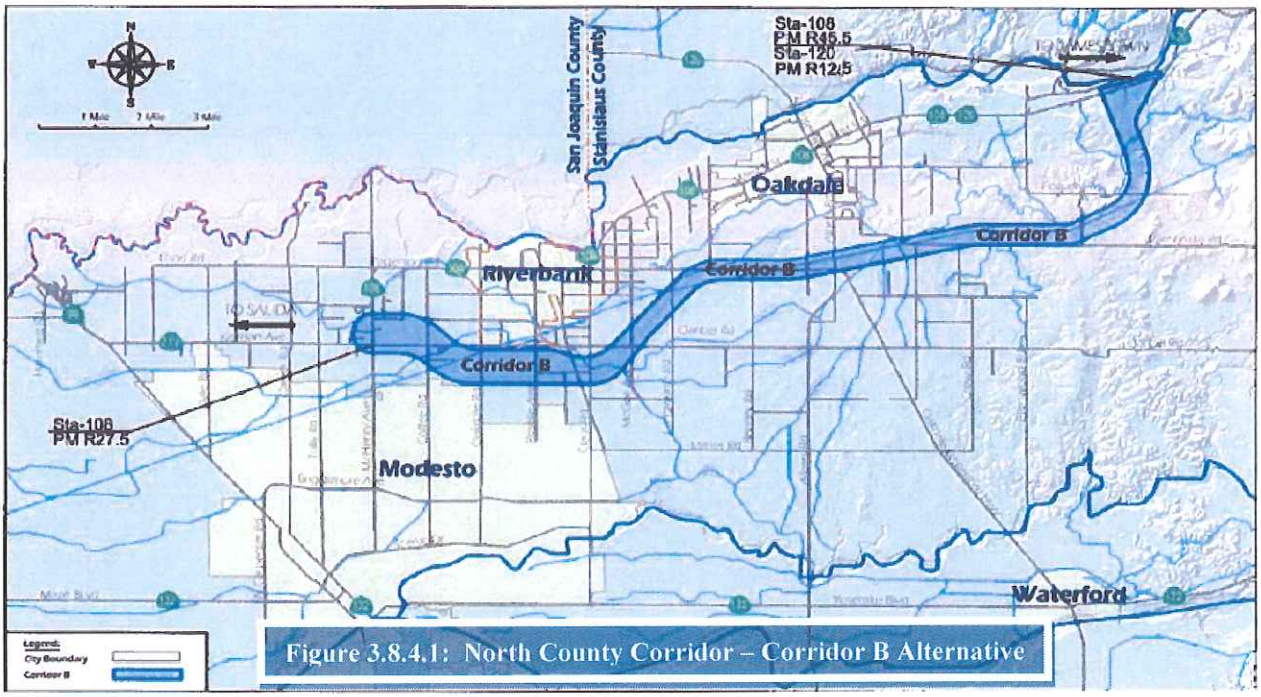


Figure 3.8.4.1: North County Corridor – Corridor B Alternative

The Project Report was completed by Caltrans in January 2010. The North County Corridor, Corridor B Alternative, is illustrated in Figure 3.8.5.1 above.

3.8.4.2 SR-99 Corridor Master Plan

Collectively, Caltrans, local agencies, business interests, community groups and organizations including the Great Valley Center (GVC) have prepared a number of planning documents intended to improve the capacity and efficiency as well as the aesthetics of the SR-99 corridor. The Department in cooperation and coordination with the GVC 99 Task Force completed a Route 99 Corridor Enhancement Master Plan, which placed emphasis on creating

a "sense of place" as a means of distinguishing one community along SR-99 from another, above and beyond the more standard types of planned projects.

The Business, Transportation and Housing Agency then requested that Caltrans prepare a Business Plan for the orderly improvement of SR-99 throughout the SJV. These two products were completed in 2005 and became known as the Route 99 Corridor Master Plan.

The SR-99 Business Plan was recently updated to reflect existing conditions and to complete several Business Plan goals. It is the intent of this CSMP to be consistent with the goals of the SR-99 Business Plan. The SR-99 Business Plan can be found at the following location on the internet: http://www.dot.ca.gov/dist6/site_index/index.htm

3.8.4.3 Valley Wide Transit Study

Caltrans recently awarded a partnership planning grant to fund the SJV Express Transit Study with MCAG as lead working with the counties of Kern, Kings, Tulare, Fresno, Madera, Merced, Stanislaus, and San Joaquin. The study will address current and future needs for coordinated bus services throughout the region, resulting in the creation of a more integrated transit network within the SJV and improving the existing transit system. The study will also examine the potential for connectivity with other modes of transportation such as BART, ACE, and Amtrak.

3.8.4.4 Interregional Transportation Partnership Planning

Caltrans also recently awarded StanCOG a Partnership Planning grant to fund the Interregional Transportation Partnership Planning program. StanCOG has taken lead on the effort to bring together stakeholders from the SJV and the San Francisco/San Jose/Bay Area to explore ways to address complex, interregional growth issues, including interregional transportation, goods movement, and air quality. The program will develop a five-year strategic plan of regional transportation improvement strategies and a memorandum of understanding documenting support from the SJV and San Francisco/San Jose Bay Area regions for implementation.

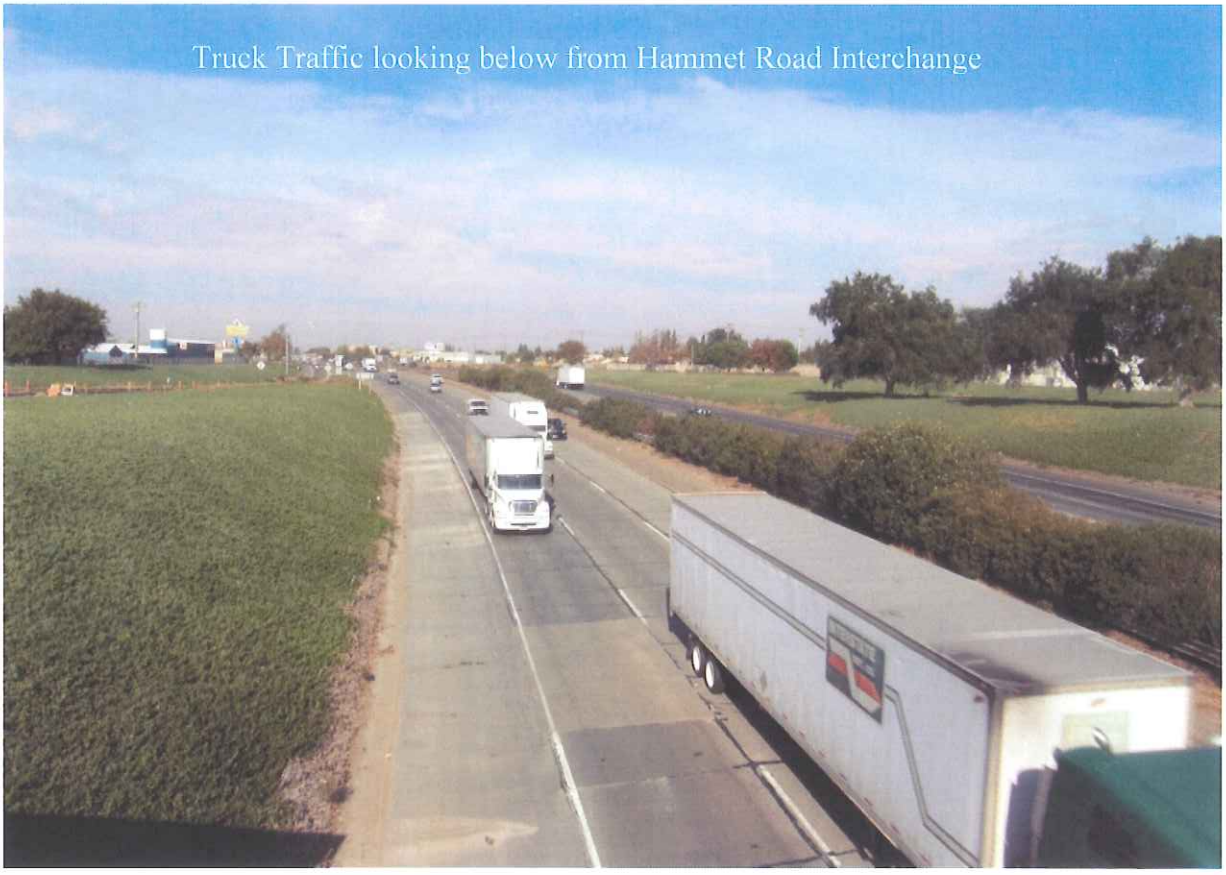
3.8.4.5 Valley Wide Regional Blueprint Strategies

Building on successful planning studies conducted by several California metropolitan transportation planning agencies over the past four years, Caltrans provided a planning grant to MCAG on behalf of the eight SJV regional planning agencies to prepare a "visioning" plan for the Valley. The goal of the SJV Blueprint Planning Process is to facilitate the public's development and implementation of a SJV Regional Vision addressing the growth of San Joaquin, Stanislaus, Merced, Madera, Fresno, Tulare, Kings and Kern Counties, with an emphasis that shows the links between land use, agricultural, environment, transportation, and air quality. StanCOG and Caltrans District 10 are actively participating in the Valley wide Regional Blueprint process.

3.8.4.6 California Partnership for the San Joaquin Valley

The California Partnership for the San Joaquin Valley brings state agency secretaries and SJV representatives together to make recommendations to the Governor regarding changes that would improve the economic well-being of the Valley and quality-of-life to its residents.
The major goals of the Partnership are:

- ❖ Identify projects and programs that best utilize public dollars and most quickly improve the economic vitality of the Valley.
- ❖ Work with members of the State's Congressional delegation and federal officials.
- ❖ Partner with University of California, California State University, community colleges, and the State's other research and educational institutions as well as private foundations.
- ❖ Review State policies and regulations to ensure they are fair and appropriate for the State's diverse geographic regions.
- ❖ Recommend to the Governor changes that would improve the economic well-being of the SJV and the quality-of-life of its residents.



4. Comprehensive Performance Assessment and Corridor System Management Strategies

The comprehensive performance assessment evaluates congestion, delay, and performance of the corridor by analyzing the existing (2007 base year) LOS, and projections for years 2015 and 2030 and collision rates. In addition, the CSMP provides expected benefits and performance of the Proposition 1B Transportation Bond Act State Route 99/Kiernan Interchange Reconstruction project.

Also included are the system management strategies that are needed to manage the performance of the SR-99 corridor, and a Ten Year Implementation Plan that identifies transportation improvements currently provided in the STIP, SHOPP, RTP, and other transportation programming and planning documents. The project list includes ITS, detection, operational, rehabilitation, interchange/intersection, capacity increasing, transit, park-and-ride, and bicycle facility improvements. It is expected that these improvements will be considered during the next available update of transportation planning and programming processes.

4.1 Delays or Bottlenecks

Reduced speeds and bottlenecks (areas of congestion) indicate that the current capacity of SR-99 in the near future will no longer be adequate. In spite of the widening projects, congestion will persist due to increases in AADT and peak hour traffic, increases in traffic merging on and off the freeway, and the large percentage of truck traffic, primarily five axle or greater trucks.

Fog is a frequent cause of collisions and delay during the winter months, occasionally requiring the use of CHP pace cars. Interregional traffic as well as local traffic is delayed, impeding the efficient movement of people and goods. Caltrans District 10 uses a sophisticated multi-sensor automated warning system composed of roadside weather stations, visibility meters, and traffic monitoring stations to notify of incidents and delays due to adverse conditions.

The primary function of the Caltrans Automated Warning System (CAWS) is to detect the presence of adverse weather conditions and/or congested traffic and then warn the driver of such conditions automatically using changeable message signs. The CAWS is composed of 24 separate stations each consisting of remote roadside weather stations and/or Inductive Loop Speed Detectors and one Model 500 Changeable Message Sign. The CAWS is controlled by a network in the District 10 TMC. The CAWS currently serves the corridors of SR-99, I-5, I-205 and SR-120.

The AADT on SR-99 in the CSMP corridor limits currently ranges from 78,620 to 125,780 with trucks constituting up to 17 percent of the AADT in some sections.

Currently, there are 13.26 out of the 24.75 lane miles that are not currently planned for widening to eight lanes. There are 11.49 lane miles planned to begin construction on SR-99 as eight lanes by 2027. Based on 2007 volumes and calculating in the planned projects that there

will be no projects widening to eight lanes prior to 2015, no miles will be operating at acceptable LOS 'D.'

In 2015, there will be 8.16 lane miles operating at deficient LOS 'E' from the Merced County Line to 0.4 miles north of Keyes Road and there will be 16.59 miles operating at deficient LOS 'F' from 0.4 miles north of Keyes Road to the San Joaquin County Line. Altogether there will be 24.75 miles operating at a deficient LOS in 2015. In 2030 there will be 24.75 lane miles in the CSMP corridor operating at LOS 'F' even with the improvements to eight lanes planned to go to construction in 2027.

On pages 60 and 61 are figures from the 2008 Highway Congestion Monitoring Program Exhibit 3-27 and Exhibit 3-28 found in that document on pages 3-34 to 3-35. Figure 4.1a displays the congestion during the peak hour morning conditions within Stanislaus and San Joaquin counties between 5:45 a.m. and 9:00 a.m. Figure 4.1b displays the peak hour congestion period and location in the late afternoon between 4:30 p.m. and 5:45 p.m.

A different kind of representation coming directly from the latest StanCOG model for the year 2006 is Figure 4.1c (see page 62). It displays the congestion during the morning peak hour between 7:30 a.m. and 8:30 a.m. The display shows the volume over capacity (V/C) results in red and black. Where there is a red line, V/C is 0.90 or greater. This is equivalent to having LOS condition of LOS 'E' or 'F.' Where there is a black line illustrated, the V/C conditions are between 0.75 and 0.90 or the conditions are between LOS 'D' and 'E.' This map comes directly from the latest StanCOG model for the model year 2006. This provides a closer view of LOS conditions in the Modesto area as well as at the SR-99/Kiernan Avenue .

DISTRICT 10
SAN JOAQUIN AND STANISLAUS COUNTIES
2008 MORNING CONGESTION MAP*

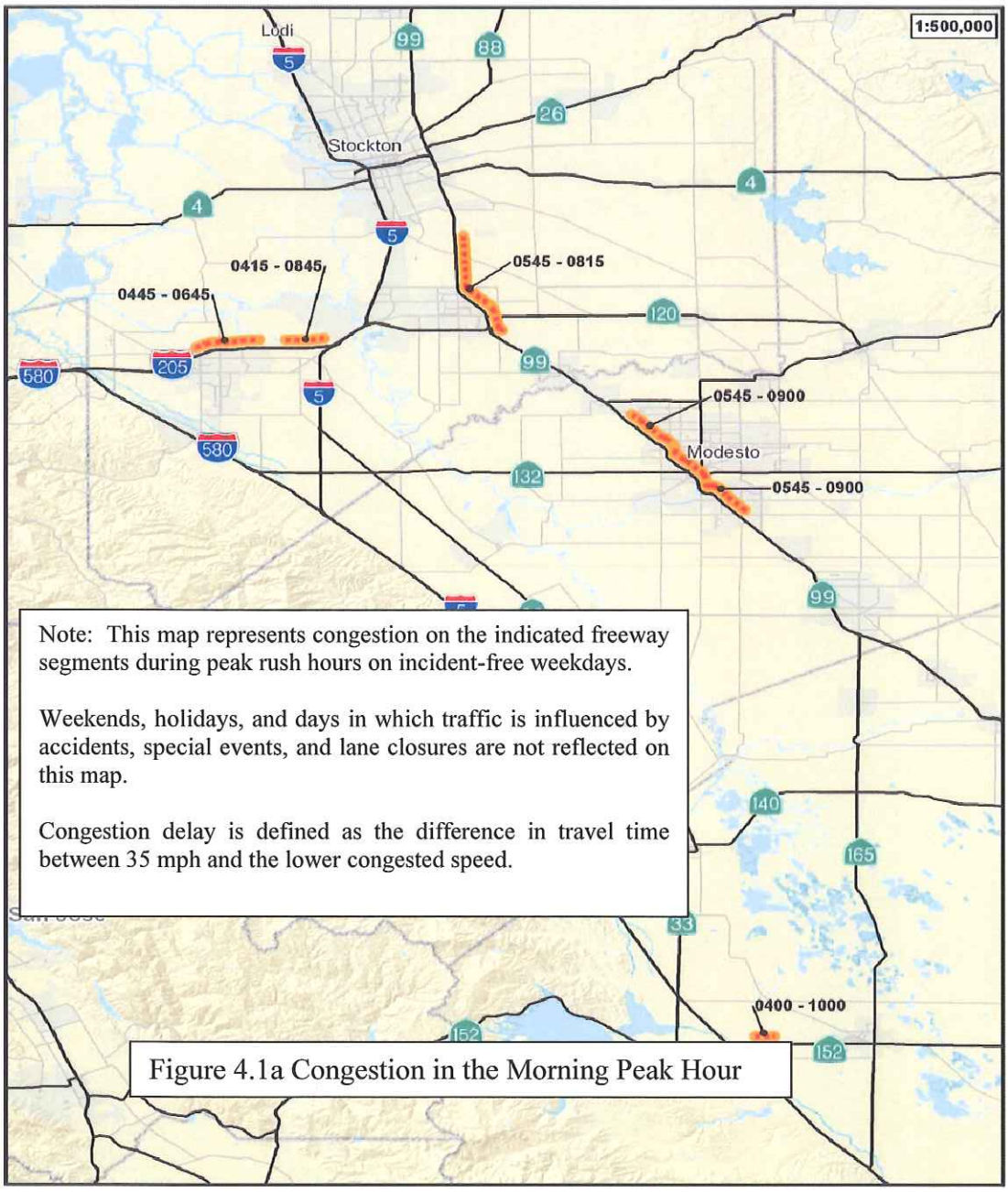


Figure 4.1a Congestion in the Morning Peak Hour

*This Map comes from the 2008 Highway Congestion Monitoring Program Exhibit 3-27 Page 3-34

DISTRICT 10
SAN JOAQUIN AND STANISLAUS COUNTIES
2008 AFTERNOON CONGESTION MAP*

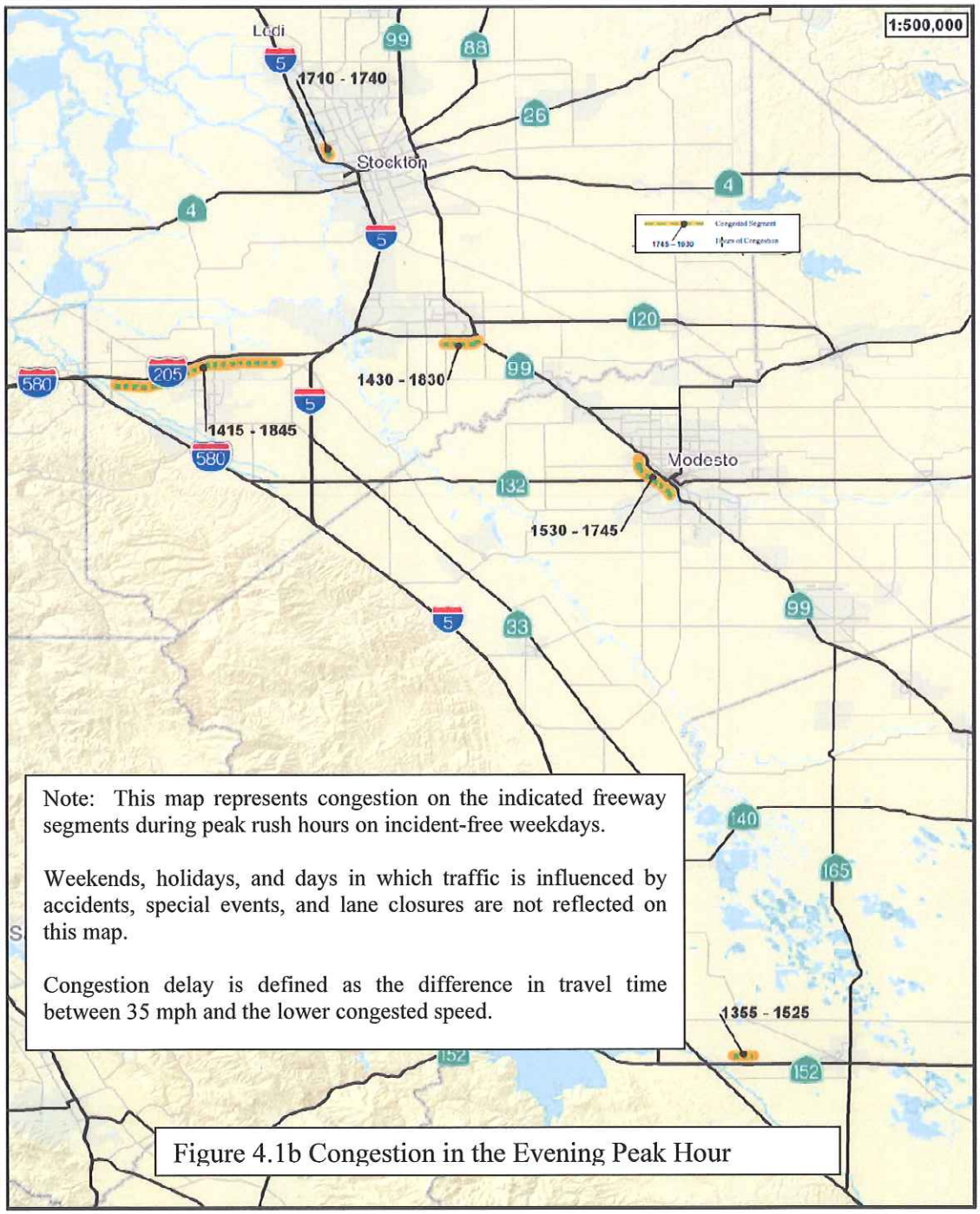


Figure 4.1b Congestion in the Evening Peak Hour

*This Map comes from the 2008 Highway Congestion Monitoring Program Exhibit 3-27 Page 3-34

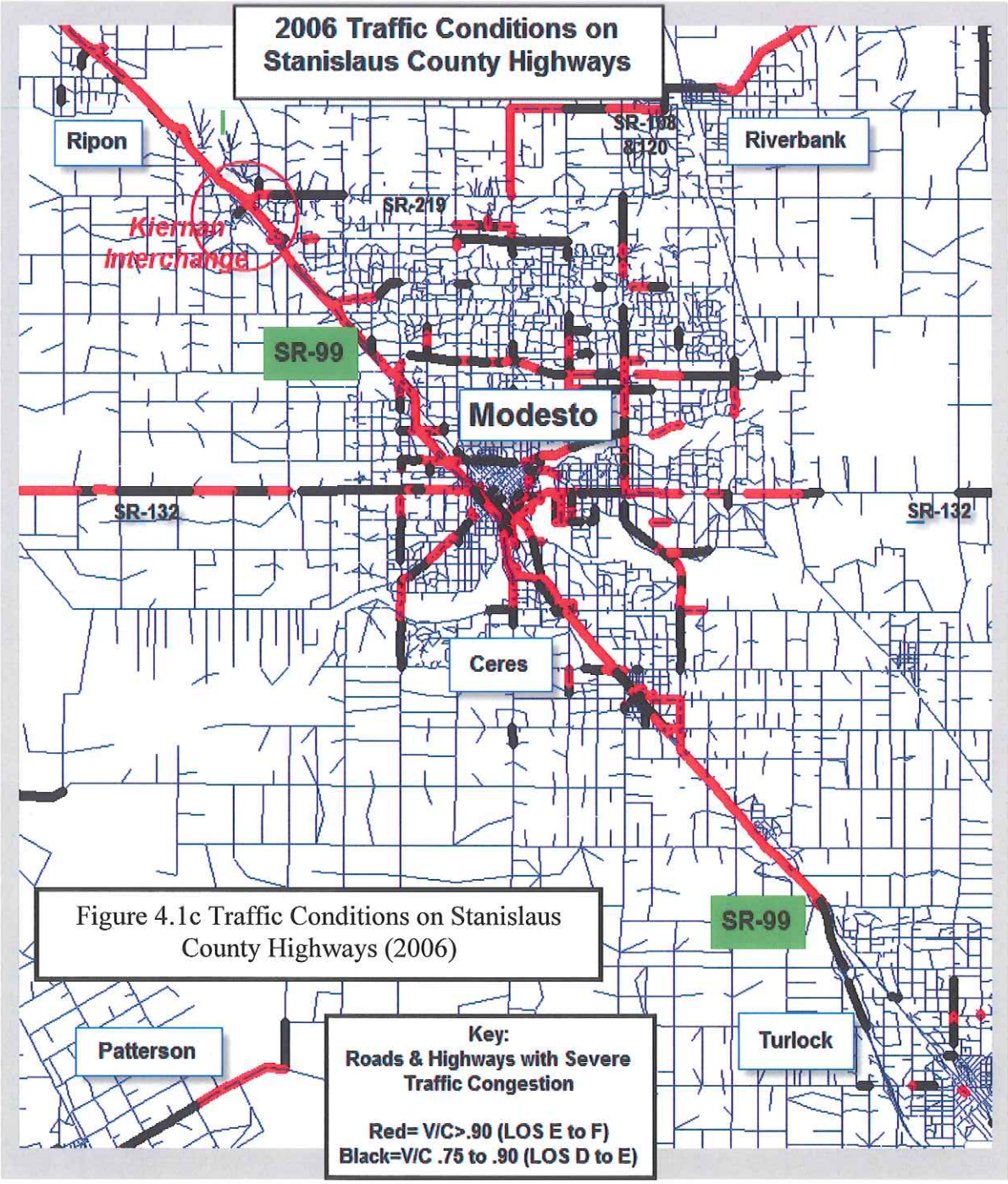


Figure 4.1c Traffic Conditions on Stanislaus County Highways (2006)

4.2 SR-99 CSMP Transportation System Management Strategies

Analysis indicates that twelve to ten lanes are needed to meet the 2030 concept LOS 'D.' Due to ROW, environmental, and financial considerations, the concept facility is eight lanes. The UTC is undetermined. In order to manage the performance of the freeway, the concept facility recommends including ramp metering and HOV lanes. Other strategies will include freeway service patrol including expansion of incident management, traveler information, traffic surveillance, detection, advanced synchronization of traffic signals, and

additional operational improvements. It is also recommended that the local jurisdictions consider the connectivity of existing and construction of new frontage roads in future commercial and residential development along SR-99.

In order to manage the performance of the freeway, reduce congestion, and preserve the mobility gains of the SR-99 Proposition 1B CMIA investment, Caltrans District 10 and STANCOG are committed to the following system management strategies:

- Expansion of ITS elements to enhance incident management, traveler information, traffic surveillance and detection. There are six existing ITS elements and 16 PeMS stations along the CSMP corridor, and 35 ITS elements are currently programmed and 20 ITS elements planned for implementation. There are 37 programmed PeMS stations and 14 planned PeMS stations for implementation.

- The existing and planned ITS infrastructure represents a wide collection of instrumentation, some of which combines several technologies in a single integrated system. The elements are placed in strategic locations to provide optimal benefit to the public or provide Caltrans TMC with data used to manage the corridor. The TMC uses the collected data to post advisories during incident management through CMS, HAR, or other media to alert approaching traffic to avoid possible secondary accidents, encourage diversion away from an incident, or dispatch Traffic Management Teams in the field.

- ITS project improvements are categorized as short-term (0-4 years), mid-term (5-7 years) and long-term (8 - 10 years). Short-term project goals for SR-99 include placing ITS elements at major decision points within STIP and SR-99 Bond funded projects. Mid-term project goals for SR-99 include TMS for congestion monitoring of lane volumes and possible travel time calculations, as well as CCTV for incident verification and management. Long-term project goals for SR-99 include full instrumentation of ITS elements along freeway corridors.

- The *2009 Northern San Joaquin Regional Ramp Metering and HOV Master Plan* identifies that ramp metering can be effective for mitigating bottleneck impacts and avoiding the breakdown of mainline flow in both northbound and southbound directions of SR-99 in Stanislaus County.

- The actual implementation of ramp metering is planned to occur through the joint development and adoption of cooperative policies to establish the authorities, roles and responsibilities of all parties in the management of the ramp metering, freeway and arterial roadway system, and in the mitigation of local roadway impacts. Such an interagency agreement will establish a process to ensure that concerns of local agencies are addressed and resolved, including a process for review of impacts and refinement of metering parameters.

- The *2009 Northern San Joaquin Regional Ramp Metering and HOV Master Plan* also identifies that HOV lanes would be beneficial in all areas of SR-99 when widened to eight lanes. Stanislaus Regional Transit has recommended that all ramp metering and

HOV lanes be designed to accommodate the operation of transit buses.

- Expansion of operational, rehabilitation improvements to include auxiliary lanes, increase acceleration lanes, reconstruct and modify interchanges and bridges, asphalt/concrete overlays, median barriers, and landscaping. In addition to the improvements that are included in the Proposition 1B 99Bond SR-99/SR-219 Kiernan Interchange Reconstruction Project, there are three programmed operational improvement projects. There are four planned and proposed operational improvements, four programmed interchange projects, and 16 interchange or capacity increasing projects are planned project improvements that will provide safety benefits and will contribute to the overall improved performance of the corridor. Improvements are categorized as short-term (0-4 years), mid-term (5-7 years) and long-term (8 - 10 years). Short and mid-term project goals for SR-99 include the operational improvements within the Proposition 1B Transportation Bond Act State Route 99 project, and those currently programmed in the STIP and SHOPP. Long-term project goals include operational improvements not currently identified for funding. The programmed, planned, and proposed operational, rehabilitation and maintenance improvements are listed in the Ten Year Implementation Plan and Project List in Appendix F.

- The management of traffic incidents and closures for natural causes will continue to be coordinated between the CHP and the Caltrans District 10 TMC, and communication with the media will continue to be coordinated with the CHP. Meetings will also continue to be held twice a year with CHP, Caltrans, and local agencies, and the Office of Emergency Services to discuss incident, construction, maintenance, and special event traffic management, including permit related issues.

- Expansion of transportation demand management practices including construction of new park-and-ride facilities with transit coordination, development of telecommute work centers, and continued work force vanpool and rideshare services.

- Connectivity of bicycle and pedestrian facilities crossing SR-99. Programmed and planned bicycle and pedestrian facilities are listed in the Ten Year Implementation Plan and Project List in Appendix F.

- To address the lack of local STAA routes, access and truck parking issues along SR-99 and throughout the SJV, the San Joaquin Valley Goods Movement Action Plan efforts will serve to evaluate and coordinate discussion of these local and regional issues.

- Construction of new frontage roads in future transportation projects should be considered and included in any planned commercial and residential development along SR-99. Developing frontage roads allows for the establishment of an alternative route for local traffic to reduce traffic congestion on the mainline.

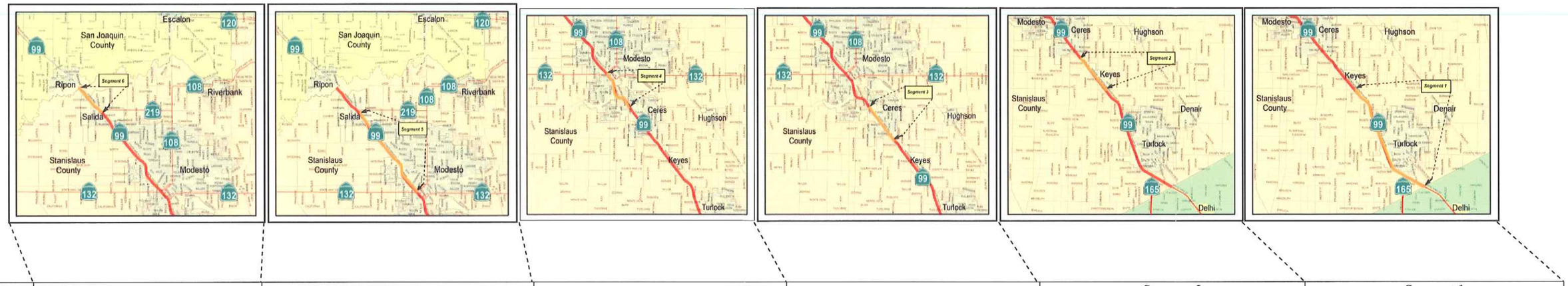
4.2.1 Ten Year Implementation Plan

The SR-99 CSMP includes a Ten Year Implementation Plan or project listing of

transportation improvements and system management strategies currently identified in the STIP, SHOPP, RTP, and other transportation programming and planning documents. The Ten Year Implementation Plan can be found in Appendix F. The project list includes programmed and planned ITS, detection, operational, rehabilitation, interchange/intersection, capacity increasing, park-and-ride, rest area, transit, and bicycle and pedestrian facility improvements along the corridor.

In addition, the project list includes proposed improvements and system management strategies that have been recommended as a result of the CSMP development process. Funding for the proposed improvements has not yet been identified, and considered planned projects for CSMP purposes. It is expected that these improvements will be considered during the next available update of transportation planning and programming processes. The 10 year planning horizon extends ten years from the beginning construction date of the Proposition 1B Transportation Bond Act SR-99/Kiernan Avenue Reconstruct Interchange project or 2022. Refer to Ten Year Implementation Plan Figure 4.2.1 on the following page and the Ten Year Implementation Plan Project List in Appendix F.

FIGURE 4.2.1
SR-99 10 Year Implementation Plan (2022) LOS with Project List
Summary: 10 Years from Begin Construction Date of SR-99 Kiernan Interchange Project



Location	Segment 6 R22.55/R24.75 JCT SR-219 to SJ County Line	Segment 5 R16.12/R22.55 JCT SR-132 to JCT SR-219	Segment 4 R13.26/R16.12 Hatch Rd. to JCT SR-132	Segment 3 R10.90-R13.26 0.3 mi. N/O Service Rd. to Hatch Rd.	Segment 2 R8.16/R10.90 0.4 mi. N/O Keyes Rd. to 0.3 mi. N/O Service Rd.	Segment 1 R0.00/R8.16 Merced County Line to 0.4 mi N/O Keyes Rd.
Existing Level of Service	E	F	F	E	D	D
ITS Funded	139, 141, 142	89, 90, 96, 97, 98, 100, 101, 106, 111, 113, 114, 115, 118, 122, 124, 126, 132, 133	68, 69, 76, 76, 84, 85	46, 47, 55, 56	30, 33, 34, 36	
ITS Unfunded	138	93, 94, 109, 110	65, 70, 71	51, 52, 53, 54	43	4, 7, 8, 17, 23, 27
PeMS Detection Funded	135, 136, 137, 140, 143, 145	87, 91, 99, 102, 107, 112, 119, 121, 123, 125, 127, 128, 130, 134	60, 63, 64, 67, 72, 73, 78, 83, 86	44	28, 29, 31, 32, 35, 37	2
PeMS Detection Unfunded		95	80	45, 50	41	5, 6, 11, 15, 18, 19, 21, 22, 26
Operational Funded			82	59		1
Operational Unfunded		108, 117	66			
Interchange Funded		120, 131		48	38	16
Interchange Unfunded	144	105	61, 79			3, 9, 20, 24
Capacity Funded						
Capacity Unfunded		92, 104	62, 81		42	
Other Modes/TDM Funded						
Other Modes/TDM Unfunded	137, 146	88, 103, 116, 129	74, 75	49, 57, 58	39, 40,	10, 12, 13, 14, 25

4.2.2 Proposition 1B 99 Bond Program Project Benefits—

SR-99/ Kiernan Avenue Interchange Reconstruction Project

Stanislaus County, in cooperation with Caltrans, District 10, proposes to reconstruct the existing SR-99/Kiernan Avenue interchange in the community of Salida, just north of Modesto in Stanislaus County. The project is expected to begin construction in 2012.

The interchange improvements would include reconstructing the overcrossing structure, on and off-ramp, and certain roadway segments within the interchange limits. On and off-ramps will be widened to accommodate greater traffic volumes entering and exiting the mainline. The overcrossing will be widened and replaced to accommodate forecasted turning and through movements. The interchange improvements also include the construction of the SR-99 northbound and southbound auxiliary lanes between the Kiernan Avenue and Pelandale Avenue interchanges. The proposed improvements would also add four additional travel lanes (eight lanes total) to Kiernan Avenue/SR-219 between Salida Boulevard and Sisk Road and modify the existing diamond interchange ramps to and from SR-99. The proposed improvements offer:

- **Future LOS consistent with local growth projections:**
  - The Salida community is expected to experience a large amount of residential and commercial growth in the coming years as it grows from development projects consistent with the Salida County General Plan. As a result of this local growth, combined with expected regional growth, total future demand volumes on Kiernan Avenue Interchange ramps are projected to increase by about 1,000 vehicles in both the AM and PM peak hours by 2035, when compared to existing volumes. Growth will not only increase traffic congestion and delay, but also cause indirect consequences such as inefficient energy use and deteriorating air quality. By 2015, the traffic analysis shows that, without improvement, all intersections within the study area are expected to operate at LOS 'F' with the existing interchange. Additionally, vehicle queues at the ramp terminal intersections will spill back onto SR-99 in both directions. Traffic operations will continue to decline beyond 2015, if no changes to the circulation system occur. The project is needed to create additional capacity to accommodate growth forecasts and traffic projections.

- **Improve Traffic Operations:**
  - The traffic analysis prepared for the project identified that the SR-219 (Kiernan Avenue)/Sisk Road intersection northeast of the interchange currently operates at LOS 'E' in the PM peak hour. Additionally, the northbound SR-99 off-ramp to SR-219 (Kiernan Avenue) operates at LOS 'F.' The project is needed to improve the existing LOS to acceptable levels.

- The delays in the peak travel directions under existing conditions stem from regional growth in the County and on SR-99. For the Kiernan Avenue Interchange, this has lead to periods of high traffic volumes and deterioration in peak hour traffic operations, including vehicle queuing that extends across multiple intersections. Vehicle queue spillback to adjacent intersections occurs at the SR-99 southbound ramps/Kiernan Ave, SR-99 northbound ramps/Kiernan Avenue, and the Kiernan Avenue/Sisk Road intersections under existing conditions. The project is needed to improve delay, thus improving or eliminating spillback conditions.

- The LOS at the weaving section between Pelandale Avenue and Kiernan Avenue interchanges is less than the standard of LOS 'D' for both directions. The LOS of this weaving section contributes to adverse overall levels of service at the interchanges. The auxiliary lanes between the interchanges will improve the traffic weaving operations.

The project will ease congestion, improve mobility and decrease commute times for all drivers for interregional and regional trips within and through the county. The daily vehicle hours of delay saved will be 46.3 hours. The daily peak duration person-minutes saved will be 0.1 minutes per individual and 5,051 minutes cumulative. Daily and peak travel time savings are reported as 20 year, average annual savings. Benefits/costs begin to accrue the year the project is completed and are calculated over a 20 year period.

The project benefits are published on the California Strategic Growth Plan: Bond Accountability website: http://svdtsucp.dot.ca.gov:8084/bondacc/

4.3 Key Planning Approaches

While project specific considerations are not included in this CSMP, the following will need to be considered during the planning process.

4.3.1 Context Sensitive Solutions

Caltrans uses "Context Sensitive Solutions" (CSS) as an approach to plan, design, construct, maintain and operate its transportation system. These solutions use innovative and inclusive approached that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context Sensitive Solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders and meets transportation goals in harmony with community goals and natural environments.

Context Sensitive Solutions require careful, imaginative, and early planning, and continuous community involvement. The context of all projects and activities is a key factor in reaching decisions. It is considered for all State transportation and support

facilities when defining, developing, and evaluating options.

Relevant laws, rules, and regulation must be investigated when considering CSS issues such as funding feasibility, maintenance feasibility, traffic demand, impact on alternate routes, and safety.

4.3.2 Safety Conscious Planning

Safety conscious planning is incorporated into all planning processes and complements CSS. As in most projects, a need is established before a project can be built.

Factors such as congestion, collision patterns, poor LOS, narrow roads, non-standard alignments and operational problems, can facilitate safety improvements. The SR-99 CSMP can be used as a tool to proactively identify operational solutions rather than waiting to react to safety problems. Suggested solutions for these problems should conform to the surrounding environment and meet the needs of the people within, and users of these facilities should agree upon these community-sensitive solutions.

4.3.3 Complete Streets-Integrating the Transportation System

Complete streets begins a methodology to improve traveler safety by designing roadways with new innovative basic elements of design that make the street system more attractive to pedestrians, bicyclists and transit users. Complete streets can serve to help communities develop a healthy and active lifestyle and to move toward innovative ways reduce traffic congestions, and make local trips more attractive to the public for using other options such as taking transit, bicycling and walking. Caltrans views all transportation improvements as opportunities to improve safety, access and mobility for all travelers in California and recognizes bicycle, pedestrian and transit modes as integral elements of the Deputy Directive 64-R1, *Complete Streets-Integrating the Transportation System,* as policy to develop integrated multi-modal projects in balance with community goals, plans and values. By creating "complete streets" early in the system planning process, a transportation facility that is planned, designed, operated and maintained to provide safe mobility for all users will ensure that travelers of all ages and abilities can move safely and efficiently across a fully integrated transportation network.

APPENDIX A

DEFINITIONS

APPENDIX A-1

Level of Service Definitions

The LOS is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. A LOS definition generally describes these conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. Six levels of LOS can generally be categorized as follows:

LOS A describes free flowing conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway.

LOS B is also indicative of free-flowing conditions. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.

LOS C represents a range in which the influence of traffic density on operations becomes marked. The ability to maneuver with the traffic stream is now clearly affected by the presence of other vehicles.

LOS D demonstrates a range in which the ability to maneuver is severely restricted because of the traffic congestion. Travel speed begins to be reduced as traffic volume increases.

LOS E reflects operations at or near capacity and is quite unstable. Because the limits of the level of service are approached, service disruptions cannot be damped or readily dissipated.

LOS F represents a breakdown or forced flow. It usually occurs at a point on a planned facility when forecast demand exceeds computed capacity.

APPENDIX A-2

Rural, Urban and Urbanized Definitions

The rural, urban and urbanized area limits are based upon population density as determined by the U.S. Census Bureau. The criteria are:

Rural – Under 5,000 population

Urban – 5,000 to 49,999 population

Urbanized – over 50,000 population

APPENDIX A-3

Air Quality Definitions

- **Unclassified:** a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or non-attainment.
- **Attainment:** a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a three-year period.
- **Non-attainment:** a pollutant is designates non-attainment if there was at least one violation of a State standard for the pollutant in the area.
- **Non-attainment/Transitional:** a sub-category of the non-attainment designation. An area is designated non-attainment/transitional to signify that the area is close to attaining the standard for that pollutant.

APPENDIX A-4

Environmental Status Definitions

Flood Plains: Flood data from FEMA Digital Q3 Data Mapping and identification whether or not areas are within 100 or 500 year floodplain.

Jurisdictional Waters of the U.S. (including wetlands): are described as those that are under federal and/or state regulatory authority. Waters of the U.S. include essentially all surface waters such as navigable waters and their tributaries, all interstate waters and their tributaries all wetlands adjacent to these waters, and all impoundments of these waters. Wetland data obtained from the U.S. Fish and Wildlife Service national Wetland Inventory Mapping, previous survey data, or other in office sources. Army Corps of Engineer and EPA definition of wetlands is: those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Special Status Species: Species that are legally protected under federal and state Endangered Species Acts or other regulations, and species that are considered sufficiently rare by the scientific community to qualify for such listing.

- Species listed or proposed for listing as threatened or endangered under the federal or state Endangered Species Act (50 CFR 17.12 and 14 CCR 670.5);
- Species that are federal candidates for possible future listing under the federal Endangered Species Act;
- Species listed as Federal Species of Concern;
- Species that meet the definition or are endangered under the California Environmental Quality Act (CEQA), State CEQA guidelines, section 15380.
- Plants listed under the California Native Plant Protection Act (California Fish and Game Code 1900 et seq).
- Plants considered by the California Native Plant Society (CNPS) to be "rare, threatened, or endangered in California (Lists 1A and 2 in Skinner and Pavlik 1994)."
- Plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution (Lists 3 and 4 in Skinner and Pavlik 1994), which may be included on the basis of local significance or recent biological information;
- A Bureau of Land Management, U.S. Fish and Wildlife Service, or U.S. Forest Service Sensitive Species.

APPENDIX B
GLOSSARY OF TERMS

AADT	Average Annual Daily Traffic
ACE	Altamont Commuter Express
ATIS	Advanced Traveler Information Systems
BNSF	Burlington Northern Santa Fe Rail Road
CAT	Ceres Area Transit
CAWS	Caltrans Automated Warning System
CCTV	Closed Circuit Television
CEQA	California Environmental Quality Act
CHIN	California Highway Information Network
CHP	California Highway Patrol
CIP	Congestion Improvement Program
CMIA	Corridor Mobility Improvement Account
CMP	Congestion Management Plan
CMS	Changeable Message Sign
CSMP	Corridor System Management Plan
CSS	Context Sensitive Solutions
CTC	California Transportation Commission
DSMP	District System Management Plan
EB	Eastbound
E/O	East Of
EXPW	Expressway
FHWA	Federal Highway Administration
FSP	Freeway Service Patrol
GVC	Great Valley Center
HAR	Highway Advisory Radio
HICOMP	State Highway Congestion Monitoring Program
HOV	High Occupancy Vehicle
I/C	Interchange
ICES	Inter-modal Corridor of Economic Significance
IIP	Interregional Improvement Program
IRRS	Interregional Road System
IT	Information Technology
ITS	Intelligent Transportation Systems
JCT	Junction
LOS	Level of Service
MAX	Modesto Area Express
MPA	Mariposa County
MPA LTC	Mariposa County Local Transportation Commision
MCTC	Madera County Transportation Commission
MER	Merced County
MCAG	Merced County Association of Governments
NB	Northbound

APPENDIX B
GLOSSARY OF TERMS CONTINUED

N/O	North Of
NEPA	National Environmental Policy Act
NHS	National Highway System
NTN	National Truck Network
OH	Overhead
OC	Over-crossing
OWP	Overall Work Program
PA&ED	Project Approval and Environmental Document (phase)
PCS	Pavement Condition Survey
PeMS	Performance Measurement System (Detection)
PSR	Project Study Report
RCMP	Regional Congestion Management Plan
ROW	Right-of-Way
RTE	Route
RTIF	Regional Transportation Impact Fee
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWIS	Roadside Weather Information System
SACOG	Sacramento Area Council of Governments
SAFETY-LU	Safe, Accountable, Flexible, Efficient Trasnportation Equity Act: A Legacy for Users
SB	Southbound
SHOPP	State Highway Operations Protection Program
SJRRC	San Joaquin Regional Rail Commission
SJRTD	San Joaquin Regional Transit District
SJV	San Joaquin Valley
S/O	South Of
SOP	Status of Projects
SOV	Single Occupancy Vehicle
SP	Southern Pacific Rail Road
SR	State Route
STA	Stanislaus County
STAA	Surface Transportation Assistance Act
STANCOG	Stanislaus Council of Governments
STARNET	Sacramento Transportation Area Network
StaRT	Stanislaus Regional Transit
STIP	State Transportation Improvement Program
STRAIN	Structures Replacement and Improvement Needs
STRAHNET	Strategic Highway Network
TA	Terminal Access
TASAS	Traffic Accident Surveillance and Analysis System
TBD	To Be Determined

APPENDIX B
GLOSSARY OF TERMS CONTINUED

TCR	Transportation Concept Report
TDM	Transportation Demand Management
TCTC	Tuolumne County Transportation Council
TMC	Transportation Management Center
TMS	Traffic Monitoring Station or Transportation Management System
TSDP	Transportation System Development Plan
UC	Under-crossing
UP	Union Pacific Rail Road
UPRR	Union Pacific Rail Road
UTC	Ultimate Transportation Corridor
VMT	Vehicle Miles Traveled
WB	Westbound
W/O	West Of

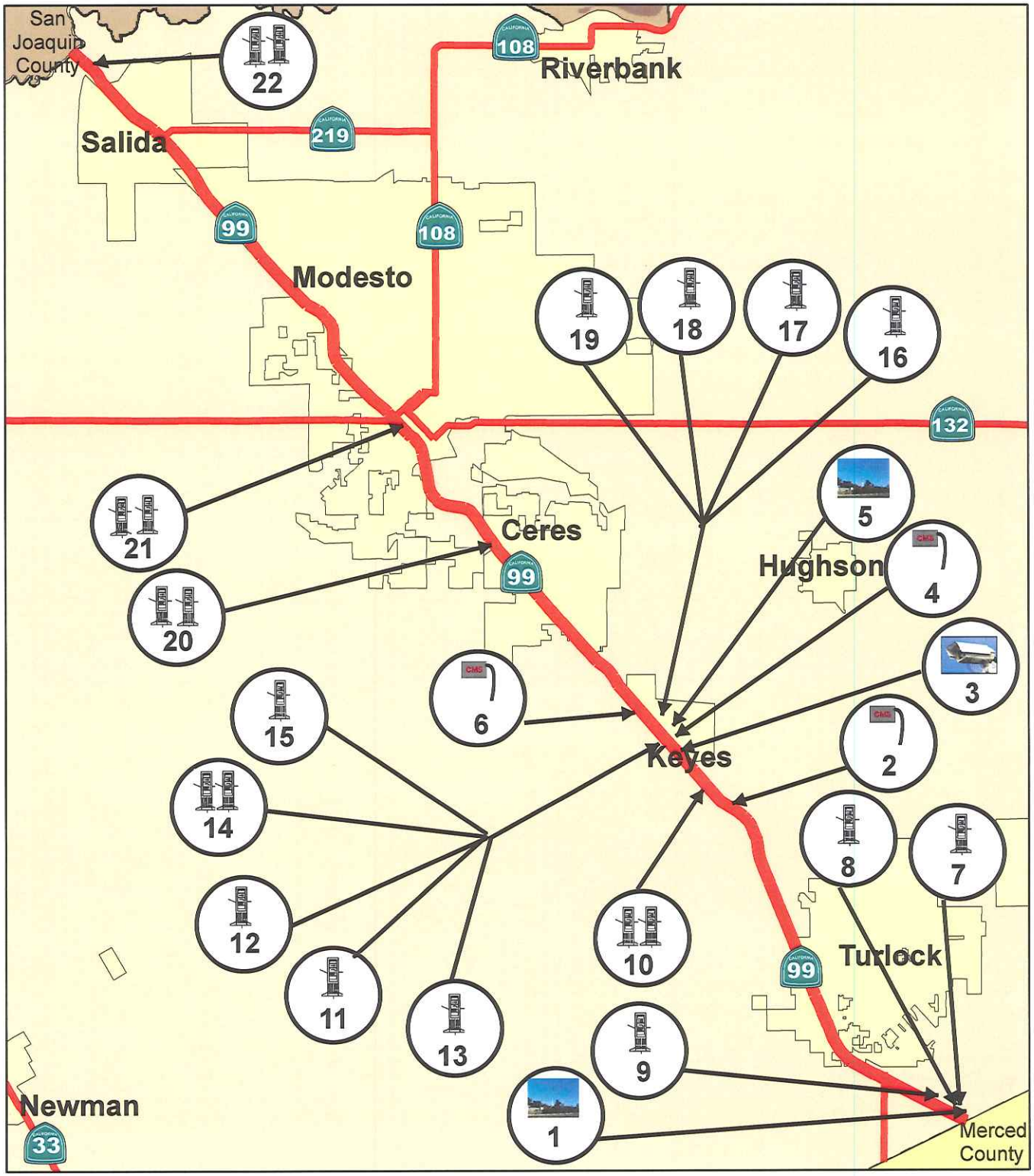
APPENDIX C

Existing ITS and PeMS

APPENDIX C
SR-99 CSMP Corridor
Existing, ITS and PeMS Elements
March 2011

Existing ITS/Detection Elements on SR-99 Corridor			
No.	Post Mile	Location	Equipment/ Description
Existing ITS Elements			
1	R0.160	Turlock Rest Stop	RWIS
2	R07.48	N/O Taylor Road	CMS
3	8.56	S/O Faith Home Road OC	CCTV
4	8.6	N/O Keyes Road	CMS
5	8.7	Faith Home Road OC	RWIS
6	R9.48	S/O Mitchell Road	CMS
Existing Detection Elements			
7	R0.160	Turlock Rest Stop	PeMS (NB)
8	R0.41	Turlock Rest Stop	PeMS (NB)
9	R0.66	N/O Golf Road OC	PeMS (NB)
10	R7.81	Keyes Road	PeMS (Both)
11	R8.493	N/O Faith Home Road	PeMS (SB)
12	8.593	N/O Faith Home Road OC	PeMS (NB)
13	8.69	S/O Faith Home Road OC	PeMS (SB)
14	8.69	Faith Home Road OC (Weigh In Motion)	PeMS (Both)
15	8.79	N/O Faith Home Road OC	PeMS (NB)
16	8.89	S/O Mitchell Road	PeMS (SB)
17	9.093	S/O Mitchell Road	PeMS (NB)
18	9.193	S/O Mitchell Road	PeMS (SB)
19	9.293	S/O Mitchell Road	PeMS (NB)
20	R13.26	Hatch Road	PeMS (Both)
21	R16.12	JCT SR-132	PeMS (Both)
22	R24.27	NB Hammett Road	PeMS (Both)

Intelligent Transportation System Elements		Symbol
CCTV	Closed Circuit Television	
CMS	Changeable Message Sign	
HAR	Highway Advisory Radio	TRAFFIC ALERT AM 1610
RWIS	Road Weather Information Systems	Information Sign
Sign/ Beacon	Blue/White Information Sign with Flashing Beacon	
PeMS	Performance Monitoring System (NB or SB)	
N W E S	Legend	
	State Route	
	TCR Corridor	
	County Boundary	Caltrans



APPENDIX D

Programmed and Planned ITS and PeMS

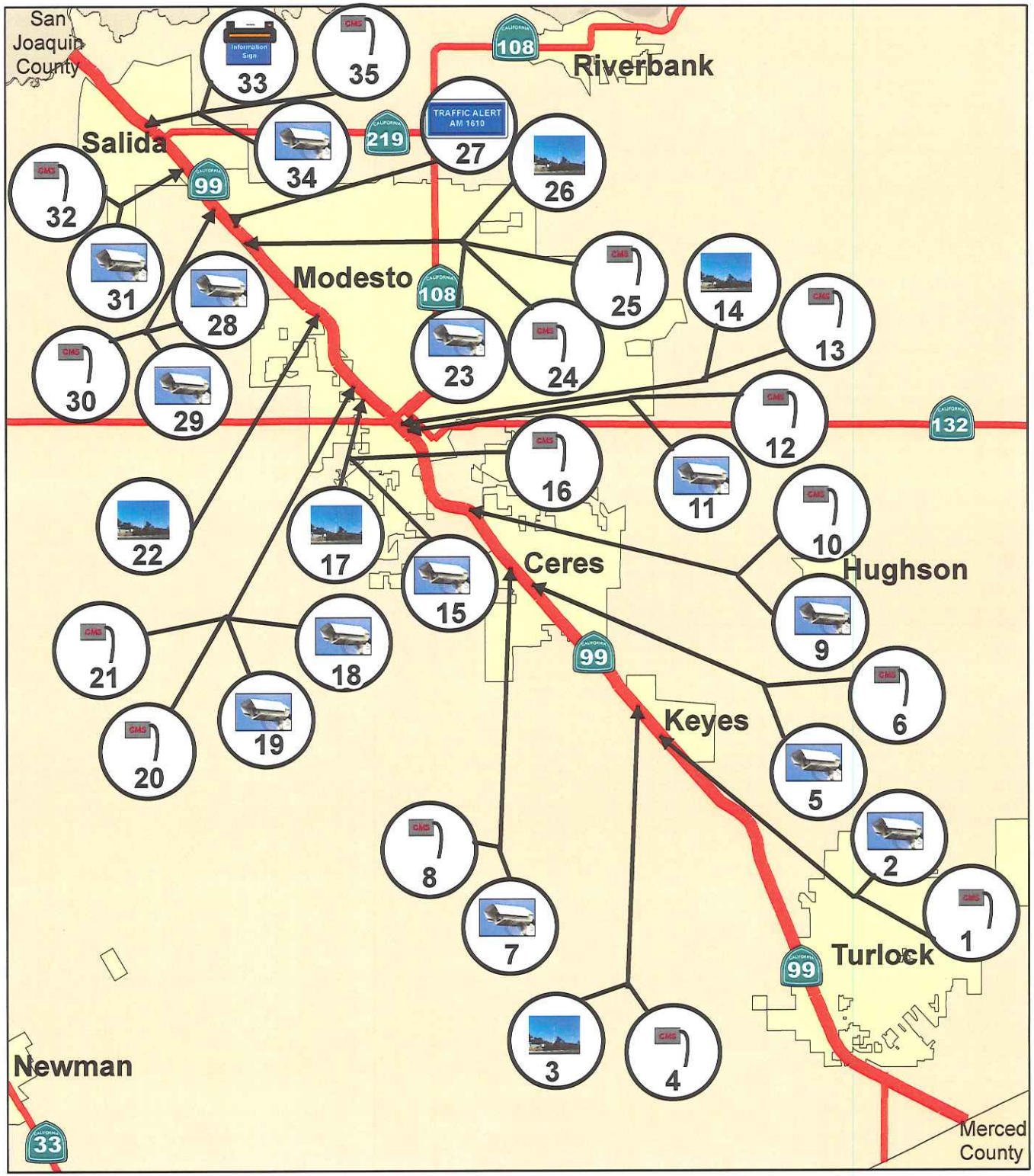
APPENDIX D-1

Programmed ITS

APPENDIX D-1
SR-99 CSMP Corridor Programmed ITS Elements
March 2011

Programmed ITS Elements on the SR-99 Corridor			
No.	Post Mile	Location	Equipment/ Description
1	R8.20	N/O Keyes Road OC	CMS (SB)
2	R8.70	Faith Home Road OC	CCTV (SB)
3	R8.70	Faith Home Road OC	RWIS
4	R9.20	N/O Faith Home Road OC	CMS (SB)
5	11.7	SR-99 and 2nd Street	CCTV (NB)
6	11.7	SR-99 and Whitmore Avenue	CMS
7	12.81	SR-99/Whitmore Avenue	CCTV (NB)
8	12.81	SR-99/Whitmore Avenue	CMS (NB)
9	R13.85	SR-99 and Modesto UC	CCTV (SB)
10	R13.85	SR-99 and 9th Street	CMS (SB)
11	R14.84	Tuolumne Bridge	CCTV (NB)
12	R14.84	Tuolumne Bridge	CMS (NB)
13	R15.84	SR-99/6th Street and I Street	CMS (SB)
14	R15.84	North of Tuolumne Bridge	RWIS
15	R16.6	SR-99/Kansas Avenue	CCTV (NB)
16	R16.6	SR-99/Kansas Avenue	CMS (NB)
17	R17.1	SR-99/Woodland Avenue	RWIS
18	R17.6	SR-99/Woodland Avenue	CCTV (NB)
19	R17.6	JSO Briggsmore Avenue	CCTV (SB)
20	R17.6	JSO Briggsmore Avenue	CMS (NB)
21	R17.6	SR-99/Woodland Avenue	CMS (SB)
22	M18.61	N/O Carpenter/Briggsmore Road OC	RWIS
23	M19.75	JCT-N/O Briggsmore Avenue	CCTV (NB)
24	M19.75	S/O Beckwith Road.	CMS (NB)
25	M19.75	JCT-N/O Briggsmore Avenue	CMS (SB)
26	M19.75	S/O Beckwith Road	RWIS
27	R20.86	S/O Pelandale Avenue OC	HAR
28	R21.28	S/O Pelandale Avenue OC	CCTV (NB)
29	R21.36	S/O Pelandale Avenue OC	CCTV (SB)
30	R21.36	JCT-N/O Beckwith Road	CMS (NB)
31	R22.05	N/O Pelandale Avenue	CCTV (NB)
32	R22.05	N/O Pelandale Avenue	CMS (NB)
33	R23.05	S/O Hammett Road OC	RWIS
34	R23.30	S/O Hammett Road OC	CCTV (SB)
35	R23.30	S/O Hammett Road OC	CMS (SB)

Intelligent Transportation System Elements		Symbol
CCTV	Closed Circuit Television	
CMS	Changeable Message Sign	
HAR	Highway Advisory Radio	
RWIS	Road Weather Information Systems	
Sign/Beacon	Blue/White Info Sign with Flashing Beacon	
PeMS	Performance Monitoring System (NB or SB)	
PeMS	Performance Monitoring System (NB & SB)	
N W E S	Legend	
	State Route	
	TCR Corridor	
	County Boundary	

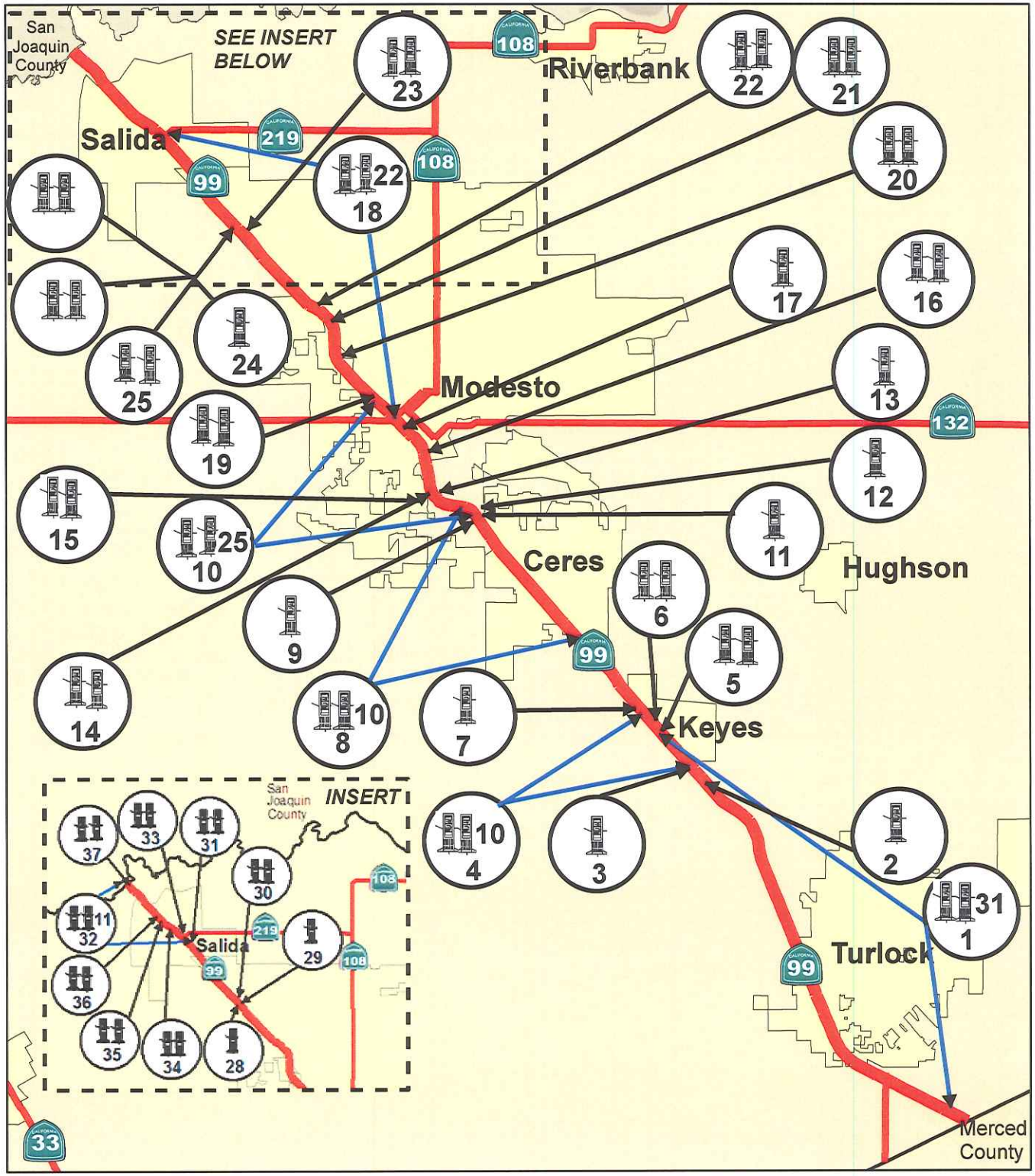


APPENDIX D-2

Programmed PeMS

APPENDIX D-2
SR-99 CSMP Corridor
Programmed PeMS
(Detection) Elements
March 2011

Programmed PeMS Elements on SR-99 Corridor			
No.	Post Mile	Location	Direction
1	R0.116 –R8.132	Merced/Stanislaus County Line (31)	Both
2	8.45	N/O Keyes Road OC	SB
3	R8.20	N/O Keyes Road OC	SB
4	R8.20 – R9.2	Merced/Stanislaus County Line (10)	Both
5	R8.70	Faith Home Road OC	Both
6	R8.95	N/O Faith Home Road OC	Both
7	R9.20	N/O Faith Home Road OC	SB
8	R10.9 – R13.6	Merced/Stanislaus County Line (10)	Both
9	R13.3	N/O Hatch Road OC	NB
10	R13.31 – R16.05	Merced/Stanislaus County Line (25)	Both
11	R13.71	S/O South Modesto UC	SB
12	R13.85	S/O South Modesto UC	SB
13	R14.52	N/O Crows Landing Road OC	SB
14	R14.7	Crows Landing Road IC	Both
15	R14.84	Tuolumne Bridge	Both
16	R15.34	Sierra Drive OC	Both
17	R15.85	S/O Sierra Drive OC	NB
18	R16.23 –R22.38	Merced/Stanislaus County Line (22)	Both
19	R16.6	SR-99/Kansas Avenue	Both
20	R17.6	SR-99/Woodland Avenue	Both
21	R18.11	N/O West Modesto OH	NB
22	M18.61	N/O Carpenter/Briggsmore Road OC	Both
23	M19.75	S/O Beckwith Road OC	Both
24	R21.0	S/O Pelandale Avenue OC	SB
25	R21.28	S/O Pelandale Avenue OC	Both
26	R21.30	S/O Pelandale Avenue OC	Both
27	R21.36	S/O Pelandale Avenue OC	Both
28	R21.53	NB off ramp to Pelandale Avenue OC	NB
29	R21.55	SB on ramp from Pelandale Avenue OC	NB
30	R21.75	N/O Pelandale Avenue OC	Both
31	R22.28	N/O Pelandale Avenue	Both
32	R22.36 –R22.49	Merced/Stanislaus County Line (11)	Both
33	R22.59	N/O Broadway/JCT SR-219	Both
34	R22.78	S/O Hammett Road OC	Both
35	R23.05	S/O Hammett Road OC	Both
36	R23.55	S/O Hammett Road OC	Both
37	R24.05	S/O Hammett Road OC	Both



Legend		
PeMS (NB or SB)	State Route	Caltrans
PeMS (NB & SB)	TCR Corridor	N W E S
	County Boundary	

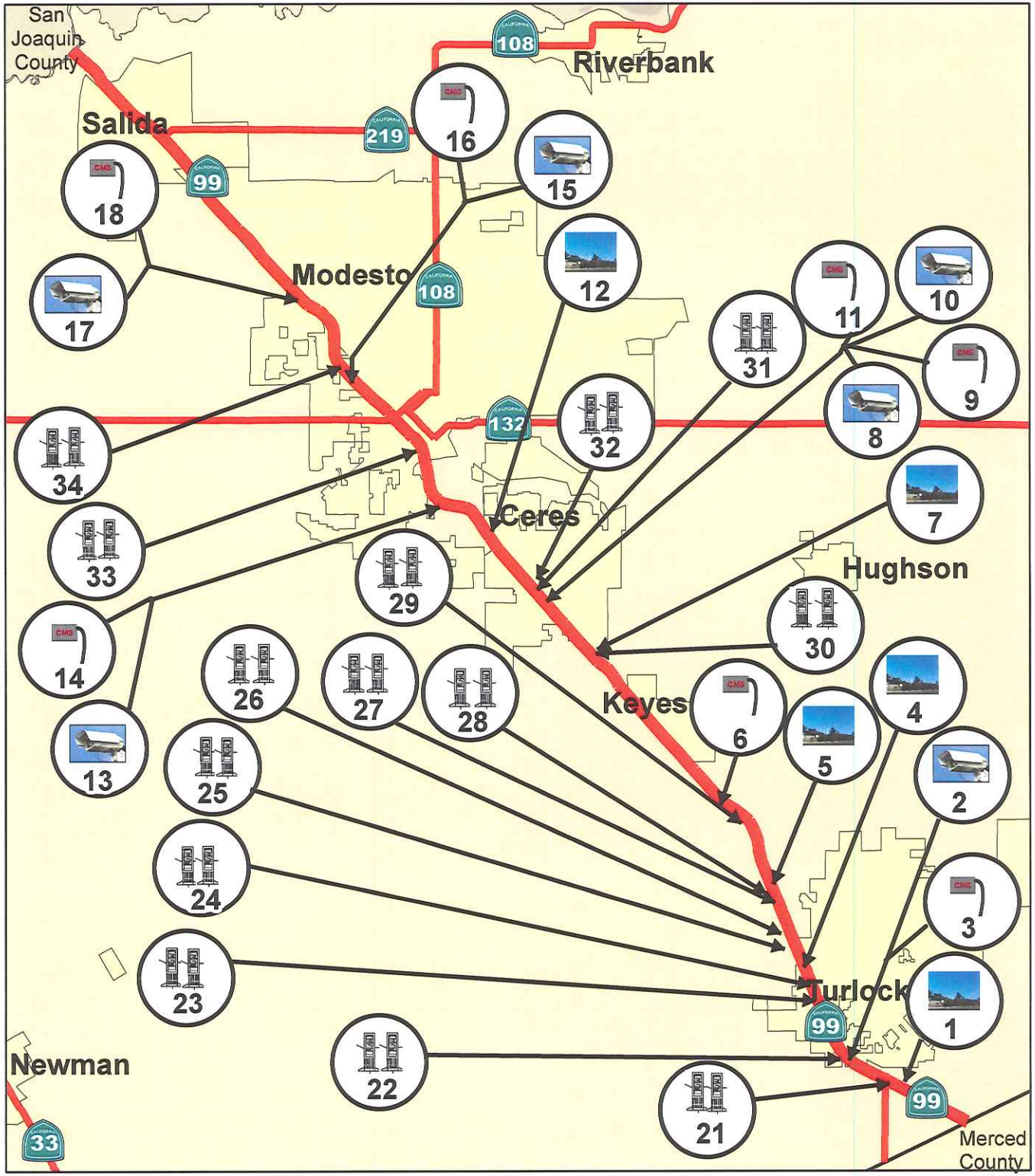
APPENDIX D-3

Planned ITS and PeMS

APPENDIX D-3
SR-99 CSMP Corridor
Planned ITS and PeMS
March 2011

Planned ITS/Detection Elements on SR-99 Corridor			
No.	Post Mile	Location	Equipment/ Description
Planned ITS Elements			
1	R1.45	SR-99 and Lander Avenue	RWIS
2	R2.28	SB SR-99 N/O SR-165 (Landers Avenue)	CCTV (SB)
3	R2.28	SB SR-99 N/O SR-165 (Landers Avenue)	CMS (SB)
4	R4.34	SR-99 and Fulkerth Road	RWIS
5	R6.36	SR-99 and Taylor Road	RWIS
6	R7.45	S/O Keyes Road	CMS (SB)
7	10.9	SR-99 and Service Road	RWIS
8	R12.0	NB SR 99, N/O Whitmore Ave.	CCTV (NB)
9	R12.0	NB SR 99, N/O Whitmore Ave.	CMS (NB)
10	R12.2	SB SR 99, S/O 9th Street onramp	CCTV (SB)
11	R12.2	SB SR 99, S/O 9th Street onramp	CMS (SB)
12	R13.35	SR-99 and Hatch Road	RWIS
13	R14.0	NB SR 99, Near South Modesto OH	CCTV (NB)
14	R14.0	NB SR 99, Near South Modesto OH	CMS (NB)
15	R17.0	NB SR 99, N/O Kansas Avenue	CCTV (NB)
16	R17.0	NB SR 99, N/O Kansas Avenue	CMS (NB)
17	R19.0	SB SR 99, N/O Carpenter	CCTV (SB)
18	R19.0	SB SR 99, N/O Carpenter	CMS (SB)
19	R23.0	S/O Hammett Road	CCTV (NB)
20	R23.0	S/O Hammett Road	CMS (Both)
Planned Detection Elements			
21	R1.65	JCTSR-165 South, Lander Avenue	PeMS (Both)
22	R2.28	Linwood Avenue OC	PeMS (Both)
23	R3.45	West Main Street IC	PeMS (Both)
24	R3.84	S/O Canal Drive OC	PeMS (Both)
25	R4.54	Fulkerth Road	PeMS (Both)
26	R4.84	N/O Fulkerth Road	PeMS (Both)
27	R5.64	Monte Vista Avenue IC	PeMS (Both)
28	R5.86	S/O North Turlock OH	PeMS (Both)
29	R6.75	Taylor Road	PeMS (Both)
30	10.04	Mitchell Road	PeMS (Both)
31	11.91	Whitmore Avenue	PeMS (Both)
32	R11.4	S/O Second Street UC	PeMS (Both)
33	R15.09	Tuolumne Boulevard	PeMS (Both)
34	R17.1	NB SR 99, N/O Kansas Avenue	PeMS (NB)

Intelligent Transportation System Elements		Symbol
CCTV	Closed Circuit Television	
CMS	Changeable Message Sign	
HAR	Highway Advisory Radio	
RWIS	Road Weather Information Systems	
Sign/Beacon	Blue/White Info Sign with Flashing Beacon	
PeMS	Performance Monitoring System (NB or SB)	
PeMS	Performance Monitoring System (NB & SB)	
N W E S	Legend	
	State Route	
	TCR Corridor	
	County Boundary	

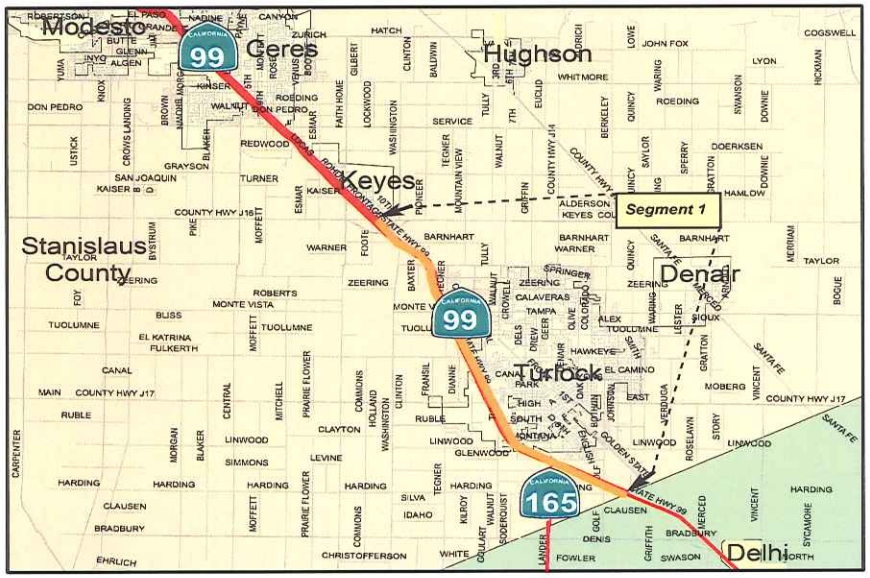


APPENDIX E

Segment Fact Sheets

STATE ROUTE 99 - STANISLAUS COUNTY - SEGMENT 1

APPENDIX E-1



Programmed Projects:

Planned Projects:

1- PM 1.4, construct new Interchange, SR-99 and SR-165 ,CMAQ,Dev. Fees, STIP
2- PM 3.2/4.0, construct new Interchange,SR-99 and W.Main Street,, CMAQ, Dev. Fees, STIP
3- PM 4.3/ 4.3, construct new Interchange, SR-99 and Fulkerth Road, CMAQ,Dev. Fees,RSTP
4- PM R5.092 construct new Overcrossing, SR-99 and Tuolumne Road, TBD
5- PM 6.7/6.7 , Reconstruct existing Interchange, SR-99 and Taylor Road, CMAQ, Dev. Fees, STIP

Segment Location:

Description:	Stanislaus county Line to 0.4 miles N. of Keyes Road		
Post Mile:	0.00-8.16	**Rural/Urban/Urbanized:**	Urban
Length:	8.16 miles	**Within City Limits:**	Turlock
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	Stanislaus Council of Governments

Roadbed Information

Number of Lanes:	Six-Lane	**Lane Width:**	12 Feet
Terrain:	Level	**Right of Way Width:**	195
Accessible to Bicycles:	No	**Shoulder Width:**	8-10 Feet
		Median Width:	46-70 Feet

Route Designations

Functional Classification:	Principal Arterial	**Trucking Network:** NTN	
Facility Type:	Six-Lane Freeway		
Interregional Road:	Yes		
High Emphasis Route:	Yes		
Focus Route:	No		
Freeway Agreement:	10-STA-99 No.22 PM 0.00-7.3	**National Highway System:**	Yes

Environmental Status

	Degree of Impact		Degree of Impact
Flood Plains:	N/A	**Cultural Resources:**	High
Wetlands:	Moderate	**Leaking Underground Tanks:**	Low
Special Status Species:	Moderate	**Possible Hazardous Waste:**	Moderate

* See Appendix -- for explanation of environmental status

Air Quality

Ozone	Particulate Matter		Carbon Monoxide
	PM 10	2.5	
Non-attainment	Maintenance	Non-Attainment	Maintenance

Travel Forecast Data

Existing Facility: Six-Lane Freeway
Base Free Flow Speed: 70

	2007 Existing Facility	2015 without Improvement	2030 without Improvement
Level of Service:	D	E	F
Volume/Capacity:	0.79	0.97	1.49
Average Daily Traffic:	78,620	97,230	146,800
Peak Hour Volume:	8,335	10,300	14,970
Peak Hour Directional Split:	60/40	60/40	60/40
Truck Volume % of Total Truck ADT:	17.4	17.4	17.4

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident Rate	Rate	Statewide Average	Rate
Fatal & Injury	0.31	**Fatal & Injury**	0.21
Total (Includes Property Damage)	0.90	**Total (Includes Property Damage)**	0.65

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from 1/1/04 to 12/31/06

Segment Route Concept

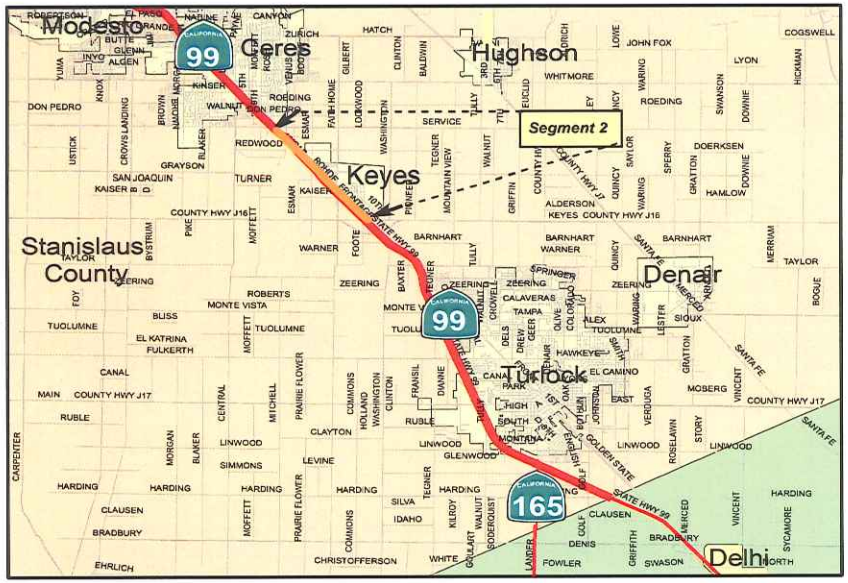
Concept Level of Service:	D
Concept Facility (2030):	Ten-Lane Freeway*
Ultimate Transportation Corridor:	TBD
Comments:	The facility when converted to eight lanes will demand ramp metering and HOV lanes to manage freeway performance.

*Note that ten lanes are needed but are infeasible.

NOTE: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

STATE ROUTE 99 - STANISLAUS COUNTY - SEGMENT 2

APPENDIX E-2



Programmed Projects:

1-PM 9.7/10.9, Reconstruct Interchange, Mitchell Road/Service Road, Developer/Oversight
2-PM 11.9 Reconstruct Interchange, Whitmore Avenue and SR-99, STIP
2-PM 11.9 Reconstruct Interchange, Whitmore Avenue and SR-99, STIP

Planned Projects:

1- PM 10.15/13.26 Widen from 6 to 8 lanes, Mitchell Road to Hatch Road, STIP, IIP, Tax Measure
2- PM 13.26/13/26 City of Ceres, construct new Overpass, Hatch Road and SR-99, TBD
3- PM 13.26/15.098, Widen from 6 to 8 lanes, Hatch Road to Tuolumne Road, STIP, IIP, Tax Measure

Segment Location:

Description:	0.4 miles north of Keyes Road to 0.3 miles north of Service Road		
Post Mile:	8.16-10.90	**Rural/Urban/Urbanized:**	Urban
Length:	3.05 miles	**Within City Limits:**	Ceres
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	Stanislaus Council of Governments

Roadbed Information

Number of Lanes:	Six-Lane	**Lane Width:**	12 Feet
Terrain:	Level	**Right of Way Width:**	181
Accessible to Bicycles:	No	**Shoulder Width:**	8-10 Feet
		Median Width:	22-60

Route Designations

Functional Classification:	Principal Arterial	**Trucking Network:** NTN	
Facility Type:	Six-Lane Freeway		
Interregional Road:	Yes		
High Emphasis Route:	Yes		
Focus Route:	No		
Freeway Agreement:	10-STA-99-No. 5	**National Highway System:**	Yes
	PM 7.8-10.6; 3-12-70		

Environmental Status

	Degree of Impact		Degree of Impact
Flood Plains:	N/A	**Cultural Resources:**	Moderate
Wetlands:	Moderate	**Leaking Underground Tanks:**	High
Special Status Species:	Moderate	**Possible Hazardous Waste:**	Low

* See Appendix -- for explanation of environmental status

Air Quality

Ozone	Particulate Matter		Carbon Monoxide
	PM 10	2.5	
Non-attainment	Maintenance	Non-Attainment	Maintenance

Travel Forecast Data

Existing Facility: Six-Lane Freeway
Base Free Flow Speed: 70

	2007 Existing Facility	2015 without Improvement	2030 without Improvement
Level of Service:	D	F	F
Volume/Capacity:	0.86	1.01	1.4
Average Daily Traffic:	105,800	125,050	173, 680
Peak Hour Volume:	9,630	11,380	15,800
Peak Hour Directional Split:	55/45	55/45	55/45
Truck Volume % of Total Truck ADT:	12.6	12.6	12.6

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident Rate	Rate	Statewide Average	Rate
Fatal & Injury	0.24	**Fatal & Injury**	0.26
Total (Includes Property Damage)	0.76	**Total (Includes Property Damage)**	0.83

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from 1/1/04 to 12/31/06

Segment Route Concept

Concept Level of Service:	D
Concept Facility (2030):	Ten-Lane Freeway*
Ultimate Transportation Corridor:	TBD
Comments:	

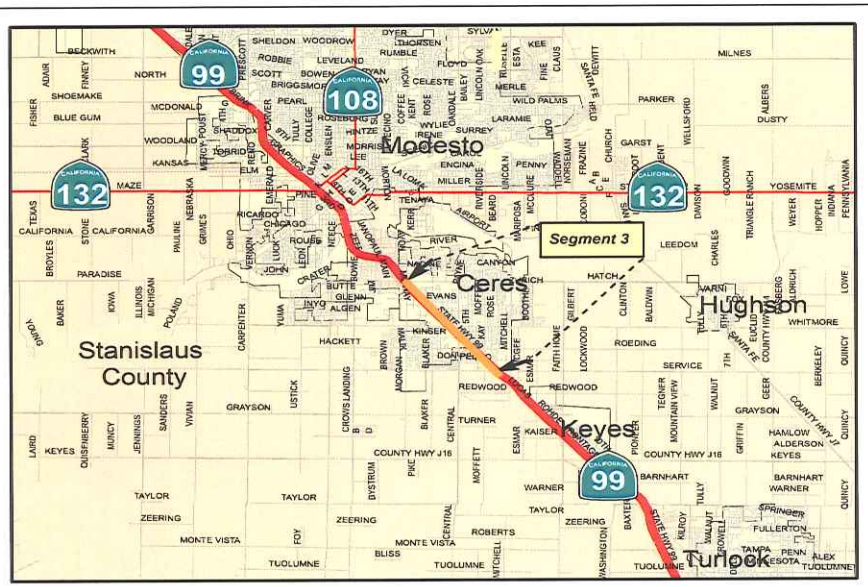
The facility when converted to eight lanes will demand ramp metering and HOV lanes to manage freeway performance.

*Note that ten lanes are needed but are infeasible.

NOTE: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

STATE ROUTE 99 - STANISLAUS COUNTY - SEGMENT 3

APPENDIX E-3



Programmed Projects:

1-PM 13.26/ 20.2, Install rumble strips on the inside and outside shoulders,SR-99 from Hatch Road to Standiford/ Beckwith Road, SHOPP
2-PM 15.1/17.0, Rehabilitate Multiple Ramps, SHOPP

Planned Projects:

1- PM 10.58/13.26, Widen to 6 to 8 lanes, Mitchell Road to Hatch Road, STIP,IIP,Tax Measure
2- PM 13.4/18.8, Construct N/B Aux. Lane, SR-99 and Hatch Road, SHOPP

Segment Location:

Description:	0.3 miles north of Service Road to Hatch Road		
Post Mile:	10.90-13.26	**Rural/Urban/Urbanized:**	Urban
Length:	2.36 miles	**Within City Limits:**	Modesto
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	Stanislaus Council of Governments

Roadbed Information

Number of Lanes:	Six-Lane	**Lane Width:**	11-16 Feet
Terrain:	Level	**Right of Way Width:**	165 Feet
Accessible to Bicycles:	No	**Shoulder Width:**	10 Feet
		Median Width:	46 Feet

Route Designations

Functional Classification:	Principal Arterial	**Trucking Network:** NTN	
Facility Type:	6-Lane Freeway		
Interregional Road System:	Yes		
High Emphasis Route:	Yes		
Focus Route:	No		
Freeway Agreement:	10-STA-99 No.19PM 9.7/PM12.9-	**National Highway System:**	Yes

Environmental Status

	Degree of Impact		Degree of Impact
Flood Plains:	N/A	**Cultural Resources:**	High
Wetlands:	Moderate	**Leaking Underground Tanks:**	Low
Special Status Species:	Moderate	**Possible Hazardous Waste:**	Moderate

* See Appendix -- for explanation of environmental status

Air Quality

Ozone	Particulate Matter		Carbon Monoxide
	PM 10	2.5	
Non-attainment	Maintenance	Non-Attainment	Maintenance

Travel Forecast Data

Existing Facility: Six-Lane Freeway
Base Free Flow Speed: 70

	2007 Existing Facility	2015 without Improvement	2030 With Improvement
Level of Service:	E	F	F
Volume/Capacity:	0.9	1.05	1.05
Average Daily Traffic:	104,430	121,620	161,870
Peak Hour Volume:	10,130	11,800	15,700
Peak Hour Directional Split:	55/45	55/45	55/45
Truck Volume % of Total Truck ADT:	12.8	12.8	12.8

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident Rate	Rate	Statewide Average	Rate
Fatal & Injury	0.26	**Fatal & Injury**	0.28
Total (Includes Property Damage)	0.99	**Total (Includes Property Damage)**	0.88

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from 1/1/04 to 12/31/06

Segment Route Concept

Concept Level of Service:	D
Concept Facility (2030):	Ten-Lane Freeway*
Ultimate Transportation Corridor:	TBD

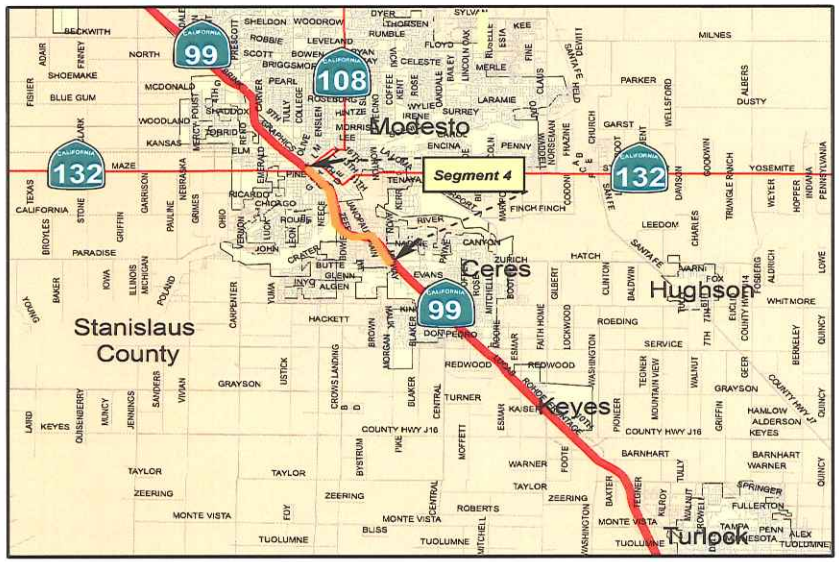
Comments:
The facility when converted to eight lanes will demand ramp metering and HOV lanes to manage freeway performance.

*Note ten lane freeway is needed but infeasible.

NOTE: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

STATE ROUTE 99 - STANISLAUS COUNTY - SEGMENT 4

APPENDIX E-4



Programmed Projects:

1-PM 13.2/20.2, Install rumble strips on the inside and outside shoulders, SR-99 from Hatch Road to Standiford/Beckwith Road, SHOPP
2-PM 15.1/17.0, Rehabilitate Multiple Ramps, from Tuolumne River Bridge to Kansas Avenue, SHOPP

Planned Projects:

1- PM 13.26/13.26 City of Ceres Construct new Overpass, Hatch Road and SR-99, TBD
2- PM 13.26/15.098, Widen from 6 to 8 Lanes, Hatch Road to Tuolumne Road, STIP, IIP, Tax Measure
3- PM 13.4/18.8, Construct N/B Aux. Lane, SR-99 and Hatch Road, SHOPP
4-PM 14.9/15.6, New Freeway to Freeway Interchange, SR-99 at SR-132 West to SR-132 East STIP, IIP, Tax Measure
5-PM 15.098/16.82, Widen from 6 to 8 lanes, Tuolumne Road to Kansas Avenue, STIP, IIP, Tax Measure

Segment Location:

Description:	Hatch Road OC to JCT SR-132		
Post Mile:	13.26-16.12	**Rural/Urban/Urbanized:**	Urban
Length:	2.86 miles	**Within City Limits:**	Modesto
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	Stanislaus Council of Governments

Roadbed Information

Number of Lanes:	Six-Lane	**Lane Width:**	12 Feet
Terrain:	Level	**Right of Way Width:**	150
Accessible to Bicycles:	No	**Shoulder Width:**	8
		Median Width:	46

Route Designations

Functional Classification:	Principal Arterial	**Trucking Network:** NTN	
Facility Type:	Six-Lane Freeway		
Interregional Road:	Yes		
High Emphasis Route:	Yes		
Focus Route:	No		
Freeway Agreement:	10-STA-99-No. 27	**National Highway System:**	Yes
	PM 13.0-13.9 5-3.72; 10-STA-99-No. 3-AB PM 2.5-14.7 6-6-61		

Environmental Status

	Degree of Impact		Degree of Impact
Flood Plains:	N/A	**Cultural Resources:**	Moderate
Wetlands:	Moderate	**Leaking Underground Tanks:**	High
Special Status Species:	Moderate	**Possible Hazardous Waste:**	Low

* See Appendix – for explanation of environmental status

Air Quality

Ozone	Particulate Matter		Carbon Monoxide
	PM 10	2.5	
Non-attainment	Maintenance	Non-Attainment	Maintenance

Travel Forecast Data

Existing Facility: Six-Lane Freeway
Base Free Flow Speed: 70

	2007 Existing Facility	2015 without Improvement	2030 With Improvement
Level of Service:	F	F	F
Volume/Capacity:	1.02	1.18	1.16
Average Daily Traffic:	116,820	135,080	177,340
Peak Hour Volume:	11, 450	13,240	177,340
Peak Hour Directional Split:	55/45	55/45	55/45
Truck Volume % of Total Truck ADT:	12.5	12.5	12.5

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident Rate	Rate	Statewide Average	Rate
Fatal & Injury	0.64	Fatal & Injury	0.30
Total (Includes Property Damage)	2.31	Total (Includes Property Damage)	0.96

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from 1/1/04 to 12/31/06

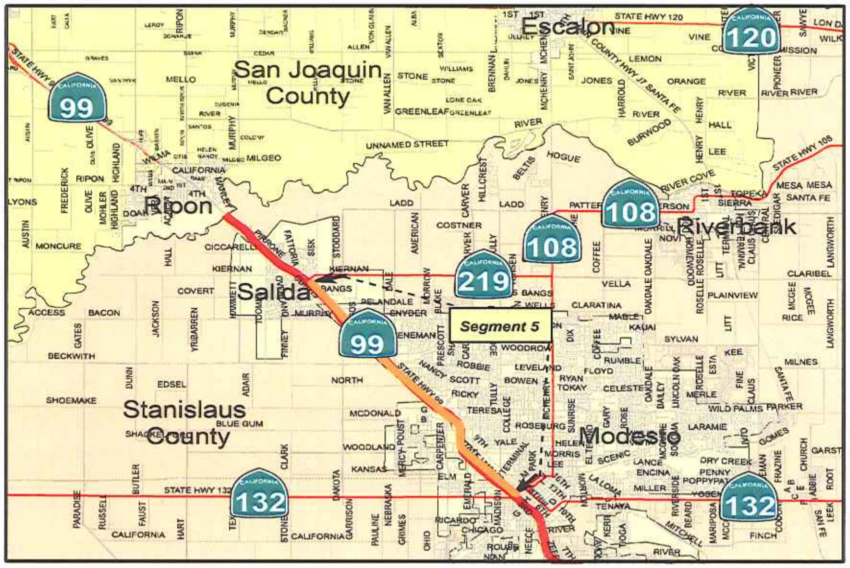
Segment Route Concept

Concept Level of Service:	D
Concept Facility (2030):	Twelve-Lane Freeway*
Ultimate Transportation Corridor:	TBD
Comments:	

The facility when converted to eight-lanes will demand ramp metering and HOV lanes to manage freeway performance.

*Note that twelve lanes are needed but are infeasible.

NOTE: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.



Programmed Projects:

1-PM 21.9/22.3, Widen Roadway and Ramps, SR-99 and SR-219, SHOPP
2-PM 21.9/23.1, Interchange Replacement, In Stanislaus County at SR-99 and Kiernan Avenue, STIP/PFF
3-PM 21.0/22.4, Modify Interchange, Pelandale and SR-99, N/A

Planned Projects:

1- PM 16.8/18.52, Widen from 6 to 8 lanes, Kansas Avenue to Carpenter Road, STIP, IIP, Tax Measure
2- PM 18.52/24.7, Widen from 6 to 8 lanes, Carpenter Road to San Joaquin County Line, STIP, IIP, Tax Measure
3- PM 18.7/19.9, Improve on-off ramps and construct N/B Aux. Lanes, Carpenter to Briggsmore Road, TBD
4-PM 20.5/21.5, Improve on-off ramps and construct N/B and S/B Aux. lanes, Beckwith/Standiford to Pelandale, SHOPP

Segment Location:

Description:	JCT STA-132 to JCT 219		
Post Mile:	16.12-22.55	**Rural/Urban/Urbanized:**	Urban
Length:	6.43 miles	**Within City Limits:**	Modesto
Functional Classification:	Principal Arterial	**Local Planning Jurisdiction:**	Stanislaus Council of Governments
Roadbed Information			
Number of Lanes:	Six-Lane	**Lane Width:**	12 feet
Terrain:	Level	**Right of Way Width:**	95-228 feet
Accessible to Bicycles:	No	**Shoulder Width:**	10 feet
		Median Width:	22-50 feet
Route Designations			
Functional Classification:	Principal Arterial	**Trucking Network:** NTN	
Facility Type:	Six-Lane Freeway		
Interregional Road:	Yes		
High Emphasis Route:	Yes		
Focus Route:	No		
Freeway Agreement:	STA-99-No23 PM 17.9-21.0	**National Highway System:**	Yes
	2/24/70		

Environmental Status

	Degree of Impact		Degree of Impact
Flood Plains:	N/A	**Cultural Resources:**	Moderate
Wetlands:	Low	**Leaking Underground Tanks:**	High
Special Status Species:	Low	**Possible Hazardous Waste:**	Low

* See Appendix -- for explanation of environmental status

Air Quality

Ozone	Particulate Matter PM 10	Particulate Matter 2.5	Carbon Monoxide
Non-attainment	Non-attainment/Maintenance	Non-Attainment	Non-attainment/Maintenance

Travel Forecast Data

Existing Facility: Six-Lane Freeway
Base Free Flow Speed: 70

	2007 Existing Facility	2015 without Improvement	2030 with Improvement
Level of Service:	F	F	F
Volume/Capacity:	1.14	1.32	1.29
Average Daily Traffic:	125,780	145,060	189,520
Peak Hour Volume:	12,830	14,800	19,330
Peak Hour Directional Split:	55/45	55/45	55/45
Truck Volume % of Total Truck ADT:	13.5	13.5	13.5

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident Rate	Rate	Statewide Average	Rate
Fatal & Injury	0.32	Fatal & Injury	0.32
Total (Includes Property Damage)	1.18	Total (Includes Property Damage)	1.03

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from 1/1/04 to 12/31/06

Segment Route Concept

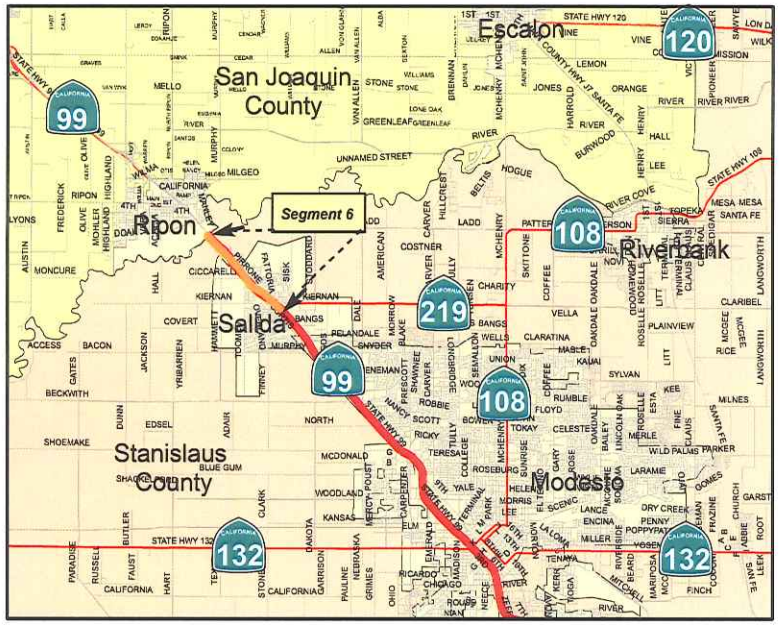
Concept Level of Service:	D
Concept Facility (2030):	Twelve-Lane Freeway*
Ultimate Transportation Corridor:	TBD

Comments:
The facility when converted to eight lanes will demand ramp metering and HOV lanes to manage freeway performance.

*Note that twelve lanes are needed but are infeasible.

NOTE: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

STATE ROUTE 99 - STANISLAUS COUNTY - SEGMENT 6



Segment Location:

Description:	Jct Sta-219 to San Joaquin County line		
Post Mile:	22.55-24.75	**Rural/Urban/Urbanized:**	Urban
Length:	2.199 miles	**Within City Limits:**	Modesto
Functional Classification:	Other Principal Arterial	**Local Planning Jurisdiction:**	Stanislaus Council of Governments

Roadbed Information

Number of Lanes:	Six-Lane	**Lane Width:**	12 feet
Terrain:	flat	**Right of Way Width:**	187 feet
Accessible to Bicycles:	No	**Shoulder Width:**	10 feet
		Median Width:	19 feet

Route Designations

Functional Classification:	Principal Arterial	**Trucking Network:** NTN	
Facility Type:	Six-Lane Freeway		
Interregional Road System:	Yes		
High Emphasis Route:	Yes		
Focus Route:	No		
Freeway Agreement:	STA-99 No. 18 PM 21.2-24.5 7-6-(	**National Highway System:**	Yes

Environmental Status

	Degree of Impact		Degree of Impact
Flood Plains:	N/A	**Cultural Resources:**	Moderate
Wetlands:	Moderate	**Leaking Underground Tanks:**	Low
Special Status Species:	Moderate	**Possible Hazardous Waste:**	Low

* See Appendix – for explanation of environmental status

Air Quality

Ozone	Particulate Matter		Carbon Monoxide
	PM 10	2.5	
Non-attainment	Attainment/Maintenance	Non-Attainment	Attainment/Maintenance

NOTE: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.

APPENDIX E-6

Programmed Projects:

1- PM 23.9/ 25.1, Interchange Replacement, SR-99/ Hammett Road , STIP/PFF

Planned Projects:

1-PM 22.5/ 22.5, Construct 2-6 lane Expressway, North County Corridor Sr-99/SR 108, STIP, IIP, PFF, Tax Measure,Demo
2- PM 22.5 , Construct 4-8 lane Expressway, North County Corridor SR-99 to McHenry Avenue,TBD
3- PM 23.27/24.27, Interchange Ramp and Auxilliary Lane improvements, SR-99/ Hammett Road , TBD
4- PM 23.9/25.1, Interchange and Ramp improvement, SR-99 and Hammett Road, TBD
5- PM 24.27/ 24.27, Interchange Ramp and Auxilliary improvements, SR-99 and Hammett Road, TBD

Travel Forecast Data

Existing Facility: Six-Lane Freeway

Base Free Flow Speed: 70

	2007 Existing Facility	2015 without Improvement	2030 With Improvement
Level of Service:	E	F	F
Volume/Capacity:	0.94	1.1	1.15
Average Daily Traffic:	115,560	139,860	201,390
Peak Hour Volume:	12,730	18,320	19,330
Peak Hour Directional Split:	60/40	55/45	55/45
Truck Volume % of Total Truck ADT:	13.5	13.5	13.5

Traffic Collision Rate (Average collision rates statewide for this type facility)

Actual Accident Rate	Rate	Statewide Average	Rate
Fatal & Injury	0.23	**Fatal & Injury**	0.29
Total (Includes Property Damage)	0.85	**Total (Includes Property Damage)**	0.89

3-Year Period Evaluated Rates - Rates are incidents per million vehicle miles from 1/1/04 to 12/31/06

Segment Route Concept

Concept Level of Service:	D
Concept Facility (2030):	Twelve-Lane Freeway
Ultimate Transportation Corridor:	TBD

Comments:

The facility when converted to eight lanes will demand ramp metering and HOV lanes to manage freeway performance,

*Twelve Lanes are needed but are infeasible.

APPENDIX F

Ten Year Implementation Plan

Ten Year Implementation Plan Project List (2022) APPENDIX F-1

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
1 SR-99 00.00–08.16	1	Short Term	SHOPP	OM800X	R0.00	R24.8	From Merced County Line to San Joaquin County Line	Restore and Resurface	$91,400	SHOPP
	2**	Mid Term	SHOPP	OK340X	R0.116	R8.132	Merced/Stanislaus County Line	Programmed Detection at every on/off ramp for Census-Total of 31 stations	$775,000	SHOPP
	3	TBD	Tier 1; Y	N/A	R1.4	R1.4	SR-99 and SR-165(Lander Avenue)	Construct New Interchange	$52,000	CMAQ, Dev. Fees STIP
	4	TBD	SHOPP	TBD	R1.45	R1.45	SR-99 and Lander Avenue	RWIS	$60,000	SHOPP
	5	TBD	SHOPP	TBD	R1.65	R1.65	JCT SR-165 South, Lander Avenue	Planned Detection	$50,000	SHOPP
	6	TBD	SHOPP	TBD	R2.28	R2.28	Linwood Avenue OC	Planned Detection	TBD	UNK
	7	TBD	SHOPP	TBD	R2.28	R2.28	SB SR-99 N/O SR-165 (Landers Avenue)	CMS	$200,000	TBD
	8	TBD	SHOPP	TBD	R2.28	R2.28	SB SR-99 N/O SR-165 (Landers Avenue)	CCTV	$65,000	TBD
	9	2025	Tier 1; Y	T-30	R3.2	R4.0	SR-99 and West Main Street	Construct New Interchange	$20,861	CMAQ, Dev. Fees STIP
	10	TBD	No	N/A	R3.45	R3.45	SR-99 and West Main Street in Turlock	Planned Park and Ride	TBD	SHOPP
	11	TBD	SHOPP	TBD	R3.45	R3.45	West Main Street IC	Planned Detection	TBD	UNK
	12	TBD	No	N/A	R3.8	R3.8	From Turlock City Limit to Oakdale City Limit	Planned Class III Bicycle Route	TBD	UNK
	13	TBD	No	N/A	R3.8	R3.8	From Patterson City Limits to Turlock City Limits	Planned Class III Bicycle Route	TBD	UNK
	14	TBD	No	N/A	R3.8	R3.8	From Crows Landing Road to West Bradbury Road	Planned Class I Bicycle Facility	TBD	SHOPP
	15	TBD	SHOPP	N/A	R3.84	R3.84	S/O Canal Drive OC	Planned Detection	$50,000	SHOPP
	16	2014	Tier 1; Y	N/A	R4.3	R4.3	SR-99 and Fulkerth Road	Reconstruct Interchange	$13,842	CMAQ, Dev. Fees RSTP
	17	TBD	SHOPP	N/A	R4.34	R4.34	SR-99 and Fulkerth Road	RWIS	$60,000	SHOPP
	18	TBD	SHOPP	TBD	R4.54	R4.54	Fulkerth Road	Planned Detection	$50,000	SHOPP
	19	TBD	SHOPP	TBD	R4.84	R4.84	N/O Fulkerth Road	Planned Detection	$50,000	SHOPP
	20	TBD	TBD	25	R5.092	R5.092	Tuolumne Road OC	Construct New Overcrossing	TBD	TBD
	21	TBD	SHOPP	TBD	R5.64	R5.64	Monte Vista Avenue IC	Planned Detection	$50,000	SHOPP
	22	TBD	SHOPP	TBD	R5.86	R5.86	S/O North Turlock OH	Planned Detection	$50,000	SHOPP
	23	TBD	SHOPP	TBD	R6.36	R6.36	SR-99 and Taylor Road	RWIS	TBD	UNK
	24	2025	Tier 1; Y	T-31	R6.7	R6.7	SR-99 and Taylor Road	Reconstruct Interchange	$8,407	CMAQ, Dev. Fees STIP

* Short = 0-4 Years
2012-2016
Mid = 5-7 Years
2017-2019
Long = 8-10 Years
2020-2022

**New Projects

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-1

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
1 SR-99 00.00–08.16	25	TBD	No	N/A	R6.75	R6.75	SR-99 and Taylor Road in Turlock	Planned Park and Ride	TBD	SHOPP
	26	TBD	SHOPP	TBD	R6.75	R6.75	Taylor Road	Planned Detection	$50,000	SHOPP
	27	TBD	SHOPP	TBD	R7.45	R7.45	S/O Keyes Road	CMS	$200,000	SHOPP

* Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-2

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
2 SR-99 R08.16-R10.90	28**	Mid Term	SHOPP	0K340X	R8.20	R9.2	Merced/Stanislaus County Line	Programmed Detection at every On/Off ramp for Census-Total of 10 stations	$250,000	SHOPP
	29**	Short Term	SHOPP	3A450X	R8.20	R8.20	N/O Keyes Road OC (SB)	Programmed Detection	$30,000	SHOPP
	30**	Short Term	SHOPP	3A450X	R8.20	R8.20	N/O Keyes Road OC (SB	CMS	$200,000	SHOPP
	31**	Short Term	SHOPP	3A450X	8.45	8.45	N/O Keyes Road OC (SB)	Programmed Detection	$50,000	SHOPP
	32**	Short Term	SHOPP	3A450X	R8.70	R8.70	Faith Home Road OC (NB/SB)	Programmed Detection	$50,000	SHOPP
	33**	Short Term	SHOPP	3A450X	R8.70	R8.70	Faith Home Road OC	CCTV	$65,000	SHOPP
	34**	Short Term	SHOPP	3A450X	R8.70	R8.70	Faith Home Road OC	RWIS	$60,000	SHOPP
	35**	Short Term	SHOPP	3A450X	R8.95	R8.95	N/O Faith Home Road OC (NB/SB)	Programmed Detection	$50,000	SHOPP
	36**	Short Term	SHOPP	3A450X	R9.20	R9.20	N/O Faith Home Road OC	CMS	200,000	SHOPP
	37**	Short Term	SHOPP	3A450X	R9.20	R9.20	N/O Faith Home Road OC (SB)	Programmed Detection	$30,000	SHOPP
	38	TBD	Tier 1; Y	1A690	R9.7	10.9	Mitchell Road/Service Road	Reconstruct Interchange	$60,196	Developer/Local
	39	TBD	No	N/A	10.034	10.034	From Turlock City Limit to South Santa Fe Avenue	Planned Class II Bicycle Lane	TBD	UNK
	40	TBD	No	N/A	10.034	10.034	From Turlock City Limit to Main Street in Ceres	Planned Class I Bicycle Facility	TBD	UNK
	41	TBD	SHOPP	TBd	10.040	10.040	Mitchell Road	Planned Detection	$50,000	SHOPP
	42	Long Term	Tier 1; Y	ST02	R10.16	R13.26	Mitchell Road to Hatch Road	Widen from 6 to 8 lanes	$263,877	STIP, IIP, Tax Measure
	43	Long Term	SHOPP	TBD	10.9	10.9	SR-99 and Service Road	RWIS	$60,000	SHOPP

* Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

**New Projects

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-3

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
3 SR-99 10.90–13.26	44**	Mid Term	SHOPP	0K340X	R10.9	R13.16	Merced/Stanislaus County Line	Programmed Detection at every On/Off ramp for Census-Total of 10 stations	$250,000	SHOPP
	45**	TBD	SHOPP	TBD	R11.4	R11.4	S/O Second Street UC	Planned Detection	$50,000	SHOPP
	46	Mid Term	SHOPP	0M950X	11.7	11.7	SR-99 and Whitmore Avenue	CMS	$200,000	SHOPP
	47	Mid Term	SHOPP	0M950X	11.7	11.7	SR-99 and 2nd Street	CCTV	$65,000	SHOPP
	48	Short Term	No	2A770X	R11.9	R11.9	Whitmore Avenue and SR-99	Reconstruct Interchange	$28,071	STIP
	49	TBD	No	TBD	11.91	11.91	SR-99 and Whitmore Avenue in Ceres	Planned Park and Ride	TBD	UNK
	50	TBD	SHOPP	TBD	11.91	11.91	Whitmore Avenue	Planned Detection	$50,000	SHOPP
	51**	Long Term	TBD	TBD	R12.0	R12.0	NB SR 99, N/O Whitmore Ave.	CMS	$200,000	TBD
	52**	Long Term	TBD	TBD	R12.0	R12.0	NB SR 99, N/O Whitmore Ave.	CCTV	$65,000	TBD
	53**	Long Term	TBD	TBD	R12.2	R12.2	SB SR 99, S/O 9th Street onramp	CMS	$200,000	TBD
	54**	Long Term	TBD	TBD	R12.2	R12.2	SB SR 99, S/O 9th Street onramp	CCTV	$65,000	TBD
	55	Short-term	SHOPP	3A340X	12.81	12.81	SR-99/Whitmore Avenue – North Bound	CMS	$200,000	SHOPP
	56	Short-term	SHOPP	3A340X	12.81	12.81	SR-99/Whitmore Avenue-North Bound	CCTV	$65,000	SHOPP
	57	TBD	No	TBD	13.26	13.26	From East Hatch Road to Yosemite Boulevard	Planned Class I Bicycle Facility	TBD	UNK
	58	TBD	No	TBD	13.26	13.26	SR-99 and Hatch Road in Ceres	Planned Park and Ride Facility	TBD	UNK
	59	Short Term	No	0T840X	R13.26	R20.2	SR-99 from Hatch Road to Beckwith Road/Standiford Avenue	Install rumble strips on the inside and outside shoulders	$429	SHOPP-Minor

*Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

**New Projects

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-4

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
4 SR-99 13.26–16.12	60**	Mid Term	SHOPP	0K340X	R13.31	R16.05	Merced/Stanislaus County Line	Programmed Detection at every On/Off ramp for Census-Total of 25 stations	$750,000	SHOPP
	61	Long Term	Tier 2; Y	N/A	R13.26	R13.26	Hatch Road and SR-99	City of Ceres – Construct new Overpass	$55,808	TBD
	62	Long Term	Tier 1; Y	ST03	R13.26	R15.09	Hatch Road to Tuolumne Road	Widen from 6 to 8 lanes	$144,706	STIP, IIP, Tax Measure
	63	Short Term	SHOPP	TBD	R13.3	R13.3	N/O Hatch Road OC (NB)	Programmed Detection	$30,000	SHOPP
	64	Short Term	SHOPP	TBD	R13.71	R13.71	S/O South Modesto UC (SB)	Programmed Detection	$30,000	SHOPP
	65	TBD	SHOPP	TBD	R13.35	R13.35	SR-99 and Hatch Road	RWIS	$60,000	SHOPP
	66	TBD	SHOPP	TBD	R13.4	R18.8	SR-99 and Hatch Road	Construct N/B Auxilliary Lane	$1,070	SHOPP
	67	TBD	SHOPP	0M950X	R13.85	R13.85	S/O South Modesto UC (SB)	Programmed Detection	$30,000	SHOPP
	68	TBD	SHOPP	0M950X	R13.85	R13.85	SR-99 and 9th Street	CMS	$200,000	SHOPP
	69	TBD	SHOPP	0M950X	R13.85	R13.85	SR-99 and Modesto UC	CCTV	$65,000	SHOPP
	70**	Long Term	TBD	TBD	R14.0	R14.0	NB SR 99, Near South Modesto OH	CMS	$200,00	SHOPP
	71**	Long Term	TBD	TBD	R14.0	R14.0	NB SR 99, Near South Modesto OH	CCTV	$65,000	SHOPP
	72	Short Term	SHOPP	3A340X	R14.52	R14.52	N/O Crows Landing Road OC (SB)	Programmed Detection	$30,000	SHOPP
	73	Short Term	SHOPP	3A340X	R14.7	R14.7	Crows Landing Road IC	Programmed Detection	$50,000	SHOPP
	74	TBD	No	N/A	R14.7	R14.7	From East Service Road to Crows Landing	Planned Class II Bicycle Lane	TBD	TBD
	75	TBD	No	N/A	R14.7	R14.7	Crows Landing Road (5.05 miles)	Planned Class I Bicycle Facility	TBD	TBD
	76	TBD	SHOPP	0M950X	R14.84	R14.84	Tuolumne Bridge	CMS	$200,000	SHOPP
	77	TBD	SHOPP	0M950X	R14.84	R14.84	Tuolumne Bridge	CCTV	$65,000	SHOPP
	78	TBD	SHOPP	0M950X	R14.84	R14.84	Tuolumne Bridge	Programmed Detection	$50,000	SHOPP
	79	TBD	Tier 1; Y	N/A	R14.9	R15.6	SR-99 at SR-132 West to SR-132 East	New Freeway to Freeway Interchange – Construct full Interchange at SR-132W/SR-99 Construct full SR-132 East Interchange	$377,000	STIP, IIP, Tax Measure
	80	TBD	SHOPP	TBD	R15.09	R15.09	Tuolumne Boulevard	Planned Detection	$50,000	SHOPP
	81	Long Term	Tier 1; Y	ST04	R15.09	R16.82	Tuolumne Road to Kansas Avenue	Widen from 6 to 8 lanes	$170,243	STIP, IIP, Tax Measure

* Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

**New Projects

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-4

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
4 SR-99 13.26–16.12	82	Short Term	N	0A671X	R15.1	R17.0	From Tuolumne River Bridge (PM15.1) to Kansas Avenue (PM 17.0)	Rehabilitate Multiple Ramps	$8,608	SHOPP
	83**	TBD	SHOPP	0M950X	R15.34	R15.34	Sierra Drive OC	Programmed Detection	$50,000	SHOPP
	84	TBD	SHOPP	0M950X	R15.84	R15.84	North of Tuolumne Bridge	RWIS	$60,000	SHOPP
	85	TBD	SHOPP	0M950X	R15.84	R15.84	SR-99/6th Street and I Street	CMS	$200,000	SHOPP
	86	TBD	SHOPP	0M950X	R15.85	R15.85	S/O Sierra Drive OC (NB)	Programmed Detection	$30,000	SHOPP

* Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

**New Projects

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-5

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
5 SR-99 16.12–22.55	87**	Mid Term	SHOPP	0K340X	R16.23	R22.38	Merced/Stanislaus County Line	Programmed Detection at every On/Off ramp for Census-Total of 22 stations	$660,000	SHOPP
	88	TBD	TBD	N/A	R16.4	R16.4	From Bridgewood Way to Modesto City Limits	Planned Class II Bicycle Lane	TBD	TBD
	89	Mid Term	SHOPP	0M950X	R16.6	R16.6	SR-99/Kansas Avenue – Northbound	CMS	$200,000	SHOPP
	90	Mid Term	SHOPP	0M950X	R16.6	R16.6	SR-99/Kansas Avenue	CCTV	$65,000	SHOPP
	91**	Mid Term	SHOPP	0M950X	R16.6	R16.6	SR-99/Kansas Avenue	Programmed Detection	$50,000	SHOPP
	92	Long Term	Tier 1; Yes	ST05	R16.82	R18.52	Kansas Avenue to Carpenter Road	Widen from 6 to 8 lanes	$102,146	STIP, IIP, PFF, Tax Measure
	93**	Long Term	TBD	TBD	R17.0	R17.0	NB SR 99, N/O Kansas Avenue	CMS-NB	$200,000	TBD
	94**	Long Term	TBD	TBD	R17.0	R17.0	NB SR 99, N/O Kansas Avenue	CCTV-NB	$65,000	TBD
	95	TBD	SHOPP	TBD	R17.1	R17.1	NB SR 99, N/O Kansas Avenue	Planned Detection	$30,000	SHOPP
	96**	Mid Term	SHOPP	0M950X	R17.1	R17.1	SR-99/Woodland Avenue	RWIS	$60,000	SHOPP
	97**	Mid Term	SHOPP	0M950X	R17.6	R17.6	SR-99/Woodland Avenue	CMS-SB	$200,000	SHOPP
	98**	Mid Term	SHOPP	0M950X	R17.6	R17.6	SR-99/Woodland Avenue	CCTV	$65,000	SHOPP
	99**	Mid Term	SHOPP	0M950X	R17.6	R17.6	SR-99/Woodland Avenue	Programmed Detection	$50,000	SHOPP
	100**	Mid Term	SHOPP	0M950X	R17.6	R17.6	JSO Briggsmore Avenue	CMS-NB	$200,000	SHOPP
	101**	Mid Term	SHOPP	0M950X	R17.6	R17.6	JSO Briggsmore Avenue	CCTV	$65,000	SHOPP
	102	Mid Term	SHOPP	0M950X	R18.11	R18.11	N/O West Modesto OH (NB)	Programmed Detection	$30,000	SHOPP
	103	TBD	No	N/A	M18.52	M18.52	SR-99 and Briggsmore Avenue/Carpenter Road in Modesto	Planned Park and Ride	TBD	TBD
	104	Long Term	Tier 1; Yes	ST06	R18.52	R24.75	Carpenter Road to San Joaquin County Line	Widen from 6 to 8 lanes	$124,277	STIP, IIP, Tax Measure
	105	Long Term	Tier 2; Yes	N/A	R18.52	R18.52	SR-99 and Briggsmore Avenue	City of Modesto – Reconstruct to 8-lane Interchange	$104,306	TBD
	106**	Mid Term	SHOPP	0M950X	M18.61	M18.61	N/O Carpenter/Briggsmore Road OC	RWIS	$60,000	SHOPP
	107	Mid Term	SHOPP	0M950X	M18.61	M18.61	N/O Carpenter/Briggsmore Road OC (NB/SB)	Programmed Detection	$50,000	SHOPP
	108	TBD	Tier 1; Yes	N/A	R18.7	R19.9	Carpenter Road to Briggsmore Avenue	Improve On-Off ramps and construct N/B and S/B Auxiliary Lanes	$9,600	TBD
	109**	Long Term	TBD	TBD	R19.0	R19.0	SB SR 99, N/O Carpenter	CMS-SB	$200,000	TBD
	110**	Long Term	TBD	TBD	R19.0	R19.0	SB SR 99, N/O Carpenter	CCTV-SB	$65,000	TBD

*Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

**New Projects

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-5

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
5 SR-99 16.12–22.55	111**	Mid Term	SHOPP	0M950X	M19.75	M19.75	S/O Beckwith Road.	CMS-NB	$200,000	SHOPP
	112	Mid Term	SHOPP	0M950X	M19.75	M19.75	S/O Beckwith Road OC (NB/SB)	Programmed Detection	$50,000	SHOPP
	113**	Mid Term	SHOPP	0M950X	M19.75	M19.75	S/O Beckwith Road	RWIS	$60,000	SHOPP
	114**	Mid Term	SHOPP	0M950X	M19.75	M19.75	JCT-N/O Briggsmore Avenue	CMS-SB	$200,000	SHOPP
	115**	Mid Term	SHOPP	0M950X	M19.75	M19.75	JCT-N/O Briggsmore Avenue	CCTV	$65,000	SHOPP
	116	TBD	No	N/A	R20.22	R20.22	SR-99 and Standiford Avenue/ Beckwith Road in Modesto	Planned Park and Ride	TBD	TBD
	117	TBD	Tier 1; Yes	N/A	R20.5	R21.5	Carpenter Road to Briggsmore Avenue	Improve On-Off ramps and construct N/B and S/B Auxilliary Lanes	$9,600	TBD
	118**	Mid Term	SHOPP	0M950X	R20.86	R20.86	S/O Pelandale Avenue OC	HAR	$70,000	SHOPP
	119	Mid Term	SHOPP	0M950X	R21.0	R21.0	S/O Pelandale Avenue OC (SB)	Programmed Detection	$50,000	SHOPP
	120	Short Term	Yes	47210X	R21.0	R22.4	Pelandale Avenue and SR-99	Modify Interchange	$74,607	STIP, RSTP, CFF
	121	Mid Term	SHOPP	0M950X	R21.28	R21.28	S/O Pelandale Avenue OC	Programmed Detection	$50,000	SHOPP
	122**	Mid Term	SHOPP	0M950X	R21.28	R21.28	S/O Pelandale Avenue OC	CCTV	$65,000	SHOPP
	123	Short Term	SHOPP	3A340X	R21.30	R21.30	S/O Pelandale Avenue OC (NB & SB)	Programmed Detection	$50,000	SHOPP
	124**	Mid Term	SHOPP	0M950X	R21.36	R21.36	JCT-N/O Beckwith Rd.	CMS-NB	$200,000	SHOPP
	125	Mid Term	SHOPP	0M950X	R21.36	R21.36	S/O Pelandale Avenue OC (NB/SB)	Programmed Detection	$50,000	SHOPP
	126**	Mid Term	SHOPP	0M950X	R21.36	R21.36	S/O Pelandale Avenue OC	CCTV	$65,000	SHOPP
	127	Mid Term	SHOPP	0M950X	R21.53	R21.53	NB off ramp to Pelandale Avenue OC (NB)	Programmed Detection	$30,000	SHOPP

* Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

**New Project

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-5

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
5 SR-99 16.12–22.55	128	Long Term	SHOPP	0M950X	R21.55	R21.55	SB on ramp from Pelandale Avenue OC (NB)	Programmed Detection	$30,000	SHOPP
	129	TBD	No	N/A	R21.74	R21.74	SR-99 and Pelandale Avenue in Modesto	Planned Park and Ride	TBD	TBD
	130	Short Term	SHOPP	3A340X	R21.75	R21.75	N/O Pelandale Avenue OC	Programmed Detection	$50,000	SHOPP
	131	Short Term	99Bond	0L330X	R21.9	R23.1	SR-99 and Kiernan Avenue	Interchange Replacement	59,300	99Bond
	132**	TBD	STIP	0L330X	R22.05	R22.05	N/O Pelandale Avenue	CMS-NB	$200,000	STIP
	133**	TBD	STIP	0L330X	R22.05	R22.05	N/O Pelandale Avenue	CCTV	$65,000	STIP
	134**	Mid Term	SHOPP	0M950X	R22.28	R22.28	N/O Pelandale Avenue	Programmed Detection	$50,000	SHOPP

Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

**New Projects

Programmed Projects
Planned Projects

Ten Year Implementation Plan Project List (2022) APPENDIX F-6

Corridor Segment Route Post Mile	Project ID	Begin Construction	*SHOPP/ RTP Tier 1, Tier 1I (Yes/No)	EA/RTP MPO ID	Post Mile From	Post Mile To	Location	Description	Total Cost ($1,000)	Primary Funding Source
6 SR-99 22.55-24.75	135**	Mid Term	SHOPP	0K340X	R22.36	R24.49	Merced/Stanislaus County Line	Programmed Detection at every On/Off ramp for Census-Total of 11 stations	$330,000	SHOPP
	136	Short Term	SHOPP	3A340X	R22.59	R22.59	N/O Broadway/JCT SR-219	Programmed Detection	$50,000	SHOPP
	137	Short Term	SHOPP	0M950X	R22.78	R22.78	S/O Hammett Road OC	Programmed Detection	$50,000	SHOPP
	138**	Long Term	TBD	TBD	R23.0	R23.0	S/O Hammett Road	CMS, CCTV (Both Directions)	$530,000	TBD
	139**	Short Term	SHOPP	0L330X	R23.05	R23.05	S/O Hammett Road OC	RWIS	$60,000	SHOPP
	140	Short Term	SHOPP	0L330X	R23.05	R23.05	S/O Hammett Road OC	Programmed Detection	$50,000	SHOPP
	141**	Mid Term	SHOPP	3A340X	R23.30	R23.30	S/O Hammett Road OC	CMS	$200,000	SHOPP
	142**	Mid Term	SHOPP	3A340X	R23.30	R23.30	S/O Hammett Road OC	CCTV	$65,000	SHOPP
	143	Short Term	SHOPP	0L330X	R23.55	R23.55	S/O Hammett Road OC	Programmed Detection	$50,000	SHOPP
	144	Short Term	Local	0L320X	R23.9	R25.1	SR-99/Hammett Road	Interchange Replacement	$61,000	Local
	145	Short Term	SHOPP	0L330X	R24.05	R24.05	S/O Hammett Road OC	Programmed Detection	$50,000	SHOPP
	146	TBD	TBD	TBD	R24.27	R24.27	SR-99 and Hammett Road in Salida	Planned Park and Ride	TBD	TBD

*Short = 0-4 Years
2012-2016

Mid = 5-7 Years
2017-2019

Long = 8-10 Years
2020-2022

**New Projects

Programmed Projects
Planned Projects

APPENDIX G

Letter of Intent

DEPARTMENT OF TRANSPORTATION
DISTRICT 10
P.O. BOX 2048, STOCKTON, CA 95201
(1976 E. DR. MARTIN LUTHER KING JR. BLVD. 95205)
PHONE (209) 948-7943
FAX (209) 948-3670
TTY 711

2011 FEB 24 AM 10 04

Flex your power!
Be energy efficient!

January 28, 2011

Mr. Vince Harris
Executive Director
Stanislaus Council of Governments
1111 "I" Street, Suite 308
Modesto, CA 95354

Dear Mr. Harris:

This letter is to communicate our intent to work, in partnership, with the Stanislaus Council of Governments (StanCOG) to jointly develop the State Route 99 (SR-99) Corridor System Management Plan (CSMP) for Stanislaus County. The CSMP is a guide for managing the corridor among all partners, and the process is intended to develop and implement a CSMP across all jurisdictions and modes for the highest mobility benefits to travelers in the corridor.

The Department of Transportation, District 10 is committed to a coordinated and cooperative effort with StanCOG and our other regional agency partners in the Central Valley to improve mobility and performance along the SR-99 Corridor.

District 10 is coordinating the preparation of this CSMP for the SR-99 corridor segment in Stanislaus County. CSMPs are required pursuant to the SR-99 Infrastructure Bond Program and undertaken for bond savings for the SR-99/219 (Kiernan Avenue) interchange project that is anticipated to begin construction in August 2012.

This CSMP document is framed similar to a Transportation Concept Report (TCR), but is modified to emphasize operational aspects and identification of specific areas of traffic congestion, identify causes, and then identify strategies, actions, and projects to remove congestion.

Please sign the second page of this letter of intent and return a copy to Lynn O'Connor.

I look forward and concur to our continued partnership during development and implementation of the SR-99 CSMP dedicated to the highest mobility benefits to travelers in the San Joaquin Valley. If you have any questions please do not hesitate to contact Lynn O'Connor of my staff at (209) 948-3975, or me at (209) 948-7906.

Sincerely,

Ken Baxter — Date 1/28/11
Deputy District Director
Division of Planning and Local Assistance
Caltrans District 10

I agree with this letter of intent,

Vince Harris — Date 2/16/2011
Executive Director
Stanislaus Council of Governments

c: Lynn O'Connor, Branch Chief, Caltrans, District 10, Office of System Planning and Goods Movement

System Planning and Goods Movement

"We're here to get you there."

1976 E. Martin Luther King Jr. Blvd., Stockton, CA 95205
Phone 209-948-7325 Fax 209-948-7164
Lynn_O'Connor@dot.ca.gov

CONTACT INFORMATION:

LYNN O'CONNOR, SENIOR TRANSPORTATION PLANNER
OFFICE OF SYSTEMS PLANNING AND GOODS MOVEMENT
CALTRANS, DISTRICT 10