



Transportation Concept Report
State Route (SR) 33
District 10
January 2016



Disclaimer: The information and data contained in this document are for planning purposes only and should not be relied upon for final design of any project. Any information in this Transportation Concept Report (TCR) is subject to modification as conditions change and new information is obtained. Although planning information is dynamic and continually changing, the District 10 Division of Planning, Local Assistance, and Environmental makes every effort to ensure the accuracy and timeliness of the information contained in the TCR. The information in the TCR does not constitute a standard, specification, or regulation, nor is it intended to address design policies and procedures.

California Department of Transportation

*Provide a safe, sustainable, integrated, and efficient transportation system
to enhance California's economy and livability*

Approvals:

 01/19/16
DENNIS T. AGAR Date
District 10 Director
Stockton

 1/14/16
KEN BAXTER Date
District 10 Deputy Director
Planning, Local Assistance, and Environmental

TABLE OF CONTENTS

ABOUT THE TRANSPORTATION CONCEPT REPORT	1
STAKEHOLDER PARTICIPATION	1
EXECUTIVE SUMMARY.....	2
CORRIDOR OVERVIEW	5
Route Segmentation.....	5
Map.....	7
Route Description	8
Community Characteristics.....	10
Land Use	13
System Characteristics.....	14
Bicycle Facility.....	15
Pedestrian Facility.....	17
Transit Facility.....	20
Freight.....	21
Environmental Considerations	25
CORRIDOR PERFORMANCE.....	26
KEY CORRIDOR ISSUES	28
CORRIDOR CONCEPT.....	28
Concept Rationale.....	28
Planned and Programmed Projects and Strategies.....	29
Projects and Strategies to Achieve Concept.....	29
APPENDIX	30
Appendix A: Glossary of Terms and Acronyms.....	30

ABOUT THE TRANSPORTATION CONCEPT REPORT

System Planning is the long-range transportation planning process for the California Department of Transportation (Caltrans). The System Planning process fulfills Caltrans' statutory responsibility as owner/operator of the State Highway System (SHS) (California Government Code §65086) by evaluating conditions and proposing enhancements to the SHS. Through System Planning, Caltrans focuses on developing an integrated multimodal transportation system that meets Caltrans' goals of safety and health; stewardship and efficiency; sustainability, livability and economy, system performance, and organization excellence.

The System Planning process comprises four parts: the District System Management Plan (DSMP), the DSMP project list, the TCR, and the Corridor System Management Plan (CSMP). The district-wide DSMP is a strategic policy and planning document that focuses on maintaining, operating, managing, and developing the transportation system. The TCR is a planning document that identifies the existing and future route conditions as well as future needs for each route on the SHS. The CSMP is a complex, multi-jurisdictional planning document that identifies future needs within corridors experiencing or expected to experience high levels of congestion. The CSMP serves as a TCR for segments covered by the CSMP. The DSMP Project List is a list of planned and partially programmed transportation projects used to recommend projects for funding. These System Planning products are also intended as resources for stakeholders, the public, and partner, regional, and local agencies.

TCR Purpose

California's State Highway System needs long range planning documents to guide the logical development of transportation systems as required by California Government Code (CGC) §65086 and as necessitated by the public, stakeholders, and system users. The purpose of the TCR is to evaluate current and projected conditions along the route and communicate the vision for the development of each route in each Caltrans District during a 20 to 25 year planning horizon. The TCR is developed with the goals of increasing safety, improving mobility, providing excellent stewardship, and meeting community and environmental needs along the corridor through integrated management of the transportation network, including the highway, transit, pedestrian, bicycle, freight, operational improvements and travel demand management components of the corridor.

STAKEHOLDER PARTICIPATION

The State Route 33 TCR employed an outreach strategy consistent with local Metropolitan Planning Organization (MPO) outreach conducted with the development of the Overall Work Program (OWP). This strategy avoids duplicative effort, and reduces public confusion as to the aims of local and regional transportation planning. As the OWP intends to meet federal requirements outlined in Volume 23 Code of Federal Regulations (CFR) section 450.314, and in the Moving Ahead for Progress in the 21st Century Act (MAP-21), external stakeholder needs can be addressed by local partner outreach efforts related to the OWP. Development of the TCR includes initial outreach to internal partners—these would be traffic operations, traffic safety, project management, maintenance, environmental support, as well as others.

EXECUTIVE SUMMARY

SR 33 is a conventional agricultural goods movement corridor, a collector, and main street for several rural communities in the western San Joaquin Valley. The highway starts in District 10 (D10) at the Fresno County line south of the City of Dos Palos and ends in San Joaquin County at the junction with Interstate 5 (I-5) east of Tracy. Originally constructed in the first decades of the 20th Century to link the west side of the San Joaquin Valley to the Bay Area and to Southern California, SR 33's role in freight is less significant compared to the newer I-5, which it parallels throughout most portions of the District. However, 10 to 30% of SR 33's vehicular traffic is trucks, and anywhere from 25 to 80% of those trucks are 5-axle.¹

For purposes of analysis and evaluation, SR 33 was segregated into nineteen segments, excluding two concurrent segments. Fifteen highway segments run in a rural context and four run in urban segments. This description does not include the concurrent segments with SR 152 and SR 140 (both of which are dominant routes) in Los Banos and Gustine respectively.

The SR 33 TCR evaluates recent traffic conditions along the route using 2015 as a base year (BY) and projects conditions for the route over the next 25 years utilizing a horizon year (HY) of 2040. Current traffic conditions indicate a facility operating within its BY 2015 concept level of service (LOS) for all segments. By HY 2040, the LOS on rural Segments MER-4, MER-5, and MER-6 in Santa Nella will become deficient. Plans exist to increase capacity on urbanized Segments STA-1, STA-5, and STA-6 on SR 33 in the cities of Newman and Patterson in Stanislaus County.

Facility safety and maintenance is likely to be the main focus for rural segments, which show little growth in projected traffic volumes. Expansion and operational improvements are likely in urbanized segments and in Santa Nella.

Despite projections for growth, SR 33 will continue to play a minor role in the state highway system (SHS). This is due to its paralleling I-5, and its comparatively low truck volumes to those of busier expressways and freeways in the San Joaquin Valley SHS system.

Pedestrians and bicycles are allowed on the current facility, though shoulder widths north of SR 152 are narrow. Widening of shoulders to accommodate bike capability is encouraged in segments north of SR 152.

There is fixed-route and deviated fixed-route transit serving the route in Stanislaus and Merced counties. SR 33 intersects with east-west roads that serve as commute corridors between the San Joaquin Valley and the San Francisco Bay Area.

SR 33 in D10 runs in a section of California that features median incomes lower than the state average, higher percentages of population with income below the federal poverty line, and two cities that possess average worker commute times at least six to fourteen minutes higher than the state average. State transportation planning policies need to address environmental justice while catering to the development sustainability and multimodal needs of local agencies along the SR 33 corridor.

¹ 2012 Annual Average Daily Truck Traffic on the California State Highway System, Caltrans

Concept Summary

CONCEPT SUMMARY					
Seg.	Segment Description	Existing Facility	20-25 Year Capital Facility Concept	20-25 Year System Operations and Management Concept	Post-25 Year Concept
MER-1	FRE Cnty L to Valeria St.	2C	2C	Preservation, safety, and maintenance	2C
MER-2	Valeria St. to Sharon Ln./Las Palmas Rd.	4C	4C	Preservation, safety, and maintenance	4C
MER-3	Sharon Ln./Las Palmas Rd. to SR 152 Rte. break	2C	2C	Preservation, safety, and maintenance	2C
MER-4	SR 152 Rte. break to Vera Cruz Dr.	2C	4C	Operations	4C
MER-5	Vera Cruz Dr. to JCT I-5	2C	4C	Operations	4C
MER-6	JCT I-5 to McCabe Rd.	3C	4C	Operations	4C
MER-7	McCabe Rd. to SR 140 route break	2C	2C	Preservation, safety, and maintenance	2C
MER-8	N JCT SR 140 to Merced/Stanislaus Cnty L	2C	2C	Preservation, safety, and maintenance	2C
STA-1	MER Cnty L to Stuhr Rd.	2C	4C	Operations	4C
STA-2	Stuhr Rd. to Crows Landing Rd.	2C	2C	Preservation, safety, and maintenance	2C
STA-3	Crows Landing Rd. to 4 th St.	2C	2C	Preservation, safety, and maintenance	2C
STA-4	4 th St. to Sperry Rd.	2C	2C	Preservation, safety, and maintenance	2C
STA-5	Sperry Rd. to M St.	4C	4C	Operations	4C
STA-6	M St. to Ward Ave.	2C	4C	Operations	4C
STA-7	Ward Ave. to Howard Rd.	2C	2C	Preservation, safety, and maintenance	2C
STA-8	Howard Rd. to E St.	2C	2C	Preservation, safety, and maintenance	2C
STA-9	E St. to SJ Cnty L	2C	2C	Preservation, safety, and maintenance	2C
SJ-1	SJ Cnty L to JCT SR 132	2C	2C	Preservation, safety, and maintenance	2C
SJ-2	JCT SR 132 to end SR 33 ramp south bound I-5	2C	2C	Preservation, safety, and maintenance	2C

FRE: Fresno County; **Cnty L:** county line; **Rte.:** route; **St.:** street; **Ln.:** lane; **Dr.:** drive; **N JCT:** north junction; **Rd.:** road; **Ave.:** avenue

Concept Rationale

SR 33 is not on the Interregional Road System (IRRS) in D10. Thus, its concept LOS in D10 is D, which does not require an increase in capacity for non-IRRS routes. Modeling does not show current deficiencies in LOS, but 25-year modelling does reveal deficiency in segments in Santa Nella. Growth in future traffic volume necessitates an increase in capacity on SR 33 in MER near I-5 in segments MER-4, MER-5, and MER-6. Modelling does not reveal current or 25-year deficiency in the Cities of Newman and Patterson. However, population increase and future development suggest an increase in capacity is warranted. The 2014 StanCOG Regional Transportation Plan (RTP), as well as city general plans (GP), feature facility expansion of SR 33 in their jurisdictions. Both cities feature plans for future residential development.²⁻³ There are also plans for residential development located inside the triangle near Santa Nella bounded by SR 33, I-5, and SR 152.⁴ Interstate demand for truck stops and roadside retail in Santa Nella sustains current traffic. Future growth in goods movement also suggests facility expansion. 2040 projected traffic volumes in Santa Nella are much higher than they are on other SR 33 segments in the District.⁵

Commute patterns in the west San Joaquin Valley may not heavily affect performance on SR 33, but are instead likely to influence growth on east-west routes that intersect with SR 33. Non-commute traffic activity due to increases in population with development will affect volume in incorporated cities.

According to the 2015 DSMP, approximately 25% of the region's workforce engages in interregional commuting, with 15% of that 25% leaving the District to get to work.⁶ Most outbound commutes go to either Sacramento or to the Bay Area. With the employment gap in D10 projected to be over 120,000 in 2022, more workers will have to leave the region daily for commuting purposes. This activity, along with attendant development and job

² City of Newman 2030 General Plan, adopted April 10th, 2007

³ City of Patterson 2010 General Plan, adopted November 30th, 2010

⁴ The Villages of Laguna San Luis Community Plan, County of Merced, adopted September 2nd, 2008

⁵ 2012 Annual Average Daily Truck Traffic on the California State Highway System, Caltrans

⁶ District 10 2015 District System Management Plan, approved June 19th, 2015, p. 12

distribution patterns, could affect performance at east-west routes that intersect with SR 33. Operations improvements will be a consideration at intersections to accommodate increased levels of commuting. If a large percentage of these workers are going to the Bay Area, then SR 152, SR 132, I-5, and I-580 will be further utilized. Roads that link to I-5, such as Howard Road, Frank Cox Road, Zacharias Road, Sperry Avenue, Fink Road, Stuhr Road, and SR 140 may also see more activity.

For the rural portions of SR 33, system preservation, safety, and maintenance will remain the planning emphasis. Based on traffic projections and local trends in land use development, it is likely that Segments MER-1, MER-2, and MER-3 in MER, STA-2, STA-3, STA-8, and STA-9 in STA, and SJ-1 and SJ-2 in SJ will remain with current facilities.

Complete Streets improvements take on a higher priority, as SR 33 communities in D10 feature a main street that is also the state highway, or a main street that is one block away from SR 33. Cooperation and partnership with local agencies is needed to ensure that state facilities are sensitive to the needs of local main streets. As mentioned in System Characteristics, local agencies are currently pursuing efforts to enhance Complete Streets.

A roundabout at the intersection of SR 33 and SR 140 southwest of Gustine is planned for installation.

Future projects on SR 33 will need to take the impacts of climate change into consideration, especially in areas more prone to flooding, such as sections of northern Stanislaus County and San Joaquin County.

Proposed Projects and Strategies

There are candidate projects listed by Caltrans to widen SR 33 from SR 152 to McCabe Road.⁷ The StanCOG 2014 RTP recognizes three Tier I capacity enhancement projects to widen SR 33 in Newman from Inyo Avenue to Stuhr Road, with construction years of 2017, 2018, and 2019 listed.⁸ These projects address future development needs in Newman. The same RTP lists a Tier II capacity enhancement project in the City of Patterson. The Patterson project, set for construction in 2030, calls for widening the highway from three to five lanes within city limits. Another Tier II is a roadway capacity enhancement project in Newman from Inyo Avenue to the south city limits that features widening to four lanes, set for construction in 2020. Improvements in Newman and Patterson require auxiliary lanes as needed.

There are projects endorsing bicycle accessibility. The Newman GP proposes Class I bike paths along SR 33 beyond city limits. The plan supports the formation of a regional Class I bike facility connecting Newman to other west side San Joaquin Valley communities.⁹ StanCOG RTP 2014 endorses Class 3.5 bikeways on SR 33 between Patterson and Newman.¹⁰ A Class 3.5 bikeway provides wide paved shoulders anywhere from four to eight feet wide that separate the bicyclist from the automobile travel lane with a solid white edge line stripe, and provides pedestrian space in rural areas.¹¹ The Merced County Association of Governments (MCAG) endorses Class II bike paths on SR 33 from the Stanislaus County Line to Santa Nella.¹²

SR 33 currently performs below capacity, and the overall pavement condition of the roadway is good. Fog line and shoulder maintenance is needed, however, as the area is subject to fog in winter.

⁷ Caltrans Online Project Information System, accessed July 29th, 2015

⁸ Stanislaus Council of Governments 2014 Regional Transportation Plan, adopted June 2014

⁹ City of Newman 2030 General Plan, adopted April 10th, 2007

¹⁰ Stanislaus Council of Governments 2014 Regional Transportation Plan, adopted June 2014

¹¹ Stanislaus Council of Governments Final Non-Motorized Transportation Master Plan, October 2013, Fig. 2-1

¹² Merced County Association of Governments Regional Bicycle Transportation Plan, adopted October 29th, 2008, pgs. 25-28

CORRIDOR OVERVIEW

ROUTE SEGMENTATION

ROUTE SEGMENTATION			
Seg.	Location Description	County_Route_Beg. PM	County_Route_End PM
MER-1	FRE Cnty L to Valeria St.	MER_33_PM L 000.000	MER_33_PM R 000.883
MER-2	Valeria to Sharon Ln. left turn	MER_33_PM R 000.883	MER_33_PM 001.460
MER-3	Sharon Ln. left turn to SR 152	MER_33_PM 001.460	MER_33_PM L 005.678
MER-4	SR 152 to Vera Cruz Dr.	MER_33_PM R 013.272	MER_33_PM R 015.600
MER-5	Vera Cruz Dr. to JCT I-5	MER_33_PM R 015.600	MER_33_PM 016.674
MER-6	JCT I-5 to McCabe Rd.	MER_33_PM 016.674	MER_33_PM 017.380
MER-7	McCabe Rd. to SR 140	MER_33_PM 017.380	MER_33_PM 026.464
MER-8	SR 140 to STA Cnty L	MER_33_PM 027.111	MER_33_PM 030.302
STA-1	MER Cnty L to Stuhr Rd.	STA_33_PM 000.000	STA_33_PM 002.060
STA-2	Stuhr Rd. to Crow's Landing Rd.	STA_33_PM 002.060	STA_33_PM 006.730
STA-3	Crow's Landing Rd. to 4 th St.	STA_33_PM 006.730	STA_33_PM 007.040
STA-4	4 th St. to Sperry Rd.	STA_33_PM 007.040	STA_33_PM 012.571
STA-5	Sperry Rd. to M St.	STA_33_PM 012.571	STA_33_PM 013.700
STA-6	M St. to Ward Ave.	STA_33_PM 013.700	STA_33_PM 014.520
STA-7	Ward Ave. to Howard Rd.	STA_33_PM 014.520	STA_33_PM 019.550
STA-8	Howard Rd. to E St.	STA_33_PM 019.550	STA_33_PM 019.920
STA-9	E St. to SJ Cnty L	STA_33_PM 019.920	STA_33_PM 027.086
SJ-1	SJ Cnty L to SR 132	SJ_33_PM 000.000	SJ_33_PM 000.818
SJ-2	SR 132 to JCT I-5	SJ_33_PM 000.818	SJ_33_PM 005.001
FRE: Fresno County; Cnty L: county line; St.: street; Ln.: lane; Dr.: drive; JCT: junction; Rd.: road; Ave.: avenue; PM: post mile			

Segmentation of SR 33 followed District 10 practice—segments conformed to land use planning agency boundaries, 10% or greater changes in daily or peak hour volume, changes in population density (rural versus urban), intersections with other state highways, gradient or terrain, changes in truck route designation, and changes in facility. These factors resulted in the creation of Segments MER-1 to MER-8, STA-1 to STA-9, and SJ-1 and SJ-2.

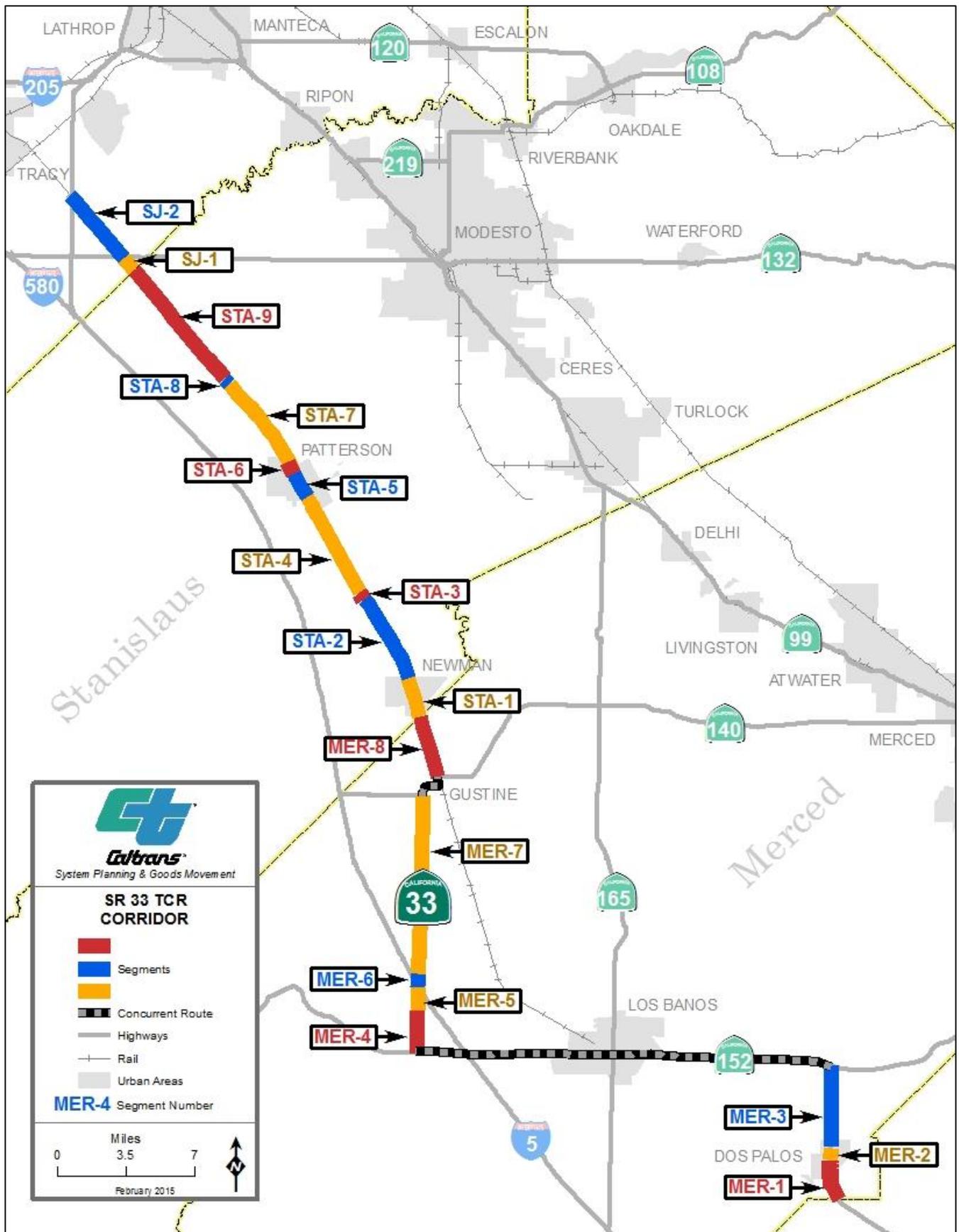
Merced County

There are eight segments in Merced County. MER-1 starts at the Fresno county Line at post mile (PM) L 000.000 and ends at Valeria Street in Dos Palos (PM R 000.883), where the facility turns into four lanes. Though portions of this segment are within the Dos Palos city limits, the area has rural land uses. MER-2, a four lane conventional highway, extends from Valeria Street to Sharon Lane (PM 001.460). MER-3 returns to a two lane facility and goes from Sharon Lane to the SR 152 junction (PM 005.678). SR 33 becomes concurrent with SR 152 to Santa Nella Boulevard.

MER-4, as Santa Nella Blvd., starts at the junction with SR 152 (PM 013.238) west of I-5. The segment extends to Vera Cruz Drive at PM 015.600. MER-5 extends from Vera Cruz Drive to I-5 at PM 016.643. This segment features a combination of continuous two-way left turn lanes and restricted left turn lanes. MER-6, also featuring two-way and restricted left turn lanes and long auxiliary lanes, extends from I-5 to McCabe Road (PM 017.270). MER-7, begins at McCabe Road and finishes at the western intersection with SR 140 in Gustine (PM 026.464). MER-8 begins at the eastern intersection with SR 140 in northeast Gustine (PM 027.011) and extends to the Merced county line (PM 030.302).

Stanislaus and San Joaquin Counties

There are eleven segments in Stanislaus and San Joaquin Counties. STA-1 extends from the county Line/south city limits of Newman (PM 000.000) to Stuhr Road (PM 002.060) in concurrence with the boundary of Newman's zone of influence, city boundary, and a change in traffic volume. STA-2 starts at the northern Newman city limits and ends at Crow's Landing Road (PM 006.370). STA-3 defines the Crow's Landing census-designated place (CDP) from Crow's Landing Road to 4th Street (PM 007.040). STA-4 extends from Crow's Landing to the south end of Patterson at Sperry Road (PM 012.571). STA-5, a four lane facility with turn pockets, starts at Sperry Road and ends at M Street (PM 013.693). STA-6, a two lane facility, starts at M Street and ends at Ward Avenue at the northern Patterson city boundary (PM 014.520) just before SR 33 crosses the California Northern Railroad track. STA-7, extends from Ward Avenue to Howard Road (PM 019.550), located at the south end of Westley. STA-8 defines Westley, extending from Howard Road to E Street (PM 019.920). STA-9 runs from E Street in Westley to the San Joaquin line (PM 027.086). SJ-1 goes from the county line to the SR 132 bridge interchange (PM 000.818). SJ-2 starts at the SR 132 underpass and ends at the SR 33 terminus (PM 005.001) at I-5 on and off ramps.



ROUTE DESCRIPTION

In D10, SR 33 is a north-south rural conventional highway, except from SR 152 to Santa Nella, where it is on the freeway and expressway system (FES). Outside of D10, it begins in the City of Ventura in Ventura County and ends in D10 in San Joaquin County. The route enters D10 in Merced, experiences two route breaks, continues into Stanislaus, and ends near the City of Tracy in San Joaquin at I-5 near Vernalis. Paralleling I-5 from Santa Nella to its terminus, SR 33 will continue to function as a rural community main street and truck shipment route for local agricultural products to intermodal facilities in the region. The route is bike and pedestrian accessible and has transit.

Route Location:

SR 33 (Legislative Route [LR] 41) begins at US 101 in the City of Ventura in Ventura County and ends in D10 at the junction with I-5 in San Joaquin at PM 005.001. Within D10, SR 33 runs in the west San Joaquin Valley in two offset north-south alignments in the counties of Merced, Stanislaus, and San Joaquin. The route is concurrent in an east-west direction with SR 152 (LR 32) in Merced from PM 005.670 north of Dos Palos to PM 013.250, west of the interchange with I-5. SR 152 is the dominant route. It is along this concurrent route that the SR 152 runs through the City of Los Banos.

SR 33 intersects with I-5 three times in D10: once in San Joaquin and twice in Merced. In Merced, SR 33 intersects with I-5 as a concurrent route in an east-west direction as SR 152 at PM 013.848, and as itself in a north-south direction at PM 016.643 in Santa Nella. SR 33 runs concurrent with SR 140 (LR 122) in the City of Gustine from PM 004.194 to PM 004.353, with SR 140 acting as the dominant route. SR 33 runs adjacent to the single track California Northern Railroad from Gustine to the highway's terminus at the junction with I-5 in San Joaquin. The railroad itself currently starts in Los Banos and continues past SR 33 to a junction in Tracy.

In addition to Santa Nella, SR 33 runs through the cities of Dos Palos, Gustine, Newman, and Patterson, as well as Crow's Landing and Westley in Stanislaus, and Vernalis in San Joaquin. The route intersects SR 132 (LR 110) at PM 000.818 in the same county.

Route Purpose:

The purpose of SR 33 is to connect rural communities and agricultural commodities in the west San Joaquin Valley with the larger highway system, acting as the first leg in getting goods to national and international shipping destinations. The other purpose is to act as a parallel back-up route in the event of an I-5 shut down.

The purpose of transit on SR 33 is to give west San Joaquin Valley workers going to Merced, Modesto, and Turlock commuting options, as many of the routes feature east-west connectivity. Transit also provides multimodal options between SR 33 communities. Seven fixed transit routes operate on SR 33 in D10. Four of them are in Merced and are operated by The Bus, Merced County's transit provider. Three fixed routes operate in Stanislaus. Stanislaus Regional Transit (StaRT) manages those routes.

As public transit mostly operates on arterials and collectors, buses do not provide last mile destination services for all agricultural workers. Shared private vans provide transportation for workers in agriculture, especially to areas located away from collectors. SR 33 fulfills a connecting role within the rural road network, one that vans use to transport agricultural workers.

Bicycle access exists on SR 33 as unsigned Class III in Stanislaus, Merced, and San Joaquin counties. Bicycle access promotes multimodal capability of the SHS by providing travel alternatives. Pedestrian access is also allowed.

Major Route Features:

A unique feature of SR 33 is that it parallels I-5. SR 33 also has in Santa Nella one of the few rural state highway/interstate truck stops in the District.

Route Designations and Characteristics:

In D10, SR 33 is not on the Freeway and Expressway System (FES), except from SR 152 west of Los Banos to I-5 in Santa Nella. It is not on the National Highway System (NHS). It is not on the strategic highway network (STRAHNET), not listed as a scenic highway in D10, and is not on the Interregional Road System (IRRS). As it is not on the IRRS, its concept LOS in D10 is designated as D in both urban and rural segments.

Its Federal Functional Classification (FFC) is collector in rural areas, and minor arterial in urban. It is not listed as a goods movement route, is not on the National Truck Network (NTN), and is designated in the Surface Transportation Assistance Act (STAA) of 1982 as Terminal Access Truck Route (TA). The exception is the California Legal Network designation in Merced County from Cottonwood Road at PM 022.400 to SR 140 in Gustine at PM 026.464. (SR 140 in Gustine is also listed as California Legal Network from the junction with SR 33 in southwestern Gustine to its northeastern junction in Gustine with SR 33, at which point SR 140 separates from SR 33.)

Most of SR 33's segments are rural. SR 33 is within the planning jurisdiction of three MPOs. They are the San Joaquin Council of Governments (SJCOG), the Stanislaus Council of Governments (StanCOG), and the Merced County Association of Governments (MCAG). Local land use planning agencies include the cities of Dos Palos, Gustine, Newman, and Patterson, as well as the counties of Merced, Stanislaus, and San Joaquin. There are no federal recognized tribes located near the SR 33 corridor. The air district is San Joaquin Valley Unified Air Pollution Control District. The terrain is flat.

ROUTE DESIGNATIONS AND CHARACTERISTICS								
County of Merced								
Segment	MER-1	MER-2	MER-3	MER-4	MER-5	MER-6	MER-7	MER-8
Freeway & Expressway System	No	No	No	Yes	Yes	No	No	No
National Highway System	No	No	No	No	No	No	No	No
Strategic Highway Network	No	No	No	No	No	No	No	No
Scenic Highway	No	No	No	No	No	No	No	No
Interregional Road System	No	No	No	No	No	No	No	No
High Emphasis	No	No	No	No	No	No	No	No
Focus Route	No	No	No	No	No	No	No	No
Federal Functional Classification	Minor Arterial					Major Collector		
Goods Movement Route	No	No	No	No	No	No	No	No
Truck Designation	Terminal Access (TA)						CL	TA
Rural/Urban/Urbanized	Rural	Urban	Rural	Rural	Rural	Rural	Rural	Rural
Metropolitan Planning Organization	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG
Regional Transportation Planning Agency	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG
Congestion Management Agency	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG	MCAG
County Transportation Commission	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Local Agency	MER	Dos Palos	County of Merced					
Tribes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Air District	San Joaquin Valley Unified Air Pollution Control District							
Terrain	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
TA: Terminal Access; CL: California Legal; MCAG: Merced County Association of Governments; N/A: not applicable; MER: County of Merced								

ROUTE DESIGNATIONS AND CHARACTERISTICS (Continued)									
County of Stanislaus									
Segment	STA-1	STA-2	STA-3	STA-4	STA-5	STA-6	STA-7	STA-8	STA-9
FES	No	No	No	No	No	No	No	No	No
NHS	No	No	No	No	No	No	No	No	No
STRAHNET	No	No	No	No	No	No	No	No	No
Scenic Highway	No	No	No	No	No	No	No	No	No
IRRS	No	No	No	No	No	No	No	No	No
High Emphasis	No	No	No	No	No	No	No	No	No
Focus Route	No	No	No	No	No	No	No	No	No
FFC	Major Collector				Minor Arterial		Major Collector		
Goods Movement Rte.	No	No	No	No	No	No	No	No	No
Truck Designation	Terminal Access (TA)								
Rural/Urban/Urbanized	Urban	Rural	Rural	Rural	Urban	Urban	Rural	Rural	Rural
MPO	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG
RTPA	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG
CMA	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG	StanCOG
CTC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Local Agency	Newman	County of Stanislaus			Patterson		County of Stanislaus		
Tribes	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Air District	San Joaquin Valley Unified Air Pollution Control District								
Terrain	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat	Flat
TA: Terminal Access; StanCOG: Stanislaus Council of Governments; N/A: not applicable; FES: Freeway and Expressway System; NHS: National Highway System; STRAHNET: Strategic Highway Network; IRRS: Inter-regional Road System; FFC: Federal Functional Classification; MPO: Metropolitan Planning Organization; RTPA: Regional Transportation Planning Agency; CMA: Congestion Management Agency; CTC: County Transportation Commission									

ROUTE DESIGNATIONS AND CHARACTERISTICS (Continued)		
County of San Joaquin		
Segment	SJ-1	SJ-2
Freeway & Expressway System	No	No
National Highway System	No	No
Strategic Highway Network	No	No
Scenic Highway	No	No
Interregional Road System	No	No
High Emphasis	No	No
Focus Route	No	No
Federal Functional Classification	Major Collector	
Goods Movement Route	No	No
Truck Designation	Terminal Access	
Rural/Urban/Urbanized	Rural	Rural
Metropolitan Planning Organization	SJCOG	SJCOG
Regional Transportation Planning Agency	SJCOG	SJCOG
Congestion Management Agency	SJCOG	SJCOG
County Transportation Commission	N/A	N/A
Local Agency	County of San Joaquin	County of San Joaquin
Tribes	N/A	N/A
Air District	San Joaquin Valley Unified Air Pollution Control District	
Terrain	Flat	Flat
N/A: not applicable; SJCOG: San Joaquin Council of Governments		

COMMUNITY CHARACTERISTICS

The purpose of the Community Characteristics section is to identify possible transportation-related environmental justice issues and potential needs for a targeted public outreach for a community. For information on the City of Los Banos, refer to the SR 152 TCR.

Population and Commute Characteristics:

2010 population of incorporated cities and unincorporated communities along SR 33 totaled to approximately 43,900. Individual counts were as follows: Dos Palos: 4,950; Gustine: 5,520; Newman: 10,224; and Patterson: 20,413. 2010 population for unincorporated communities was as follows: Santa Nella: 1,380; Crow's Landing: 355; Westley: 603; and Vernalis, 400.¹³ 2000 population for incorporated cities was as follows: Dos Palos: 4,581; Gustine: 4,698; Newman: 7,093; and Patterson: 11,606.¹⁴ Dos Palos's annual growth rate from 2000 to 2010 was 0.8%, Gustine's rate was about 1.7%, Newman's was 4.4%, and Patterson's was about 7.5%. Based on changes in population, Patterson has experienced the biggest change from 2000 to 2010.

Patterson's growth can be attributed to its relationship to the Bay Area, in that the city, among others in the area, is a destination for workers seeking cheaper housing due to the cost of real estate in the Bay Area. With an average of 41 minutes, Patterson ranked 15th in the state in the category of longest average commute times for workers 16 years of age and up.¹⁵ Newman is also ranked in the top 20% of cities with long average commutes, with an average of 33.2 minutes; the state figure is 27.2 minutes.¹⁶ 40% of Patterson's workforce commutes to the Bay, while the figures for Newman, Gustine, and Santa Nella respectively are 23%, 6%, and 33%.¹⁷ This behavior suggests that while SR 33 plays little role for Bay commuters, local planning needs to address operation and expansion as a result of jobs/housing imbalances in the Bay Area.

Race, Ethnicity, Income:

Racial composition for Dos Palos is as follows: 77% white, 1.6% African American, 2% Native American, no Asian, no Pacific Islander, 16% some other race, and 3.5% two or more races. 69% identify as Hispanic or Latino. Racial composition for Gustine is as follows: 88% white, 0.4% African American, 0.4% Native American, 0.5% Asian, no Pacific Islander, 8.6% some other race, and 2% two or more races. 58% identify as Hispanic or Latino. Racial composition for Newman is as follows: 85% white, 0.8% African American, 0.4% Native American, 1% Asian, 0.1% Pacific Islander, 11.5% some other race, and 1.3% two or more races. 65% identify as Hispanic or Latino. Racial composition for Patterson is as follows: 68% white, 9.8% African American, 1% Native American, 4.8% Asian, 2% Pacific Islander, 9% some other race, and 5.8% two or more races. 57% identify as Hispanic or Latino.¹⁸

As indicated, Hispanics or Latinos are a majority community along the D10 SR 33 corridor. Planning strategies sensitive to their interests are likely to appeal to broader public support.

The number of households is as follows: Dos Palos: 1,501; Gustine: 1,879; Newman: 3,006; and Patterson: 5,630. The median age in all cities along the corridor is 31.24. Percent renter occupied housing for cities is 35.98, with Dos Palos having the highest percentage. Median annual household income of cities (California median income is \$61,094) is as follows: Dos Palos: \$33,898; Gustine: \$33,947; Newman: \$48,121; and Patterson: \$55,016. The percent of total population with income below 2013 federal poverty lines for each city is as follows: Dos Palos: 33.6%; Gustine: 22%; Newman: 22.5%; and Patterson: 16%. For the State of California the figure is 15.9%.

Patterson is the closest to the state percentage, due to its logistics industry, proximity to I-5, and workers commuting to jobs in the Bay Area. Along the SR 33 in D10, the city has the lowest percentage of total population with income below the federal poverty line. However, SR 33 communities overall have median incomes below the state median and higher percentages of population with income below the poverty line. The data suggest the

¹³ U.S. Census, 2010, Population Finder and Quick Facts; 2009-2013 American Community Survey (ACS) 5-Year Profiles

¹⁴ U.S. Census, 2010, Population Finder and Quick Facts; 2009-2013 American Community Survey (ACS) 5-Year Profiles

¹⁵ CA Average Commute Time by City, U.S. Census, 2009-2013 American Community Survey (ACS) 5-Year Profiles

¹⁶ CA Average Commute Time by County, U.S. Census, 2009-2013 American Community Survey (ACS) 5-Year Profiles

¹⁷ CTPP five year 2006-2010 database (data originated from the American Household Survey)

¹⁸ U.S. Census, 2010, Population Finder and Quick Facts; 2009-2013 American Community Survey (ACS) 5-Year Profiles

presence of economic challenges in the San Joaquin Valley. Policies promoting multimodal transportation and development sustainability, such as local sales taxes, need to be sensitive to the needs of various income earners.

Community Profiles:

Within the western San Joaquin Valley, the SR 33 corridor provides connection between the cities and towns that grew along the old Southern Pacific Railroad stops. The region has supported cattle and dairy production with the market being the Bay Area; and was settled by Portuguese and Spanish migrants. Several ranchos were established during the Mexican era, with portions combined to create the famed Miller and Lux cattle operation.

Dos Palos consists of two clusters. The main section of the city is located in the northeast along SR 33, and a smaller village, South Dos Palos, is located along the former Southern Pacific Railroad alignment in the southwest.

At I-5 and SR 33, Santa Nella caters to travelers along I-5. The California Korean War Veterans Memorial is located on McCabe Road. Also in the vicinity is the San Luis Reservoir, which features campgrounds and recreation, and the Fore Bay Golf Club. Economic activity also includes agricultural production, processing, and distribution. The Villages of Laguna San Luis, a low-density planned community located between SR 33 and I-5, has yet to develop.

Gustine acts on a largely agricultural and dairy role. The city is home to the nation's largest festa, the Our Lady of Miracles Celebration, a Portuguese festival.¹⁹ SR 140 connects Gustine to I-5. The California Northern Railroad runs adjacent to 33 from Gustine to the highway's terminus in Vernalis in San Joaquin County.

Newman is an agricultural and dairy community with a pedestrian-friendly downtown. Known for its Fall Festival and historic West Side Theatre, the city recently completed construction of a downtown public plaza between Fresno and Tulare Streets. Stuhr Road connects SR 33 and Newman to I-5.

On SR 33 between Newman and Patterson, Crow's Landing is a census designated place (CDP). The community is not far from the Crow's Landing Air Facility, a former World War II naval auxiliary air station currently under consideration for redevelopment into a logistics, production, and business park center.²⁰ Stanislaus County is required to maintain an airfield component. There is discussion of extending SR 108 from Modesto through Crow's Landing to I-5, but Caltrans does not own the right-of-way needed to add future segments to the route.²¹

Patterson is an agricultural and logistics hub. National retailers have shipment centers with access to I-5. The city bills itself as the world's apricot capitol and hosts the Apricot Fiesta. The city has also hosted the Fiestas Patrias, a celebration of Latin American independence. The city is unique in that its street plan is inspired from layouts of Washington D.C.²² From 2000 to 2010, its population almost doubled. The city is connected to I-5 via Sperry Avenue.

Located north of Patterson, Westley is a CDP connected to I-5 by Howard and Grayson Roads. A Class I bike path runs along Howard Road connecting the Grayson Charter School with the community of Grayson.

Located in San Joaquin, Vernalis is the least centralized of the unincorporated communities. Vernalis features close access to SR 132 and I-5. Agricultural, the community is also in proximity to quarries located to the west. The community once hosted WWII Naval Auxiliary Air Station Vernalis, which once housed German prisoners of war.²³

¹⁹ <http://asmdc.org/members/a21/district/city-profiles/gustine>

²⁰ <http://www.centralcalifornia.org/PressRoom.aspx?NewsID=935>

²¹ SR 108 Transportation Concept Report, approved August 19th, 2014, pgs. 6, 8

²² City of Patterson General Plan, adopted November 30th, 2010, I-1

²³ <http://californiamilitaryhistory.org/NAASVernalis.html>

LAND USE

LAND USE	
Segment	Place Type
MER-1	Rural and agricultural lands
MER-2	Rural town, compact community
MER-3	Rural and agricultural lands
MER-4	Protected lands, rural and agricultural lands
MER-5	Rural and agricultural lands, corridor
MER-6	Rural and agricultural lands, corridor
MER-7	Rural and agricultural lands
MER-8	Rural and agricultural lands
STA-1	Rural town, compact community
STA-2	Rural and agricultural lands
STA-3	Rural settlements and agricultural lands
STA-4	Rural and agricultural lands
STA-5	Rural town, compact community
STA-6	Rural town, compact community
STA-7	Rural and agricultural lands
STA-8	Rural settlements and agricultural lands
STA-9	Rural and agricultural lands
SJ-1	Rural settlements and agricultural lands
SJ-2	Rural and agricultural lands

SR 33 segments are affected by nine plans. The 2013 Merced County General Plan (GP) covers Segments MER-1, MER-3, MER-4, MER-5, MER-6, MER-7, and MER-8. The Dos Palos GP manages MER-2 and some locations on MER-1. The 2013 San Luis Reservoir State Recreation Area Final Resource Management Plan (RMP)/GP manages the Bureau of Reclamation-owned and California State Parks-operated public lands facility that borders a portion of Segment MER-4. The 2007 Villages of Laguna San Luis Community Plan (CP) manages the development of the 6,200 acre community area adjacent to MER-4. The 2002 Gustine GP manages some locations along MER-8. The 2007 Newman GP and the 2010 Patterson GP manage Segments STA-1, STA-5, and STA-6 respectively. The 1994 Stanislaus County GP manages Segments STA-2, STA-3, STA-4, STA-7, STA-8, and STA-9. The 2010 San Joaquin GP manages Segments SJ-1 and SJ-2. Land use types in the table are consistent with the Smart Mobility Framework.²⁴

In order to achieve the 25-year concept, long term right of way (ROW) preservation is needed in areas where facility expansion is possible. Santa Nella, from SR 152 to McCabe Road, warrants preservation of right of way.

Growth projections in D10 suggest east-west commuting behavior to/from the Bay Area. Such commuting would access I-5, not SR 33, and would necessitate better east-west connectivity between the San Joaquin Valley and the Bay. Except intersections and city population increases, SR 33 would be unaffected by this type of commuting.

SR 33 does feature future development. Land use projects affect traffic volume, necessitating improvements. The Villages of Laguna San Luis, classed as residential, is planned between I-5 and SR 33.²⁵ The Newman GP depicts areas between Sherman Parkway and Stuhr Road as planned residential and business.²⁶ In addition to connectivity enhancements to I-5, the Patterson GP features planned development south of Eucalyptus Avenue east of SR 33 in STA-6. The city is also zoning residential, currently in development, on the west side of SR 33 between M Street and Ward Avenue.²⁷ Crow's Landing Air Facility, near STA-4, is the subject of discussion on redevelopment. STA hopes Crow's Landing will boost employment, reduce commuting, and lower vehicle miles traveled (VMT).²⁸

²⁴ http://www.dot.ca.gov/hq/tpp/offices/ocp/Appendix_C_SMF_Place_Type_Analysis.pdf, p. 5

²⁵ The Villages of Laguna San Luis Community Plan, County of Merced, adopted September 2nd, 2008

²⁶ Newman 2030 General Plan, adopted April 10th, 2007

²⁷ City of Patterson General Plan, adopted November 30th, 2010

²⁸ Stanislaus Council of Governments 2014 RTP, p. 102

SYSTEM CHARACTERISTICS

With exception of MER-4 and MER-5, SR 33 is classified as a conventional highway in D10. It is a two lane facility, although it is a four lane facility in MER-2 in Dos Palos and in STA-5 in Patterson. MER-4 and MER-5, between SR 152 and I-5, is classified in the freeway and expressway system. These sections, along with MER-6 north of the I-5 bridge to McCabe Road, are projected to be deficient in 2040 with an LOS of E, requiring enhancements.

Within land use agency boundaries, there are plans for Complete Streets improvements, either on SR 33 or within a one to two block distance of the highway. The GPs of Gustine,²⁹ Newman,³⁰ and Patterson³¹ promote Complete Streets enhancements and multimodal compatibility. There are also plans to expand capacity. The 2014 StanCOG RTP features plans for a facility with four to five lanes in urban segments.³² The Newman and Patterson GPs feature expansion to four to five lanes of SR 33.³³

Under consideration is the relinquishment of SR 33 segments not located between SR 152 and I-5, upon the consultation and approval of local agencies.

There are seven locations for Intelligent Transportation System (ITS) elements on SR 33 in D10. Integration with ITS detectors and other electrical elements into the Performance Measurement System (PeMS) is ongoing.

SYSTEM CHARACTERISTICS								
County of Merced								
Existing Facility								
Segment	MER-1	MER-2	MER-3	MER-4	MER-5	MER-6	MER-7	MER-8
Facility Type	Conv.	Conv.	Conv.	Exp.	Exp.	Conv.	Conv.	Conv.
General Purpose Lanes	2	4	2	2	2	3	2	2
Lane Miles	1.76	2.30	8.43	4.65	2.14	1.9	18.1	6.38
Centerline Miles	0.88	0.57	4.21	2.32	1.07	0.70	9.08	3.19
High Occupancy Vehicle (HOV)	None							
High Occupancy Vehicle Characteristics	None							
High Occupancy Toll (HOT)	None							
High Occupancy Toll Express	None							
Toll	None							
Toll Characteristics	None							
Bus Rapid Transit (BRT)	None							
Passing Lanes	None							
Truck Climbing Lanes	None							
20 to 25 Year Concept Facility								
Facility Type	Conv.	Conv.	Conv.	Exp.	Exp.	Conv.	Conv.	Conv.
General Purpose Lanes	2	4	2	4	4	4	2	2
Lane Miles	1.76	2.30	8.43	9.31	4.29	2.56	18.1	6.38
Centerline Miles	0.88	0.57	4.21	2.32	1.07	0.70	9.08	3.19
HOV	None							
HOT	None							
Toll	None							
BRT	None							
Passing Lanes	None							
Truck Climbing Lanes	None							
Conv.: conventional; Exp.: expressway; N/A: data not applicable								

²⁹ City of Gustine General Plan, adopted February 4th, 2002

³⁰ Newman 2030 General Plan, adopted April 10th, 2007

³¹ City of Patterson General Plan, adopted November 30th, 2010

³² Stanislaus Council of Governments 2014 Regional Transportation Plan, Appendix K, adopted June 2014

³³ Newman 2030 General Plan, adopted April 10th, 2007

SYSTEM CHARACTERISTICS (Continued)								
County of Merced								
TMS Elements								
Transportation Management System (Base Year)	None	SL	None	TMS	None	SL	None	None
	None	None	None	TMS	None	None	None	None
SL: signal; TMS: transportation management system; N/A: data not available								

SYSTEM CHARACTERISTICS (Continued)											
Counties of Stanislaus and San Joaquin											
Existing Facility											
Segment	STA-1	STA-2	STA-3	STA-4	STA-5	STA-6	STA-7	STA-8	STA-9	SJ-1	SJ-2
Facility Type	Conv.										
General Purpose Lanes	2	2	2	2	4	2	2	2	2	2	2
Lane Miles	4.12	9.34	0.62	11.06	5.56	1.1	10.06	0.74	14.3	1.63	8.36
Centerline Miles	2.06	4.67	0.31	5.53	1.39	0.55	5.03	0.37	7.16	0.81	4.18
HOV	None										
High Occupancy Vehicle Characteristics	None										
HOT	None										
High Occupancy Toll Express	None										
Toll	None										
Toll Characteristics	None										
BRT	None										
Passing Lanes	None										
Truck Climbing Lanes	None										
20 to 25 Year Concept Facility											
Facility Type	Conv.										
General Purpose Lanes	4	2	2	2	4	4	2	2	2	2	2
Lane Miles	8.24	9.34	0.62	11.06	5.56	2.2	10.06	0.74	14.3	1.63	8.36
Centerline Miles	2.06	4.67	0.31	5.53	1.39	0.55	5.03	0.37	7.16	0.81	4.18
HOV	None										
HOT	None										
Toll	None										
BRT	None										
Passing Lanes	None										
Truck Climbing Lanes	None										
TMS Elements											
Transportation Management System (Base Year)	SL	None	SL	None	SL	None	None	None	None	None	None
	SL	None	None	None	SL	None	None	None	None	None	None
Conv.: conventional; N/A: data not available; SL: signal; TMS: transportation management system											

BICYCLE FACILITY

Throughout SR 33, the bicycle facility is unsigned Class III.

A Class I facility runs perpendicular to SR 33 on Howard Road in Westley that starts at SR 33 and ends at Grayson Charter School. A Class I facility starts at River Road in Grayson and ends at SR 33 in Westley. There are bicycle facilities in the cities of Gustine, Newman, and Patterson that intersect with SR 33. Patterson has Class II facilities on E. Street and E. Las Palmas Avenue. Newman has a Class II facility on Yolo Street. Gustine has several Class III facilities in its city boundaries and a new Class II facility on Central Yosemite Highway between Harry P. Schmidt Park and 4th Street.³⁴ Dos Palos has the Valeria Street Bikeway, which runs on Valeria Street to Bryant Avenue.³⁵

Proposed improvements from local agencies include a Class 3.5 facility (defined on page 4 under Proposed Projects and Strategies) along SR 33 in Stanislaus County in the rural segments from Newman to Ward Road in northern

³⁴ Merced County Regional Bicycle Transportation Plan, adopted October 2008, p. 38

³⁵ Merced County Regional Bicycle Transportation Plan, adopted October 2008

Patterson, as well as a planned Class 3.5 facility on Crow’s Landing Road that meets Fink Road and SR 33 in Crow’s Landing.³⁶ Newman and Patterson feature plans for Class II and III bike lanes on their local streets.

Proposed improvements in Merced County include developing a Class II facility bike path on SR 33 and SR 140 in rural and unincorporated areas.³⁷ Gustine has proposed a mostly Class I bike loop on its city perimeter, and Santa Nella has proposed Class I facilities on its local streets.³⁸ The City of Dos Palos is planning Class I and II bike facilities. Also proposed is a bike path on the former Southern Pacific tracks from Los Banos to South Dos Palos.³⁹

San Joaquin County currently has no proposals for bike facilities beyond existing Class III on its portion of SR 33.

Based on 2010 Highway Capacity Software (HCS) analysis, bicycle LOS in rural segments is currently placed at F. Either Class I or Class II facilities are needed to bring the bicycle LOS to standard. Proposed Class II in Merced and Class 3.5 in Stanislaus present a discrepancy among local agencies in regard to improvements in rural areas.

BICYCLE FACILITY								
Seg.	ID	Post Mile	Location Description	Bicycle Access Prohibited	Bike Class Facility	Paved Shoulder Width	Description	Speed Limit
MER-1	1A	000.000-000.467	FRE Cnty L-beginning of sidewalk	No	III	>5ft.	Flat	55
	1B	000.467-000.657	Stearman St. turning lane and sidewalk	No	III	>5ft.	Flat	50
	1C	000.657-000.790	No sidewalk	No	III	>5ft.	Flat	50
	1D	000.790-000.910	Eastside sidewalk to Valeria St.	No	III	Various	Flat	40
MER-2	2A	000.910-001.480	Valeria St. to Sharon Ln./Santos St.	No	III	>5ft.	Flat	40
MER-3	3A	001.480-001.610	Santos St.-begin west paved shoulder	No	III	Various	Flat	40
	3B	001.610-005.451	Paved shoulder-Barb's Breakfast	No	III	>5ft.	Flat	50-55
	3C	005.451-005.678	Barb's Breakfast-SR 152 ramps	No	III	>5ft.	Flat	45
MER-4	4A	013.238-013.462	SR 152-power lines	No	III	>5ft.	Flat	55
	4B	013.462-014.196	Near power lines-lipped shoulder	No	III	<2ft.	Flat	55
	4C	014.196-014.347	Lipped shoulder-south of bridge	No	III	Various	Flat	55
	4D	014.347-014.500	South of canal bridge-access road	No	III	Various	Flat	55
	4E	014.500-014.727	Access road-end of lipped shoulder	No	III	<2ft.	Flat	55
	4F	014.727-015.427	End of lipped shoulder-sidewalk	No	III	<2ft.	Flat	55
	4G	015.427-015.640	Sidewalk-Vera Cruz Rd.	No	III	Various	Flat	55
MER-5	5A	015.640-015.810	Vera Cruz Rd.-end of sidewalk	No	III	Various	Flat	55
	5B	015.810-016.030	End of sidewalk-Main St. Market	No	III	<2ft.	Flat	40
	5C	016.030-016.140	Main St. Market-Comet St.	No	III	Various	Flat	40
	5D	016.140-016.410	Comet St.-Bayview Rd.	No	III	>5ft.	Flat	40
	5E	016.410-016.640	Bayview Rd.-I-5 interchange	No	III	>5ft.	Flat	30
MER-6	6A	016.640-016.893	I-5 Interchange-on/off ramps	No	III	Various	Flat	30-40
	6B	016.893-017.050	On/off ramps-TA truck stop north ent.	No	III	Various	Flat	40
	6C	017.050-017.380	TA truck stop north ent.-McCabe Rd.	No	III	Various	Flat	40-55
MER-7	7A	017.380-026.240	McCabe Rd.-PM 026.240	No	III	<2ft.	Flat	55
	7B	026.240-026.460	PM 026.240-SR 140	No	III	>5ft.	Flat	55
MER-8	8A	027.110-027.490	SR 140-end of shoulders	No	III	>5ft.	Flat	30-45
	8B	027.490-030.300	End of shoulders-STA Cnty L	No	III	<2ft.	Flat	55
STA-1	9A	000.000-000.250	STA Cnty L-Marty's Inn	No	III	<2ft.	Flat	45
	9B	000.250-000.490	Marty's Inn-Inyo St.	No	III	Various	Flat	35
	9C	000.490-001.230	Inyo St.-Newman Smog & Lube	No	III	Various	Flat	35
	9D	001.230-001.820	Newman Smog & Lube-green sign	No	III	Various	Flat	45
	9E	001.820-002.060	Green sign-Stuhr Rd.	No	III	<2ft.	Flat	45
STA-2	10A	002.060-006.450	Stuhr Rd.-Eastin Rd.	No	III	<2ft.	Flat	55
	10B	006.450-006.730	Eastin Rd.-Crows Landing Rd.	No	III	Various	Flat	45
STA-3	11A	006.730-007.040	Crows Landing Rd.-4 th St.	No	III	>5ft.	Flat	35
STA-4	12A	007.040-007.150	4 th St.-Market and Deli	No	III	Various	Flat	45
	12B	007.150-007.430	Market and Deli-speed limit sign	No	III	Various	Flat	45

Cnty L: county line; **St.:** street; **Ln.:** lane; **Dr.:** drive; **ent:** entrance; **Rd.:** road; **Ave.:** avenue; **III:** class III bike facility

³⁶ Stanislaus Council of Governments Non-Motorized Transportation Plan, adopted September 18th, 2013

³⁷ Merced County Regional Bicycle Transportation Plan, adopted October 2008, p. 41

³⁸ Merced County Regional Bicycle Transportation Plan, adopted October 2008, p. 37, 41

³⁹ Merced County Regional Bicycle Transportation Plan, adopted October 2008, p. 41

BICYCLE FACILITY (Continued)								
Seg.	ID	Post Mile	Location Description	Bicycle Access Prohibited	Bike Class Facility	Paved Shoulder Width	Description	Speed Limit
STA-4 (Cont.)	12C	007.430-012.110	Speed limit sign-JM Equipment	No	III	<2ft.	Flat	55
	12D	012.110-012.571	JM Equipment-Sperry Rd.	No	III	Various	Flat	45
STA-5	13A	012.571-013.110	Sperry Rd.-S Salado Ave.	No	III	>5ft.	Flat	35
	13B	013.110-013.270	S Salado Ave.-N El Circulo Ave.	No	III	2-5ft.	Flat	35
	13C	013.270-013.700	N El Circulo Ave.-M St.	No	III	2-5ft.	Flat	35
STA-6	14A	013.700-013.890	M St.-Northmead Way	No	III	2-5ft.	Flat	35
	14B	013.890-013.970	Northmead Way-El Soyro Dr.	No	III	2-5ft.	Flat	50
	14C	013.970-014.520	El Soyro Dr.-Ward Rd.	No	III	2-5ft.	Flat	50-55
STA-7	15A	014.520-016.450	Ward Rd.-Baldwin Rd.	No	III	2-5ft.	Flat	55
	15B	016.450-016.680	Baldwin Rd.-Mulberry Rd.	No	III	>5ft.	Flat	55
	15C	016.680-019.330	Mulberry Rd.-D&D Inc.	No	III	<2ft.	Flat	55
	15D	019.330-019.550	D&D Inc.-Howard Rd.	No	III	<2ft.	Flat	45
STA-8	16A	019.550-019.920	Howard Rd.-E St.	No	III	>5ft.	Flat	45
STA-9	17A	019.920-020.040	E St.-speed limit sign	No	III	Various	Flat	45
	17B	020.040-023.380	Speed limit sign-Ingram Creek Br.	No	III	<2ft.	Flat	55
	17C	023.380-023.510	Ingram Creek Br.	No	III	2-5ft.	Flat	55
	17D	023.510-027.086	Ingram Creek Br.-SJ County Line	No	III	<2ft.	Flat	55
SJ-1	18A	000.000-000.720	SJ Cnty L-utility pole and hwy sign	No	III	<2ft.	Flat	55
	18B	000.720-000.818	Utility pole and hwy sign-SR 132 bridge	No	III	<2-10ft.	Flat	55
SJ-2	19A	000.818-001.030	SR 132 bridge-call box	No	III	<2-10ft.	Flat	55
	19B	001.030-003.465	Call box-Durham Ferry Rd.	No	III	<2ft.	Flat	55
	19C	003.465-003.840	Durham Ferry Rd.-gated driveway	No	III	<2-10ft.	Flat	55
	19D	003.840-004.580	Gated driveway-median	No	III	<2ft.	Flat	55
	19E	004.580-005.001	Median-end of Rte.	No	III	<2-10ft.	Flat	55

Cnty L: county line; St.: street; Ln.: lane; Dr.: drive; Rd.: road; Ave.: avenue; III: class III bicycle facility; Br.: bridge; Rte.: route

PEDESTRIAN FACILITY

In rural areas with no sidewalks, shoulder widths are typically either less than two feet wide, or are two to six feet wide. Some locations on SR 33 in D10 do have Americans with Disability Act (ADA) compliant curb ramps.^{40, 41} Only ADA ramps with yellow detectable warning surfaces were counted.

Merced County

Sidewalks exist on both sides of SR 33 in Dos Palos beginning near Sharon Lane/Santos Street. The sidewalk along the southbound lane ends at the Colony Branch No. 2 Canal near Valeria Street. The northbound sidewalk begins at the south end of the Dos Palos Apartments property. Sidewalks on the northbound side in Dos Palos are not continuous. The only designated crosswalks on the Dos Palos SR 33 are on Stearman Street and Blossom Street. Stearman Street has ADA compliant curb ramps.

Sidewalk widths in Santa Nella vary from four to eight feet. There is a sidewalk on the west side of SR 33 from McCabe Road to Wendy's. There is also a sidewalk on the northbound side from Plaza Drive to the end of the Holiday Inn Express property. There is a sidewalk on the northbound side of SR 33 from the entrance of the Hotel Mission de Oro to the northbound I-5 off ramp, though there is a gap over the canal between the In-N-Out Burger and the Rotten Robbie properties. A sidewalk on the northbound side of SR 33 runs on the bridge over I-5.

From south to north in Santa Nella, these intersections have designated crosswalks: Vera Cruz Drive, the access road between the Jack in the Box and the Circle K across SR 33 from the I-5 southbound off ramp, the northbound I-5 off ramp, and Plaza Drive. The northeast corner of SR 33 and W. Henry Miller Avenue has ADA compliant curb

⁴⁰ http://www.dot.ca.gov/hq/esc/oe/construction_contract_standards/std_specs/2010_StdSpecs/2010_StdSpecs.pdf, p. 803

⁴¹ http://www.dot.ca.gov/hq/esc/oe/project_plans/highway_plans/stdplans_US-customary-units_10/viewable_pdf/rspa88a.pdf

ramps, but the intersection itself has wide turns, no signal, and no designated crosswalk. Only the northwest corner of Plaza Drive and SR 33 and the southwest corner of McCabe Road and SR 33 have ADA compliant curbs.

Sidewalks exist in Gustine on the southbound side of SR 140 from 3rd Avenue to Central Yosemite Highway (SR 140). On SR 140, both sides have sidewalks from 4th and Central Yosemite to Linden Avenue. Sidewalk widths vary from four to eight feet. From Linden Road to Sullivan Road there are no sidewalks. Designated crosswalks adjacent to or across SR 33 include Laurel Avenue, 7th Street, a crosswalk between 7th and 6th Streets, 5th Street, 3rd Avenue, and 1st Avenue. At the time of writing, Gustine does not have ADA compliant sidewalk curbs on SR 33. Policies 6.5.1 and 6.5.2 in Gustine's 2002 GP discuss maintaining and expanding pedestrian friendly environments within its city boundaries.⁴²

Stanislaus and San Joaquin Counties

Intersections with designated crosswalks adjacent to or across SR 33 in Stanislaus are as follows: M Street, N. El Circulo Avenue, and W. Las Palmas Avenue in Patterson; E. 5th Street in Crow's Landing; Kern Street and Merced Street in Newman. Locations in Stanislaus with ADA compliant curbs are in Patterson: the SR 33 entrance to the Golden Valley Health Center, the southwest corner of C Street and SR 33, an alley access between N. del Puerto Avenue and I Street, and the M Street intersection.

In Newman, sidewalks run along the northbound side from Inyo Avenue to Yolo Street. There is also a sidewalk in front of the Dollar General south of Inyo Avenue, but it is not continuous. There is a sidewalk on the southbound side that begins south of Inyo Avenue at Jack in the Box and ends at the north entrance to the West Side Marketplace. The sidewalk does not continue to Inyo Avenue. There is a gap on the northbound side from Stanislaus Street to Merced Street. Newman does have non-yellow detectable warning surface curb ramps.

Proposals in Newman include the installation of street trees, and installing two gateways to create a sense of place and to calm traffic.⁴³ The city also wants to pursue Complete Streets on SR 33, with plans to install sidewalks from Yolo Street to the northern city boundary, install a sidewalk along the east side of SR 33 between Merced Street and Stanislaus Street, and along the east side of SR 33 for approximately 0.25 miles from Inyo Avenue going south.⁴⁴ Newman also wants to install new crosswalks and pedestrian-activated in-roadway warning lights at the intersections of Inyo Avenue and Sherman Parkway.

Crow's Landing has a sidewalk from 6th St. to Navarro's Tire on the southbound side, about four to eight feet wide.

In Patterson sidewalks start north of the M Street intersection and finish at Sperry Avenue. Gaps exist between K and L Streets, and along the JS West Propane Gas Company on the west side of SR 33. Proposed improvements call for amending the Downtown Physical Design Plan to enhance pedestrian facilities, as detailed in the city's 2010 General Plan Transportation Circulation Element. Patterson will also improve marked crosswalks by installing flashing ground lights, as well as installing more pedestrian-activated push buttons for signals.⁴⁵

There are no sidewalks on SR 33 in San Joaquin County.

⁴² City of Gustine General Plan, adopted February 4th, 2002, 6-31, 6-32

⁴³ Newman 2030 General Plan, adopted April 10th, 2007, CD-23, CD-24, CD-25

⁴⁴ Newman 2030 General Plan, adopted April 10th, 2007

⁴⁵ City of Patterson General Plan, adopted November 30th, 2010, T-13

PEDESTRIAN FACILITY						
Seg.	Seg ID	Post Mile	Location Description	Ped Access	Sidewalk Present	Sidewalk Width
MER-1	1E	000.000-000.467	Fres Cnty L-beginning of sidewalk	Y	No, 8ft.	N/A
	1F	000.467-000.657	Stearman St. auxiliary Ln. & sidewalk	Y	Yes	4-8ft.
	1G	000.657-000.790	No sidewalk	Y	No, 8ft.	N/A
	1H	000.790-000.910	Eastside sidewalk to Valeria St.	Y	Yes	4-8ft.
MER-2	2B	000.910-001.480	Valeria to Sharon Ln./Santos St.	Y	Yes	4-8ft.
MER-3	3D	001.480-001.610	Santos St.-begin west paved shoulder	Y	Varies, 2-10ft.	N/A
	3E	001.610-005.678	Paved shoulder-SR 152 ramps	Y	No, 8-15ft.	N/A
MER-4	4H	013.238-013.462	SR 152-power lines	Y	No, 8-10ft.	N/A
	4I	013.462-014.347	Near power lines-south of bridge	Y	No, <2ft.	N/A
	4J	014.347-014.500	South of canal bridge-access road	Y	No, 2-25ft.	N/A
	4K	014.500-014.727	Access road-end of lipped shoulder	Y	No,<2ft.	N/A
	4L	014.727-015.427	End of lipped shoulder-sidewalk	Y	No,<2ft.	N/A
	4M	015.427-015.640	Sidewalk-Vera Cruz Rd.	Y	Yes	4-8ft.
MER-5	5F	015.640-015.810	Vera Cruz Rd.-end of sidewalk	Y	Yes	4-8ft.
	5G	015.810-016.030	End of sidewalk-Main St. Market	Y	No,<2ft.	N/A
	5H	016.030-016.140	Main St. Market-Comet St.	Y	No,8-15ft.	N/A
	5I	016.140-016.410	Comet St.-Bayview Rd.	Y	Varies,8-20ft.	>8ft.
	5J	016.410-016.640	Bayview Rd.-I-5 interchange	Y	Varies,8-15ft.	4-8ft.
MER-6	6D	016.640-016.893	I-5 Interchange-on/off ramps	Y	Yes	4-8ft.
	6E	016.893-017.050	On/off ramps-TA truck stop north ent.	Y	No,2-10ft.	N/A
	6F	017.050-017.380	TA truck stop north ent.-McCabe Rd.	Y	Yes	4-8ft.
MER-7	7C	017.380-026.240	McCabe Rd.-PM 026.240	Y	No,<2ft.	N/A
	7D	026.240-026.460	PM 026.240-SR 140	Y	No,10-15ft.	N/A
MER-8	8C	027.110-027.490	SR 140-end of shoulders	Y	No,8-10ft.	N/A
	8D	027.490-030.300	End of shoulders-Stan Cnty L	Y	No,<2ft.	N/A
STA-1	9F	000.000-000.350	MER Cnty Line-Nob Hill Foods ent.	Y	No, <2ft.	N/A
	9G	000.350-000.490	Nob Hill Foods ent.-Inyo Ave.	Y	NB: no, 2-5ft.; SB: varies: 2-5ft.	4-8ft.
	9H	000.490-000.590	Inyo Ave.-Stanislaus St.	Y	Yes	4-8ft.
	9I	000.590-000.680	Stanislaus St.-Merced St.	Y	NB: no, 2-5ft.; SB: yes	4-8ft.
	9J	000.680-001.010	Merced St.-Fire Department	Y	Yes	4-8ft.
	9K	001.010-001.130	Fire Department-Yolo St.	Y	NB: no, 2-5ft.; SB: yes	4-8ft.
	9L	001.130-001.820	Yolo St.-Sherman Pkwy. green sign	Y	No, 2-5ft.	N/A
	9M	001.820-002.060	Sherman Pkwy. sign-Stuhr Rd.	Y	No, <2ft.	N/A
STA-2	10C	002.060-006.730	Stuhr Rd.-Crow's Landing Rd.	Y	No, <2ft.	N/A
STA-3	11B	006.730-006.890	Crow's Landing Rd.-6 th St.	Y	No, >5ft.	N/A
	11C	006.890-006.990	6 th St.-Navarro's Tire	Y	NB: no, >5ft.; SB: yes	4-8ft.
	11D	006.990-007.040	Navarro's Tire-4 th St.	Y	No, >5ft.	N/A
STA-4	12E	007.040-007.150	4 th St.-Market and Deli	Y	No, 2-6ft.	N/A
	12F	007.150-007.430	Market and Deli-speed limit sign	Y	No,	N/A
	12G	007.430-012.110	Speed limit sign-JM Equipment	Y	No, <2ft.	N/A
	12H	012.110-012.571	JM Equipment-Sperry Rd.	Y	No,	N/A
STA-5	13E	012.571-013.110	Sperry Rd.-S. El Circulo Ave.	Y	NB: no, >5ft.; SB: varies, 2-5ft.	4-8ft.
	13F	013.110-013.290	S. El Circulo Ave.-N. El Circulo Ave.	Y	NB: no, 2-5ft.; SB: yes	4-8ft.
	13G	013.290-013.480	N. El Circulo Ave.- J St.	Y	NB: no, 2-5ft.; SB: yes	4-8ft.
	13H	013.480-013.570	J St.-K St.	Y	No, 2-5ft.	N/A
	13I	013.570-013.670	K St.-In n Out Carwash	Y	NB: no, 2-5ft.; SB: no, 2-5ft.	N/A
	13J	013.670-013.700	In n Out Carwash-M St.	Y	NB: no, 2-5ft.; SB: yes	4-8ft.
STA-6	14D	013.700-014.520	M St.-Ward Rd.	Y	No, 2-5ft.	N/A
STA-7	15E	014.520-016.450	Ward Rd.-Baldwin Rd.	Y	No, 2-5ft.	N/A
	15F	016.450-016.680	Baldwin Rd.-Mulberry Rd.	Y	No, >5ft.	N/A
	15G	016.680-019.330	Mulberry Rd.-D&D Incorporated	Y	No, <2ft.	N/A
	15H	019.330-019.550	D&D Incorporated-Howard Rd.	Y	No, <2ft.	N/A
STA-8	16B	019.550-019.920	Howard Rd.-E St.	Y	No, >5ft.	N/A
STA-9	17E	019.920-020.040	E St.-speed limit sign	Y	No, 2-8ft.	N/A
	17F	020.040-023.380	Speed limit sign-Ingram Creek Br.	Y	No, <2ft.	N/A
	17G	023.380-027.086	Ingram Creek Br.-SJ County Line	Y	No, 0-5ft.	N/A
SJ-1	18C	000.000-000.720	SJ Cnty L-utility pole and highway sign	Y	No, <2ft.	N/A
	18D	000.720-000.818	Utility pole and highway sign-SR 132 Br	Y	No, <2-10ft.	N/A
SJ-2	19F	000.818-001.030	SR 132 Br-call box	Y	No, <2-10ft.	N/A
	19G	001.030-003.465	Call box-Durham Ferry Rd.	Y	No, <2ft.	N/A
	19H	003.465-003.840	Durham Ferry Rd.-gated driveway	Y	No, <2-10ft.	N/A
	19I	003.840-004.580	Gated driveway-median	Y	No, <2ft.	N/A
	19J	004.580-005.001	Median-end of route	Y	No, <2-10ft.	N/A

Cnty L: county line; St.: street; Ln.: lane; Dr.: drive; Rd.: road; Ave.: avenue; Br: bridge; ent.: entrance; Pkwy.: parkway; Y: yes; N: no; ft.: feet

TRANSIT FACILITY

Stanislaus and San Joaquin Counties

SR 33 in Stanislaus is served by three Stanislaus Regional Transit (StaRT) bus routes. Bus Route 40 connects downtown Modesto to Grayson, Westley and Patterson via Grayson Road and SR 33. The route finishes at Patterson's Veterans Memorial Park. The 40 is a fixed route that operates weekdays from 5:20AM to 9:08PM every two hours. On Saturday the route runs 6:30AM to 8:13PM every two to two hours and 45 minutes.⁴⁶

Route 45 East connects Turlock to Patterson via West Main Avenue and E. Las Palmas Avenue. A fixed route that runs from 6:15AM to 8PM on weekdays and from 6:25AM to 7:10PM on Saturdays, the 45 East has buses every two hours on weekdays and every two hours and 45 minutes on Saturdays.⁴⁷

Route 45 West connects Patterson to Gustine. It operates from 5:30AM to 9:26PM, and on Saturdays from 5:45AM to 8:39PM. 45 West runs on two hour intervals and on two hour and 45 minute intervals on Saturdays.

Patterson is also served by a StaRT dial-a-ride service. Newman, Gustine, and Crow's Landing are served by another StaRT dial-a-ride service specific to those locations.

SR 33 in San Joaquin is not served by any fixed route transit. However, the San Joaquin Regional Transit District (SJRTD) General Public Dial-A-Ride does serve unincorporated areas not served by any fixed route provider.⁴⁸

Merced County

The Bus operates three routes on SR 33 in Merced. Route G, the Gustine Commuter, is a deviated fixed route connecting Merced to Gustine, Newman, Santa Nella, and Los Banos. This route operates from 6:25AM to 4:12PM, runs buses every two to two hours and 15 minutes. The last run on weekdays runs three and a half hours after the previous bus. Route G utilizes SR 140, SR 33, I-5, and SR 152. On Saturday the bus runs from 7AM to 2:58PM.⁴⁹

The Bus also operates the express Los Banos Commuter, Route LB, which connects Merced to Dos Palos and Los Banos. Utilizing SR 152, SR 59, and SR 33, Route LB runs on weekdays from 5:35AM to 10:01PM at varying set intervals. On weekends it runs from 7AM to 6:59PM with one bus in the morning and one bus in the afternoon.⁵⁰ Route DP, the Dos Palos Link, a deviated fixed route, connects Los Banos with Dos Palos using the SR 152 and the SR 33. Operating from 5:35AM to 9:44PM on weekdays and from 7:17AM to 6:45PM on Saturdays, Route DP runs buses every 2.5 to two hours and 45 minutes on weekdays. On weekends it runs one bus in the morning and one in the afternoon for each direction, totaling four buses a day.⁵¹

The California High Speed Rail Authority has selected a route for California High Speed Rail (CHSR). The route will connect the Bay Area with Southern California, crossing the Coast Mountain Range at Pacheco Pass and the Tehachapi Mountains at Tehachapi Pass. This route will follow the SR 152 corridor, crossing SR 33 just north of Santa Nella. Unless plans change, high speed rail (HSR) will do little to affect commuter activity, as no stop is planned in the corridor.⁵² Segment MER-7 is where CHSR is planned to traverse in an east-west direction near Romero Road, though funding, construction year, and exact alignment have not been finalized.

⁴⁶ http://www.srt.org/start_system_maps2.html, accessed August 6th, 2015

⁴⁷ http://www.srt.org/start_system_maps2.html, accessed August 6th, 2015

⁴⁸ <http://www.sanjoaquinrtd.com/dial-a-ride/gp-dar.php>, accessed August 6th, 2015

⁴⁹ <http://www.mercedthebus.com/195/G---Gustine-Link>, accessed August 6th, 2015

⁵⁰ <http://www.mercedthebus.com/199/LB---Los-Banos-Commuter>, accessed August 6th, 2015

⁵¹ <http://www.mercedthebus.com/196/DP---Dos-Palos-Link>, accessed August 6th, 2015

⁵² <http://www.hsr.ca.gov>

TRANSIT FACILITY										
Segment	Mode & Collat. Facility	Name	Route End Points	Headway	Operating Period	Stations		Amenities (excluding end points)	Bikes Allowed	# Parking Sp.
						Cities	Post miles			
MER-1	Trad. Bus	The Bus DP DFR	Los Banos Comm. Ctr.- South Dos Palos	2hr.	M-F: 0535-2144 Sat: 0717-1845	Dos Palos		No amenities	Y	N/A
MER-2	Trad. Bus	The Bus DP DFR	Los Banos Comm. Ctr.- South Dos Palos	2hr.	M-F: 0535-2144 Sat: 0717-1845	Dos Palos		No amenities	Y	N/A
MER-3	Trad. Bus	The Bus LB	Los Banos Walmart-Merced Trans. Ctr.	2hr.	M-F: 0535-2201 Sat: 0700-1859	Dos Palos		No amenities	Y	N/A
	Trad. Bus	The Bus DP DFR	Los Banos Comm. Ctr.- South Dos Palos	2hr.	M-F: 0535-2144 Sat: 0717-1845	Dos Palos		No amenities	Y	N/A
MER-4	None									
MER-5	None									
MER-6	Trad. Bus	The Bus G DFR	Merced Trans. Ctr.- Los Banos Comm. Ctr.	4hr.	M-F: 0625-1612 Sat: 0700-1458	Santa Nella		No amenities	Y	N/A
MER-7	Trad. Bus	The Bus G DFR	Merced Trans. Ctr.- Los Banos Comm. Ctr.	4hr.	M-F: 0625-1612 Sat: 0700-1458			No amenities	Y	N/A
MER-8	Trad. Bus	The Bus G DFR	Merced Trans. Ctr.- Los Banos Comm. Ctr.	4hr.	M-F: 0625-1612 Sat: 0700-1458	Gustine		Shelter, seating, schedule	Y	N/A
	Trad. Bus	StaRT 45W	6 th & 3 rd -Vets Mem. Park	2hr.	M-F: 0530-2126 Sat: 0545-2039	Gustine		Shelter, seating, schedule	Y	N/A
STA-1	Trad. Bus	StaRT 45W	6 th & 3 rd -Vets Mem. Park	2hr.	M-F: 0530-2126 Sat: 0545-2039	Newman	000.380, 000.700	Shelter, seating, schedule	Y	N/A
	Trad. Bus	The Bus G DFR	Merced Trans. Ctr.- Los Banos Comm. Ctr.	4hr.	M-F: 0625-1612 Sat: 0700-1458	Newman		Shelter, seating, schedule	Y	N/A
STA-2	Trad. Bus	StaRT 45W	6 th & 3 rd -Vets Mem. Park	2hr.	M-F: 0530-2126 Sat: 0545-2039			No amenities	Y	N/A
SAT-3	Trad. Bus	StaRT 45W	6 th & 3 rd -Vets Mem. Park	2hr.	M-F: 0530-2126 Sat: 0545-2039	Crows Landing	006.950	No amenities	Y	N/A
STA-4	Trad. Bus	StaRT 45W	6 th & 3 rd -Vets Mem. Park	2hr.	M-F: 0530-2126 Sat: 0545-2039			No amenities	Y	N/A
STA-5	Trad. Bus	StaRT 45W	6 th & 3 rd -Vets Mem. Park	2hr.	M-F: 0530-2126 Sat: 0545-2039	Patterson	013.210	Shelter, seating, schedule	Y	N/A
	Trad. Bus	StaRT 40	Transit Ctr. (Mod)-Vets Mem. Park	2hr.	M-F: 0520-2108 Sat: 0630-2013	Patterson	013.700	Shelter, seating, schedule	Y	N/A
	Trad. Bus	StaRT 45E	Golden State Blvd.-Vets Mem. Park	2hr.	M-F: 0615-2000 Sat: 0625-1910	Patterson		Shelter, seating, schedule	Y	N/A
STA-6	Trad. Bus	StaRT 40	Transit Ctr. (Mod)-Vets Mem. Park	2hr.	M-F: 0520-2108 Sat: 0630-2013	Patterson		No amenities	Y	N/A
STA-7	Trad. Bus	StaRT 40	Transit Ctr. (Mod)-Vets Mem. Park	2hr.	M-F: 0520-2108 Sat: 0630-2013			No amenities	Y	N/A
STA-8	Trad. Bus	StaRT 40	Transit Ctr. (Mod)-Vets Mem. Park	2hr.	M-F: 0520-2108 Sat: 0630-2013	Westley	019.740	No amenities	Y	N/A
STA-9	None									
SJ-1	None									
SJ-2	None									
Trad.: traditional; DFR: deviated fixed route; DP: Dos Palos; LB: Los Banos; G: Gustine; Y: yes; N/A: data not available										

FREIGHT

SR 33 is a TA truck route, except in Merced from Cottonwood Road to SR 140 in Gustine. In this section, SR 33 is classified as California Legal. 2015 annual average daily truck traffic (AADTT) on SR 33 in Merced is approximately 1,450. Annual average daily traffic (AADT) is about 7,250. The average truck volume on SR 33 in Merced is about 20%. In Stanislaus, the AADTT on SR 33 is 675. AADT is about 4,810. Trucks on SR 33 in Stanislaus is 14%. AADTT in San Joaquin is about 375. AADT in San Joaquin is about 2,080. Trucks on SR 33 in San Joaquin is 18%.

SR 33 runs parallel to the California Northern Railroad. Built in 1891, the railroad is operational. The Newman GP reports that a train runs to Volta and back every weekday, though frequencies change depending on demand.

The following is a list of businesses that use trucks in the SR 33 area. Not all truck traffic is year-round, as several companies feature seasonal commodities. Traffic impact analysis is needed to depict which enterprises use trucks often and the times of year that feature greater truck use. The following table describes SR 33 goods movement, but it does not tell how many trucks are used, the leading routes trucks take, or the peak seasons they operate.

Merced County

Located near Dos Palos on SR 33 a quarter mile south of the SR 152 junction is the Dos Palos Y Auction Yard.⁵³ This facility features livestock and agricultural equipment auctions, as well as appraisal and transportation services. Located in South Dos Palos west of SR 33 is Koda Farms, a Japanese-style rice producer, processor, and packager.⁵⁴

Near Santa Nella is Liberty Packing Company, a tomato processor and packager.⁵⁵ Another tomato packager is Morning Star.⁵⁶ Ingomar Packing Company Incorporated, a tomato paste maker, is also located near Santa Nella.⁵⁷

Gustine is host to Growers Transplanting Incorporated, a specialist in transplanted greenhouse vegetable production⁵⁸, as well as Rocket Farms, which focuses on indoor flowers, fresh cut herbs, and potted edibles.⁵⁹ Also present is Saputo Cheese USA, formerly Morningstar Foods.⁶⁰ Adjacent to SR 33 in Gustine is the Pusateri Nut Company, which specializes in walnuts. Located on Cottonwood Road is John B. Sanfilippo and Son Incorporated, which specializes in walnuts and almonds.⁶¹ Di Mare, located on Gun Club Road, is a tomato producer and packager.⁶² Located near Husman Road on SR 33 south of Gustine is Woods Transplant Services. Located near Gustine is Freitas Fresh Eggs and California Fresh Eggs, both of which specialize in chicken egg production.

Stanislaus and San Joaquin Counties

The following industries are also truck generators. Newman includes California Transplants, which specializes in vegetable growing and transplanting services.⁶³ Also present is Westside Pallet, a pallet manufacturer⁶⁴; Saputo Cheese USA, a dairy processor and distributor⁶⁵; and Cebro Frozen Foods, a specializer in frozen vegetable processing and packaging.⁶⁶ Also in Newman is Stuart and Jasper Orchards, an almond processor, exporter, and retailer⁶⁷; Di Mare and Valley Sun, both tomato processors⁶⁸; and California Delights, a nuts and dried food maker.

San Joaquin Tomato Growers has a facility in Crow's Landing. Dompe Warehouse⁶⁹, and J.M. Perez and Sons have facilities in the same area.⁷⁰ Near Crow's Landing is Craven, a grower, processor, and farm services provider.⁷¹ Between Patterson and Crow's Landing is Patterson Nut Company and Holland Ranch cucumbers.⁷²

⁵³ <http://www.dpyauction.com/>

⁵⁴ <http://www.kodafarms.com/>

⁵⁵ <http://morningstarco.com/index.cgi?Page=Locations/Santa%20Nella>

⁵⁶ <http://morningstarco.com/index.cgi?Page=Locations/Santa%20Nella>

⁵⁷ http://www.ingomarpacking.com/company_info

⁵⁸ <http://growerstrans.com/>

⁵⁹ <http://www.rocketfarms.com/about/facilities>

⁶⁰ <http://www.saputousafoodservice.com/Locations.aspx>

⁶¹ <http://www.jbssinc.com/jaboutus-facilities>

⁶² <http://dimarefresh.com/index.php/map/>

⁶³ <http://californiatransplants.com/>

⁶⁴ <http://westsidepallet.net/>

⁶⁵ <http://www.saputousafoodservice.com/Locations.aspx>

⁶⁶ <http://www.cebrotrozenfoods.com/>

⁶⁷ <http://www.stewartandjasper.com/>

⁶⁸ <http://www.valleysun.com/>

⁶⁹ <http://www.manta.com/c/mmcwvf7/dompe-warehouse-co-inc>

⁷⁰ <http://www.perezfarms.com/>

⁷¹ <http://www.cravenfarmingco.com/>

⁷² <https://start.cortera.com/company/research/k5k8qwp3l/holland-ranch/>

Patterson hosts Sierra Pacific, a refrigerated and dry goods shipper.⁷³ Patterson also has Trinidad Benham, a processing and packaging facility which specializes in the merchandizing, packaging, trading, and distribution of beans, rice, popcorn, and aluminum foil.⁷⁴ Also in Patterson is Triana Foods Repack, a specialist in sun dried fruit.⁷⁵

Between Patterson and Westley is Westside Hulling Association on Frank Cox Road, which specializes in nuts processing and distribution.⁷⁶ Martin Farms, which grows apricots and tomatoes, is off Magnolia Road.⁷⁷ IDC is an irrigation equipment specialist off SR 33.⁷⁸ DMS Company is a seed grower located next to IDC. Westley hosts a second Trinidad Benham facility. There is a Recology 216-acre composting facility west of SR 33 on Gaffery,⁷⁹ as well as California Soils, which specializes in soil amendments and worm castings.⁸⁰ Located off Orchard and SR 33 is General Wood Products Incorporated, a bin, crate, and pallet manufacturer.⁸¹ In Vernalis is a Trinidad Benham facility off Welty. Crop Production Services, an agricultural services retailer, is located off SR 33.⁸² On McCracken is Vernalis Warehouse⁸³, and located on Durham Derry is California Masterplant, a seed grower and transplanter.

FREIGHT FACILITY					
Seg.	Facility Type/Freight Generator	Location	Mode	Name	Major Commodity
MER-1	Processor/distributor	S. Dos Palos	Trucks	Koda Farms	Rice
				SR 33 TA	
MER-2				SR 33 TA	
	Auction yard	S. of SR 152 JCT	Trucks	Dos Palos Y Auction Yard	Cattle, Ag. eq.
MER-3				SR 33 TA	
	Warehousing/manufacturing	S. of SR 152 JCT	Trucks	Frasier Irrigation	Irrigation equipment
	Cnxn. to SR 152			152 ramps	
MER-4				SR 33 TA	
	Cnxn. to SR 152			152 ramps	
MER-5	Truck stops	Santa Nella	Trucks	Various	Retail, gas
	Cnxn. to I-5			I-5 ramps	
				SR 33 TA	
MER-6	Truck stops	Santa Nella	Trucks	Various	Retail, gas
				I-5 ramps	
				SR 33 TA	
	Processor/distributor	Ingomar Grade	Trucks, rail	Liberty Packing Co.	Tomatoes
	Processor/distributor	Volta Rd.	Trucks, rail	Morning Star	Tomatoes
	Producer/processor/distributor	Malta Rd.	Trucks, rail	Ingomar Packing Co.	Tomatoes
MER-7	Processor/distributor	Cottonwood Rd.	Trucks	John B Sanfilippo and Sons	Nuts
	Grower/distributor	Husman Rd.	Trucks	Woods Transplant Service	Ag.
	Cnxn. to I-5			SR 140	
				SR 33 TA	
	Grower/distributor	Borba Rd.	Trucks	Growers Transplanting Inc.	Tomatoes, onions
MER-8	Producer/processor/distributor	Upper Rd.	Trucks	Freitas Fresh Eggs	Poultry
	Grower/distributor	Carnation Rd.	Trucks	Growers Transplanting Inc.	Produce
	Processor/distributor	Along SR 33	Trucks	Pulsatari Nut Co.	Nuts
	Processor/distributor	Gun Club Rd.	Trucks	Di Mare	Tomatoes
	Processor/distributor	Along SR 33	Trucks	Saputo Cheese	Dairy
	Processor/distributor	Carnation Rd.	Trucks	Rocket Farms	Produce
	Producer/processor/distributor	Canal School Rd.	Trucks	California Fresh Eggs	Poultry
				SR 33 TA	
	Rail line		Rail	CA Northern, Class III	

Cnxn.: connection; **JCT:** junction; **Rd.:** road; **TA:** terminal access; **Inc.:** incorporated; **Co.:** company; **Ag.:** agriculture; **eq.:** equipment

⁷³ http://www.spwg.com/locations/patterson_set.htm

⁷⁴ <http://www.trinidadbenham.com/index.aspx>

⁷⁵ <http://www.trainafoods.com/>

⁷⁶ <http://www.manta.com/c/mm2pj54/west-side-hulling-assoc>

⁷⁷ <http://martinfarms.net/>

⁷⁸ <http://idcsupply.com/>

⁷⁹ <http://www.recolgy.com/index.php/company-finder>

⁸⁰ <http://californiasoils.com/contact-us.html>

⁸¹ <http://www.gogwp.com/>

⁸² <http://www.cpsagu.com/Regions/West/>

⁸³ <http://www.manta.com/c/mmj7rgn/vernalis-warehouse-inc>

FREIGHT FACILITY (Continued)					
Seg.	Facility Type/Freight Generator	Location	Mode	Name	Major Commodity
STA-1	Processor/distributor	N St.	Trucks	Di Mare	Tomatoes
	Processor/distributor	Inyo Ave.	Trucks	Saputo	Dairy
	Processor/distributor	Orestimba Rd.	Trucks	Valley Sun	Tomatoes
	Processor/distributor	Orestimba Rd.	Trucks	Cebro Frozen Foods	Ag.
	Warehouse/manufacturer	L St.	Trucks	Westside Pallet Inc.	Ag.
	Processor/distributor	Shiells Rd.	Trucks	Stewart and Jasper	Cherries
	Processor/distributor	Main St.	Trucks	California Delights	Nuts, dried foods
	Grower/distributor	Stuhr Rd.	Trucks	California Transplants	Ag.
	Rail line		Rail	CA Northern, Class III	
STA-2	Cnxn. to I-5			SR 33 TA	
				Stuhr Rd.	
				SR 33 TA	
STA-3	Rail line		Rail	CA Northern, Class III	
	Warehousing	Along SR 33	Trucks	Dompe Warehousing	Ag.
	Warehousing	Along SR 33		J.M. Perez and Sons	
	Processor/distributor	Crows Landing Rd.	Trucks	San Joaquin Tomato Growers	Tomatoes
	Rail line		Rail	CA Northern, Class III	
STA-4	Cnxn. to I-5			Fink Rd.	
				SR 33 TA	
	Producer/processor/distributor	Along SR 33	Trucks	Craven	Ag.
	Producer/processor/distributor	Along SR 33	Trucks	Patterson Nut Co.	Nuts
	Producer/processor/distributor	Pomogranate Ave.	Trucks	Holland Ranch	Cucumbers
STA-5	Rail line		Rail	CA Northern, Class III	
	Warehousing/manufacturing	1 st St.	Trucks, rail	Sierra Pacific	Ag.
	Warehousing/manufacturing	Along SR 33	Trucks, rail	Trinidad Benham Corp.	Beans, packaging
	Processor/distributor	1 st St.	Trucks, rail	Traina Foods Repack	Produce
	Rail line		Rail	CA Northern, Class III	
STA-6	Cnxn. to I-5			Sperry Ave.	
				SR 33 TA	
	Rail line		Rail	CA Northern, Class III	
	Processor/distributor	Frank Cox Rd.	Trucks	Westside Hulling Assn.	
	Rail line		Rail	CA Northern, Class III	
STA-7				SR 33 TA	
	Processor/distributor	Magnolia Rd.	Trucks	Martin Farms	Apricots, tomatoes
	Warehousing/manufacturing	Sequoia Rd.	Trucks	IDC	Irrigation equipment
	Processor/distributor	Sequoia Rd.	Trucks	DMS Co.	Seeds
	Producer/processor/distributor	Along SR 33	Trucks/rail	Trinidad Benham Corp.	Beans, packaging
STA-8				SR 33 TA	
	Rail line		Rail	CA Northern, Class III	
	Cnxn. to I-5			Howard Rd.	
STA-9	Producer/processor/distributor	Gaffery Rd.	Trucks	Recology	Ag.
	Producer/processor/distributor	Gaffery Rd.	Trucks	California Soils	Ag.
	Producer/processor/distributor	Orchard Rd.	Trucks	General Wood Products, Inc.	Wood packaging
	Rail line		Rail	CA Northern, Class III	
SJ-1	Warehousing	McCracken Rd.	Trucks	Vernalis Warehouse	
	Producer/processor/distributor	Welty Rd.	Trucks	Trinidad Benham Corp.	Beans, packaging
		Along SR 33	Trucks	Crop Production Services	Ag.
	Rail line		Rail	CA Northern, Class III	
	Cnxn. to I-5			SR 132	
SJ-2				SR 33 TA	
	Producer/processor/distributor	Durham Ferry Rd.	Trucks	California Masterplant	Nursery
	Rail line		Rail	CA Northern, Class III	
	Cnxn. to I-5			I-5	
				SR 33 TA	

Cnxn.: connection, **TA:** terminal access; **Ag.:** agriculture; **Co.:** company; **Corp.:** corporation; **Assn.:** association; **Inc.:** incorporated

ENVIRONMENTAL CONSIDERATIONS

Environmental considerations allow planners to estimate the cost and duration of studies for improvements to SR 33. Moderate to high risk of hazardous materials in Stanislaus and San Joaquin counties has to be taken into consideration. The risk is higher in northern Stanislaus. There is also the risk of flood in San Joaquin and Northern Stanislaus, especially considering that the road surface has little to no elevation height compared to adjacent land. Climate change impacts may increase flood risk in lower elevations in Stanislaus and San Joaquin counties.

ENVIRONMENTAL SCAN									
Merced County									
Segment	MER-1	MER-2	MER-3	MER-4	MER-5	MER-6	MER-7	MER-8	
Section 4(f) Land	No	No	No	No	No	No	No	No	No
Farmland/Timberland	PF,SARC,GL	UBU	PF	FLI,GL,VDL	UBU,FLI	UBU,FLI	PF	PF,FSI	
Cultural Resources	Moderate	Low	High	Low	Low	Moderate	Low	Low	
Visual Aesthetics	None	None	None	None	None	None	None	None	
Geology/Soils/Seismic	Sedimentary Cenozoic, San Joaquin Fault								
Floodplain	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100yr.	
Climate Change Vulnerability	Low	Low	Low	Low	Low	Low	High	Moderate/High	
Hazardous Materials	Low	Low	Low	Low	Low	Low	High	Moderate/High	
Naturally Occurring Asbestos	None	None	None	None	None	None	None	None	
Air Quality	Ozone		Non-attainment						
	PM	2.5	Non-attainment						
		10	Attainment						
	Carbon Monoxide		Maintenance						
Noise	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Waters and Wetlands	SJ R.	SJ R.	SJ R.	O'Neill	O'Neill	Canal	Canal	SJ R.	
Wild and Scenic Rivers	None	None	None	None	None	None	None	None	
Special Status Species	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Fish Passage	None	None	None	None	None	None	None	None	
Habitat Connectivity	None	None	None	None	None	None	None	None	
N/A: data not available; PF: Prime Farmland; SARC: Semi-agricultural and Rural Commercial Land; GL: Grazing Land; UBU: Urban and Built-up Land; FLI: Farmland of Local Importance; VDL: Vacant or Disturbed Land; FSI: Farmland of Statewide Importance; UF: Unique Farmland; O'Neill: O'Neill Forebay; Canal: Delta Mendota Canal; SJ R.: San Joaquin River; PM: particulate matter									

ENVIRONMENTAL SCAN (Continued)									
Stanislaus County									
Segment	STA-1	STA-2	STA-3	STA-4	STA-5	STA-6	STA-7	STA-8	STA-9
Section 4(f) Land	No	No	No	No	No	No	No	No	No
Farmland/Timberland	UBU,UF	PF	UBU	PF	UBU	UBU	PF	UBU	PF
Cultural Resources	High	Moderate	N/A	Low	Stanislaus GP, App. 3-52, Low	Moderate	Moderate	High	Low
Visual Aesthetics	Downtown	None	None	None	Downtown	None	None	None	None
Geology/Soils/Seismic	Sedimentary Cenozoic, San Joaquin Fault								
Floodplain	100	100	100/500	100/500	100/500	100/500	100/500	N/A	N/A
Climate Change	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hazardous Materials	Moderate /High	Low	N/A	Crows Landing NAF, Moderate /High	Moderate /High	N/A	Moderate /High	Moderate /High	High
Natural Asbestos	None	None	None	None	None	None	None	None	None
Air Quality	Ozone		Non-attainment						
	PM	2.5	Non-attainment						
		10	Attainment						
	CO		Maintenance						
Noise	70 Ldn	70 Ldn	N/A	N/A	70 Ldn	70 Ldn	N/A	N/A	N/A
Waters & Wetlands	SJ R.	SJ R.	SJ R.	SJ R.	SJ R.	SJ R.	SJ R.	SJ R.	SJ R.
Wild & Scenic Rivers	None	None	None	None	None	None	None	None	None
PF: Prime Farmland; UBU: Urban & Built-up Land; UF: Unique Farmland; SJ R.: San Joaquin River; App.: appendix; NAF: naval air facility GP: General Plan; N/A: data not available; CO: carbon monoxide; Ldn: level day night; PM: particulate matter									

ENVIRONMENTAL SCAN (Continued)									
Stanislaus County									
Segment	STA-1	STA-2	STA-3	STA-4	STA-5	STA-6	STA-7	STA-8	STA-9
Special Status Species	GP NR-11-14, Stanislaus GP, App. 3-36	GP NR-11-14, Stanislaus GP, App. 3-36	N/A	Stanislaus GP NR-19-31	N/A				
Fish Passage	None	None	None	None	None	None	None	None	None
Habitat Connectivity	None	None	None	None	None	None	None	None	None
N/A: data not available; GP: General Plan; App.: appendix; NR: natural resources									

ENVIRONMENTAL SCAN (Continued)		
San Joaquin County		
Segment	SJ-1	SJ-2
Section 4(f) Land	No	No
Farmland/Timberland	Prime Farmland	Prime Farmland
Cultural Resources	High	Low
Visual Aesthetics	None	None
Geology/Soils/Seismic	Sedimentary Cenozoic, San Joaquin Fault	
Floodplain	Not available	Not available
Climate Change	Not available	Not available
Hazardous Materials	High	Moderate/High
Natural Asbestos	None	None
Air Quality	Ozone	Non-attainment
	Particulate Matter	2.5 10
	Carbon Monoxide	Maintenance
	Noise	Not available
Waters and Wetlands	San Joaquin River	San Joaquin River
Wild and Scenic Rivers	None	None
Special Status Species	Not available	Not available
Fish Passage	None	None
Habitat Connectivity	None	None

CORRIDOR PERFORMANCE

CORRIDOR PERFORMANCE											
Segment #	MER-1	MER-2	MER-3	MER-4	MER-5	MER-6	MER-7	MER-8	STA-1	STA-2	
Basic System Operations											
AADT (BY)	2,710	5,036	5,767	9,507	11,228	10,105	6,732	6,926	6,926	4,192	
AADT (HY)	3,662	7,730	9,030	20,266	24,039	24,057	14,329	12,194	12,194	7,286	
VMT (BY)	2,392	2,905	24,325	22,132	12,058	7,134	61,126	22,100	14,267	19,576	
VMT (HY)	3,233	4,460	38,341	47,149	25,817	16,984	130,107	38,911	25,119	34,025	
DVHD (35 MPH) (BY)	N/A										
Truck Traffic											
Total AADTT (BY)	380	705	810	2,852	3,368	3,031	1,347	970	970	420	
Total Trucks (% AADT) (BY)	14	14	14	30	30	30	20	14	14	10	
5+ Axle AADTT (BY)	247	458	527	2,167	2,560	2,425	970	700	281	121	
5+Axle Trucks (%AADT) (BY)	65	65	65	76	76	80	72	72	29	29	
Bottlenecks Data											
Bottleneck Existing	N/A										
Peak Hour Traffic Data											
Peak Period Length	1 hr.										
Peak Hr. Direction	N/A										
Peak Hr. Time of Day	1630										
Peak Hr. V/C (BY)	N/A										
Peak Hr. V/C (HY)	N/A										
Managed Lane Performance											
N/A											
Reliability											
N/A											
BY: Base Year; HY: Horizon Year; AADT: Annual Average Daily Traffic; VMT: Vehicle Miles Traveled; N/A: data not available; DVHD: Daily Vehicle Hours of Delay; AADTT: Annual Average Daily Truck Traffic; V/C: Volume over Capacity; hr.: Hour											

CORRIDOR PERFORMANCE (Continued)									
Segment #	STA-3	STA-4	STA-5	STA-6	STA-7	STA-8	STA-9	SJ-1	SJ-2
Basic System Operations									
AADT (BY)	5,109	6,031	6,961	5,800	3,909	2,700	1,653	1,653	2,507
AADT (HY)	8,954	10,803	12,912	10,817	7,718	5,598	3,828	3,828	4,642
VMT (BY)	1,583	33,357	7,810	3,190	19,662	999	11,845	1,352	10,486
VMT (HY)	2,775	59,751	14,487	5,949	38,821	2,071	27,431	3,131	19,417
DVHD (35 MPH) (BY)	N/A								
Truck Traffic									
Total AADTT (BY)	510	905	1,044	870	587	405	248	330	377
Total Trucks (% AADT) (BY)	10	15	15	15	15	15	15	20	15
5+ Axle AADTT (BY)	148	235	271	226	152	105	65	86	99
5+Axle Trucks (%AADT) (BY)	20	26	26	26	26	26	26	26	26
Bottlenecks Data									
Bottleneck Existing	N/A								
Peak Hour Traffic Data									
Peak Period Length	1 hr.								
Peak Hr. Direction	N/A								
Peak Hr. Time of Day	1630								
Peak Hr. V/C (BY)	N/A								
Peak Hr. V/C (HY)	N/A								
Managed Lane Performance									
N/A									
Reliability									
N/A									
BY: Base Year; HY: Horizon Year; AADT: Annual Average Daily Traffic; VMT: Vehicle Miles Traveled; N/A: data not available; DVHD: Daily Vehicle Hours of Delay; AADTT: Annual Average Daily Truck Traffic; V/C: Volume over Capacity; hr.: Hour									

2015 AADT indicates all segments' volumes are within an acceptable concept LOS A to D classification, as SR 33 is not on the IRRS system. 2040 AADT suggests that Segments MER-4, MER-5, and MER-6 in Merced County will have traffic volumes at a range of LOS E to possibly F, necessitating facility expansion. There is a proposed project to widen SR 33 from SR 152 to McCabe Road. 2040 AADT shows that segments in Newman and Patterson will have LOS D, or possibly E, conditions. However, programmed projects exist to widen facilities in Newman, and Tier II projects exist to widen remaining facilities in north Patterson and south Newman. These projects are likely driven by development.

Total truck AADT is highest (30%) in Santa Nella, due to its interchange with I-5, SR 152, and its truck stops. A high percentage of trucks suggests a strategy conducive to truck flow in Santa Nella is needed, one that will streamline the facility and eliminate congestion. Corridor performance also shows that the percentage of five-axle trucks out of total trucks is high in Merced, though this is not unusual for D10. In Stanislaus and San Joaquin counties the percentage ranges from 20 to 29 percent. There are no bottlenecks on the route currently, though 2040 volumes suggest greater bottleneck possibility at certain times of the day in Santa Nella if the facility isn't widened.

Peak hour length and time of day are estimates. The expectation on highways on the SHS is to have a peak hour factor (PHF) within a range of 0.88 to 0.92, and to have that PHF increase through time with local development and population growth. Peak hour vehicle hours of delay is estimated at around 0.084 for most two-lane conventional highways.

Although LOS has been employed as a State standard by which congestion impacts may be measured for the California Environmental Quality Act (CEQA), the Federal Highway Administration (FHWA) currently emphasizes delay as a more appropriate highway performance measure. Both of these standards might reflect initial conditions of uninterrupted flow consistent with freeways and expressways, rather than conventional highways, and of speed limits in the range of 40 to 55 MPH.

There is a need for updated traffic and truck counting data on the SHS. Otherwise, data will derive from estimated calculations which may not reflect recent changes in volume, truck numbers, and highway capacity.

KEY CORRIDOR ISSUES

To summarize the findings of this TCR, the key corridor issues are as follows:

- As a component of the SHS, SR 33 facilitates truck-based agricultural goods movement.
- Segments in Santa Nella will need facility expansion and operations improvements due to projected increases in traffic volume.
- Segments in Newman and Patterson will undergo facility expansion, due to land use development.
- Rural components of SR 33 will likely remain with current facilities with operations, safety, and maintenance the lead priorities.

CORRIDOR CONCEPT

CONCEPT RATIONALE

SR 33 is not on the IRRS. This means the concept LOS for all segments is D. Currently, all AADTs meet at least an LOS of D. For 2040, the only segments of concern are the ones in Santa Nella, which deteriorate below LOS D. SR 33's interaction with truck stops and retail in Santa Nella, as well as future residential development, warrants future expansion to a four lane highway with auxiliary lanes where necessary. Part of the truck volume is coming from southbound I-5 trucks using SR 33 to access SR 152 westbound, rather than traveling further south on I-5 to access SR 152 directly. It isn't known what percentage of trucks accessing SR 152 from I-5 are utilizing this route selection. This may also be the case for trucks transferring from SR 152 eastbound to I-5 north.

Local development suggests facility expansion is needed in Newman and Patterson, though forecasting of those segments doesn't warrant immediate action. Tier I and Tier II plans are already set for Newman and Patterson.

For the rural portions of SR 33, system preservation, safety, and maintenance will remain the primary planning emphasis for the period from 2015 to 2040. For these areas, it is likely that the highway will remain a two lane conventional. Widening of shoulders to accommodate bicycle infrastructure is recommended, as proposed plans for bicycle facilities in Merced and Stanislaus Counties suggest. Also recommended is fog line and shoulder maintenance, as this area can be subject to dense fog.

More commuters from the San Joaquin Valley into the Bay Area are expected. This increase in east-west traffic flow will have little impact on SR 33, but intersections with SR 132, SR 152, SR 140, I-5, Stuhr Road, Fink Road, Sperry Avenue, Zacharias Road, Frank Cox Road, and Howard Road may see more activity. Operations improvements are likely.

Additional activity on SR 33 is possible if Stanislaus is successful in developing the former Crow's Landing Naval Air Station. No funded projects or decisions have been settled.

Construction of California HSR in Merced from Chowchilla in Madera County to Santa Clara County is unlikely to impact SR 33, except for temporary construction activity near Santa Nella. However, if a station is built in Los Banos, HSR could affect future development in Los Banos and Santa Nella, as such a station could act as a commuter stage point for residents in Los Banos and Santa Nella who work in the Bay Area, possibly reducing some of the traffic volume on SR 152. No proposals or funded efforts to construct such a station have been made.

PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES

The table below lists all planned and programmed (fiscally constrained) projects on the corridor:

PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES						
Seg.	Description	Planned or Programmed	Location	Source	Purpose	Phase
Various	Center and edge rumble strips	Programmed	Various	SOP, 7/2015	System Mgmt.	PA&ED
MER-1 to MER-6	None Identified					
MER-7	Construct roundabout		SR 33/SR 140	OPI, 1/2016	Operations	PA&ED
MER-8	None Identified					
STA-1	Install 4 Lane Arterial Roadway	Planned	Inyo Ave. to city limits	StanCOG 2014 RTP	System Exp.	Tier II
	Install 4 Lane Arterial Roadway	Programmed	Yolo St. to Inyo Ave.	StanCOG 2014 RTP	System Exp.	Tier I
	Install 4 Lane Arterial Roadway	Programmed	Yolo St. to Sherman	StanCOG 2014 RTP	System Exp.	Tier I
	Install 4 Lane Arterial Roadway	Programmed	Sherman Pkwy. to Stuhr	StanCOG 2014 RTP	System Exp.	Tier I
	Install Traffic Signal	Planned	SR 33/Sherman Pkwy.	StanCOG 2014 RTP	Operations	Tier II
	Install Traffic Signal	Planned	SR 33/Stuhr Rd.	StanCOG 2014 RTP	Operations	Tier II
STA-2 to STA-4	None Identified					
STA-5	Widen 3 to 5 lanes in Patterson	Planned	City of Patterson	StanCOG 2014 RTP	System Exp.	Tier II
STA-6	Widen 3 to 5 lanes in Patterson	Planned	City of Patterson	StanCOG 2014 RTP	System Exp.	Tier II
STA-7 to STA-9	None Identified					
SJ-1 to SJ-2	None Identified					
SOP: Status of Projects; Mgmt.: management; OPI: Online Project Information System; Ave.: avenue; St.: street; Pkwy.: parkway; Rd.: road; RTP: Regional Transportation Plan; PA&ED: Planning Analysis and Environmental Design; Exp.: expansion						

PROJECTS AND STRATEGIES TO ACHIEVE CONCEPT

The table lists all unfunded projects and strategies that could be implemented on the corridor to achieve concept:

PROJECTS AND STRATEGIES TO ACHIEVE CONCEPT						
Seg.	Description	Planned or Programmed	Location	Source	Purpose	Phase
MER-1	Class I or II bicycle facility		County of Merced			N/A
MER-2	Class I or II bicycle facility		City of Dos Palos			N/A
MER-3	Class I or II bicycle facility		County of Merced			N/A
MER-4	Class I or II bicycle facility		County of Merced	Merced RBTP, 2008		N/A
	Facility widening	Candidate	SR 152 to McCabe Rd.	SOP, 2015		PID
MER-5	Class I or II bicycle facility		County of Merced	Merced RBTP, 2008		N/A
	Facility widening	Candidate	SR 152 to McCabe Rd.	SOP, 2015		PID
MER-6	Class I or II bicycle facility		Henry Miller Rd. & SR 33		Safety; mobility	N/A
	Facility widening	Candidate	SR 152 to McCabe Rd.	SOP, 2015		PID
MER-7	Class I or II bicycle facility		County of Merced	Merced RBTP, 2008	Safety; mobility	N/A
MER-8	Class I or II bicycle facility		County of Merced	Merced RBTP, 2008	Safety; mobility	N/A
STA-1	Class I or II bicycle facility		City of Newman	Newman GP 2007	Safety; mobility	N/A
STA-2	Class I or II bicycle facility		County of Stanislaus			N/A
STA-3	Class I or II bicycle facility		County of Stanislaus			N/A
STA-4	Class I or II bicycle facility		County of Stanislaus			N/A
STA-5	Class I or II bicycle facility		City of Patterson			N/A
	Widen from Sperry Ave. to Rogers Rd.	Proposed	City of Patterson	Patterson GP 2010		N/A
STA-6	Class I or II bicycle facility		City of Patterson			N/A
	Widen from Sperry Ave. to Rogers Rd.	Proposed	City of Patterson	Patterson GP 2010		N/A
STA-7	Class I or II bicycle facility		County of Stanislaus			N/A
	Widen from Sperry Ave. to Rogers Rd.	Proposed	County of Stanislaus	Patterson GP 2010		N/A
STA-8	Class I or II bicycle facility		County of Stanislaus			N/A
STA-9	Class I or II bicycle facility		County of Stanislaus			N/A
SJ-1	Class I or II bicycle facility		County of San Joaquin			N/A
SJ-2	Class I or II bicycle facility		County of San Joaquin			N/A
Rd.: road; SOP: Status of Projects; RBTP: Regional Bicycle Transportation Plan; GP: general plan; N/A: data not available; PID: Project Initiation Document						

APPENDIX

APPENDIX A GLOSSARY OF TERMS AND ACRONYMS

ACRONYMS

AADT: Annual Average Daily Traffic
AADTT: Average Annual Daily Truck Traffic
ADA: Americans with Disabilities Act of 1990
BRT: Bus Rapid Transit
BY: Base Year
Caltrans: California Department of Transportation
CDP: Census Designated Place
CEQA: California Environmental Quality Act
CFR: Code of Federal Regulations
CGC: California Government Code
CHSR: California High Speed Rail
CL: California Legal Access
CO: Carbon Monoxide
CMA: Congestion Management Agencies
CP: Community Plan
CSMP: Corridor System Management Plan
CTC: County Transportation Commission
D10: District 10
DFR: Deviated Fixed Route
DSMP: District System Management Plan
DVHD: Daily Vehicle Hours Driven
FES: Freeway and Expressway System
FFC: Federal Functional Classification
FHWA: Federal highway Administration
FLI: Farmland of Local Importance
FRE: County of Fresno
FSI: Farmland of Statewide Importance
GL: Grazing Land
GP: General Plan
HCS: Highway Capacity Software
HOT: High occupancy toll lane
HOV: High occupancy vehicle lane
HSR: High Speed Rail
HY: Horizon Year
IRRS: Interregional Road System
ITS: Intelligent Transportation System
I-5: Interstate 5
LAFCO: Local Agency Formation Commission
LOS: Level of Service
LR: Legislative Route
MAP-21: Moving Ahead for Progress in the 21st Century, current federal highway transportation legislation
MCAG: Merced County Association of Governments
MER: County of Merced
MPH: Miles per Hour

MPO: Metropolitan Planning Organization
N/A: Not Available, or Not Applicable
NAF: Naval Air Facility
NHS: National Highway System
NR: Natural Resources
NTN: National Truck Network
OWP: Overall Work Program
PA&ED: Planning Analysis and Environmental Design
PeMS: Performance Measurement System
PF: Prime Farmland
PHF: Peak Hour Factor
PID: Project Initiation Document
PM: post mile
POW: Prisoner of War
RBTP: Regional Bicycle Transportation Plan
RMP: Resource Management Plan
ROW: Right of Way
RTP: Regional Transportation Plan
RTPA: Regional Transportation Planning Agency
SARC: Semi-agricultural and Rural Commercial Land
SHS: State Highway System
SOP: Status of Projects
SJ: County of San Joaquin
SJCOG: San Joaquin Council of Governments
SJRTD: San Joaquin Regional Transit District
SR: State Route
STA: County of Stanislaus
STAA: Surface Transportation Assistance Act
StanCOG: Stanislaus Council of Governments
StART: Stanislaus Regional Transportation
STRAHNET: Strategic Highway Network
TA: Terminal Access
TCR: Transportation Concept Report
TMS: Transportation Management System or Traffic Monitoring Station
UBU: Urban and Built-up Land
UF: Unique Farmland
US: United State Highway
V/C: Volume (of traffic) to Capacity
VDL: Vacant or Disturbed Land
VMT: Vehicle Miles Traveled

GLOSSARY OF TERMS

Annual Average Daily Traffic (AADT) -- The total volume for the year divided by 365 days. Traffic counting is generally performed by electronic counting instruments moved from location throughout the state in a program of continuous traffic count sampling. The resulting counts are adjusted to an estimate of annual average daily traffic by compensating for seasonal influence, weekly variation and other variables which may be present. Annual ADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways and other purposes.

Base Year – The year that the most current data is available to the Districts

Bikeway Class I (Bike Path) – Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross flow by motorists minimized

Bikeway Class II (Bike Lane) – Provides a striped lane for one-way bike travel on a street or highway

Bikeway Class III (Bike Route) – Provides for shared use with pedestrian or motor vehicle traffic

Bikeway Class 3.5 -- Provides wide paved shoulders anywhere from four to eight feet wide that separate the bicyclist from the automobile travel lane with a solid white edge line stripe, and provides pedestrian space in rural areas

Bikeway Class IV -- A Class II bikeway accompanied by a cement wall to physically separate bicyclists from motorists

Bottlenecks – A bottleneck is a location where traffic demand exceeds the effective carrying capacity of the roadway. In most cases, the cause of a bottleneck relates to a sudden reduction in capacity, such as a lane drop, merging and weaving, driver distractions, a surge in demand, or a combination of factors.

Capacity – The maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions

Capital Facility Concept – The 20 to 25 year vision of future development on the route to the capital facility. The capital facility can include capacity increasing, State Highway, bicycle facility, pedestrian facility, transit facility (intercity passenger rail, mass transit guideway, etc.), grade separation, and new managed lanes.

Centerline Miles -- The mileage of the median or the center line on a highway in one direction for a specified segment length

Concept LOS – The minimum acceptable LOS over the next 20 to 25 years

Conceptual Project – A conceptual improvement or action is a project that is needed to maintain mobility or serve multimodal users, but is not currently included in a fiscally constrained plan and is not currently programmed. It could be included in a General Plan or in the unconstrained section of a long-term plan.

Conventional Highway – A highway classification with at grade intersections

Corridor – A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways, bicycle, pedestrian, and transit route alignments. Off system facilities are included as informational purposes and not analyzed in the TCR.

Expressway – A highway classification with some level of restriction on having at grade intersections

Facility Concept – Describes the facility and strategies that may be needed within 20-25 years. This can include capacity increasing, State Highway, bicycle facility, pedestrian facility, transit facility, non-capacity increasing operational improvements, new managed lanes, conversion of existing managed lanes to another managed lane type or characteristic, TMS field elements, Transportation Demand Management, and Incident Management.

Facility Type – Describes the State Highway facility type. The facility could be freeway, expressway, conventional, or one-way city street

Freight Generator – Any facility, business, manufacturing plant, distribution center, industrial development, or other location (convergence of commodity and transportation system) that produces significant commodity flow, measured in tonnage, weight, carload, or truck volume.

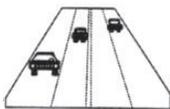
Headway – The time between two successive vehicles as they pass a point on the roadway, measured from the same common feature of both vehicles

Horizon Year – The year that the future (20 to 25 years) data is based on

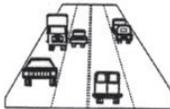
Intermodal Freight Facility – Intermodal transport requires more than one mode of transportation. An intermodal freight facility is a location where different transportation modes and networks connect and freight is transferred (or “transloaded”) from one mode, such as rail, to another, such as truck.

Intelligent Transportation System (ITS) -- Improves transportation safety and mobility and enhances productivity through the integration of advanced communications technologies into the transportation infrastructure and in vehicles. Intelligent transportation systems encompass a broad range of wireless and wire line communications-based information and electronics technologies to collect information, process it, and take appropriate actions.

Level of Service (LOS) -- 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:



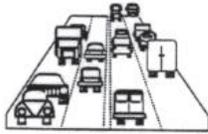
LOS A describes free flowing conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway.



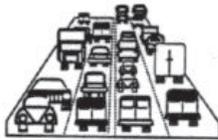
LOS B is also indicative of free-flow conditions. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.



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 is stop and go, low speed conditions with little or poor maneuverability. Speed and traffic flow may drop to zero and considerable delays occur. For intersections, LOS F describes operations with delay in excess of 60 seconds per vehicle. This level, considered by most drivers to be unacceptable, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection.

Multi-modal – The availability of transportation options using different modes within a system or corridor, such as automobile, subway, bus, rail, or air

Peak Hour – The hour of the day in which the maximum volume occurs across a point on the highway

Peak Hour Volume – The hourly volume during the highest hour traffic volume of the day traversing a point on a highway segment. It is generally between six percent and ten percent of the ADT. The lower values are generally found on roadways with low volumes.

Peak Period – A part of the day during which traffic congestion on the road is at its highest. Normally, this happens twice a day, once in the morning and once in the evening—the time periods when the most people commute. Peak Period is defined for individual routes, not a District or statewide standard.

Planned Project – A planned improvement or action is a project in a fiscally constrained section of a long-term plan, such as an approved Regional or Metropolitan Transportation Plan (RTP or MTP), Capital Improvement Plan, or measure.

Post-25 Year Concept – This dataset may be defined and re-titled at the District's discretion. In general, the Post-25 Year concept could provide the maximum reasonable and foreseeable roadway needed beyond a 20 to 25 year horizon. The post-25 year concept can be used to identify potential widening, realignments, future facilities, and rights-of-way required to complete the development of each corridor.

Post Mile – A post mile is an identified point on the State Highway System. The milepost values increase from the beginning of a route within a county to the next county line. The milepost values start over again at each county line. Milepost values usually increase from south to north or west to east depending upon the general direction the route follows within the state. The milepost at a given location will remain the same year after year. When a section of road is relocated, new milepost (usually noted by an alphabetical prefix such as "R" or "M") are

established for it. If relocation results in a change in length, "milepost equations" are introduced at the end of each relocated portion so that mileposts on the remainder of the route within the county will remain unchanged.

Programmed Project – A project in a near-term programming document identifying funding amounts by year, such as the State Transportation Improvement Program (STIP) or the State Highway Operations and Protection Program (SHOPP)

Railroads:

Class I – The Surface Transportation Board (STB) defines a Class I railroad in the U.S. as a carrier having annual operating revenues of \$250 million or more. This class includes the nation's major railroads. In California, Class I railroads include Union Pacific Railroad (UP) and Burlington Northern Santa Fe Railway (BNSF).

Class II – STB defines a Class II railroad in the U.S. as having annual carrier operating revenues of less than \$250 million but more than \$20 million. Class II railroads are considered mid-sized freight-hauling railroad in terms of operating revenues. They are considered "regional railroads" by the Association of American Railroads (AAR).

Class III – Railroads with annual carrier operating revenues of \$20 million or less. The typical Class III is a short line railroad, which feeds traffic to or delivers traffic from a Class I or Class II railroad.

Route Designation – A route's designation is adopted through legislation and identifies what system the route is associated with on the State Highway System. A designation denotes what design standards should apply during project development and design. Typical designations include, but are not limited to, the National Highway System (NHS), Interregional Route System (IRRS), and the Scenic Highway System.

Rural – Fewer than 5,000 in population designates a rural area. Limits are based upon population density as determined by the U.S. Census Bureau.

Segment – A portion of a facility between two points

System Operations and Management Concept – Describes the system operations and management elements that may be needed within 20 to 25 years. This can include non-capacity increasing operational improvements (auxiliary lanes, channelization, turnouts, etc.), conversion of existing managed lanes to another managed lane type or characteristic (e.g. HOV lane to HOT lane), TMS Field Elements, Transportation Demand Management (TDM), and Incident Management.

System Preservation – The unmet needs estimate for preserving the state's transportation system. This incorporates three elements: preventive maintenance, rehabilitation and reconstruction, and regulatory mandates.

- Preventive maintenance applies cost-effective treatments to existing transportation infrastructure in order to preserve it, slowing down future deterioration of a transportation facility (without significantly increasing the structural capacity). Preventive maintenance strategies are typically applied to assets that are in good condition and have significant remaining service life. This ensures the structural integrity of transportation systems that serve people and freight.
- Rehabilitation and reconstruction strategies are applied to transportation infrastructure that is in fair to poor condition. The goal here is to restore assets to an acceptable operating condition.

- Preservation efforts also include the cost of regulatory mandates. Examples of regulatory mandates include storm water retrofitting required by the Clean Water Act (CWA) and state water quality control boards, and improvements required by the Americans with Disabilities Act (ADA).

Transportation Demand Management (TDM) -- Programs designed to reduce or shift demand for transportation through various means, such as the use of public transportation, carpooling, telework, and alternative work hours. TDM strategies can be used to manage congestion during peak periods and mitigate environmental impacts.

Tier I – Partially programmed projects

Tier II – Fiscally constrained projects that are not programmed. Projects in this category must be from a fiscally constrained document/list (such as the fiscally constrained project list in an RTP) and not from an unconstrained document (such as a TCR).

Tier III – Projects that the District will advocate to be included in fiscally constrained project lists (RTP, SHOPP) during the 20 to 25 year planning horizon. These are projects that are not currently in a fiscally constrained project list.

Tier IV – Projects that have a demonstrated need within the 20 to 25 year time horizon and have been identified as high priority by the District but are unlikely to receive funding within the 20 to 25 year time horizon. These are likely projects that will be programmed if an unexpected funding source becomes available, like an initiative or local measure.

Tier V – Other projects identified as needed by the District: these may be within the 20 to 25 year time horizon, beyond the 20 to 25 year time horizon, or only conceptual in nature.

Transportation Management System (TMS) -- The business processes and associated tools, field elements, and communications systems that help maximize the productivity of the transportation system. TMS includes, but is not limited to, advanced operational hardware, software, communications systems and infrastructure, integrated Advanced Transportation Management Systems and Information Systems, and the Electronic Toll Collection System.

Urban – 5,000 to 49,999 in population designates an urban area. Limits are based upon population density as determined by the U.S. Census Bureau.

Urbanized – Over 50,000 in population designates an urbanized area. Limits are based upon population density as determined by the U.S. Census Bureau.

Vehicle Miles Traveled (VMT) – The total number of miles traveled by motor vehicles on road or highway segments