Prepared by:

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Table of Contents

Introduction to the Transportation Concept Report..................................................4
Executive Summary..................................................................................................5

SAN JOAQUIN COUNTY

San Joaquin County Summary.............................................................................6
Segment Fact Sheets...............................................................................................8

STANISLAUS COUNTY

Stanislaus County Summary.................................................................................17
Segment Fact Sheets..............................................................................................18

CALAVERAS COUNTY

Calaveras County Summary...............................................................................20
Segment Fact Sheets.............................................................................................21

ALPINE COUNTY

Alpine County Summary.....................................................................................32
Segment Fact Sheets............................................................................................33

APPENDICES

Appendix A: Glossary..........................................................................................37
Appendix B: Acronyms.........................................................................................38
Appendix C: End Notes........................................................................................40
INTRODUCTION TO THE TRANSPORTATION CONCEPT REPORT

What is a Transportation Concept Report?

The Transportation Concept Report (TCR) is a long-term planning document that each Caltrans district prepares for every State highway, or portion thereof, in its jurisdiction, and is where long-range corridor planning in Caltrans usually begins. The purpose of a TCR is to determine how a highway will be developed and managed so that it delivers the targeted level of service (LOS) and quality of operations that are feasible to attain over a twenty-year period as indicated in the route concept.

The concept facility will provide the amount of vehicle-carrying capacity necessary to achieve the concept LOS and, in some cases, people-carrying capacity will also be incorporated. Auxiliary lanes are not considered a part of the mainline roadway and, therefore, are not included in the number of travel lanes indicated in a concept.

In addition to the 20-year route concept, the TCR includes an ultimate concept, which is the ultimate goal for the route beyond the twenty-year planning horizon. Ultimate concepts must be used cautiously however, because unforeseen changes in land use and other variables make forecasting beyond twenty years difficult.

How does the TCR fit in with local and regional planning efforts?

As owner/operator of the State Highway System (SHS) Caltrans establishes a long-range vision for its highways and determines overall strategies for their management. This is achieved by taking into consideration the numerous factors encompassed in the human and natural environments in which a particular route exists. During development of a TCR, Caltrans’ objective is to have local, regional, private sector, and State consensus on corridor concepts, planning strategies, and improvement priorities.

State highways within each local jurisdiction should be recognized and included in the circulation element of the general plan. The jurisdiction should also adopt the concept LOS standard (the minimum level or quality of operations that is appropriate for each route segment and is considered to be reasonably attainable within the 20-year planning period) indicated in the TCR, along with the concept improvements described in the TCR as necessary to meet the concept LOS. The jurisdiction has the option of adopting a higher LOS standard and acknowledging the inconsistency with the TCR and the associated funding participation limitations by the State for State highway improvements. Typical concept LOS standards in District 10 are LOS ‘C’ in rural areas and LOS ‘D’ in urban areas.

Does the TCR have to be read from cover to cover in order to get pertinent information about a route segment?

Caltrans does not intend for TCRs to be read from cover to cover as one would read a book. Rather, the TCR is a reference document with segment-specific information presented in a concise and readable format that allows the user to easily access, in one place in the document, all the necessary data and information that pertains to a particular segment of the route.

This format creates a certain amount of repetition in the TCR, as the route is divided into segments for analysis. Each segment’s fact sheet contains a variety of technical, statistical, cultural, environmental and other useful information that provide a deeper understanding of the route and a context for the concepts developed for it.

TCRs also include estimated right-of-way widths, and a scan of environmental resources and issues known to exist in the vicinity of the highway. Right-of-way and environmental information provided in a TCR are relative to the route or route segment and are not to be considered project specific. Precise right-of-way needs and environmental resources cannot be defined until the appropriate environmental and engineering studies are completed. In the back of the TCR is a glossary of terms and acronyms used for this report.

Concept Improvements

The range of improvements available to achieve a route concept is heavily influenced by environmental, political, and fiscal conditions. In many areas, planned projects are subject to meeting air quality conformity standards. Unanticipated safety projects and routine roadway maintenance are not included in route concept improvements, although both will occur throughout the corridor as needed.

Because a highway is but one part of an interconnected transportation network, District 10 takes a corridor approach to developing TCRs. The corridor may include additional transportation systems, such as bus or rail transit service, bicycle and pedestrian facilities, heavy rail, ports, airports, interregional bus service, local roadways, and facilities for neighborhood electric vehicles, used occasionally by older citizens for local mobility. All of these systems reduce excess highway demand by providing travelers and shippers of goods with non-highway or non-driving options. Expansion of those that can provide a notable improvement to mobility within the corridor are included as concept improvements.

Where a LOS is ‘F’, the TCR recommends general operational improvements and alternate modes of travel as starting places for further study. However, because the number of route segments with a concept LOS ‘F’ is expected to increase, operational (that is, non-capacity-increasing) improvements are now the primary strategy for optimizing the operation of the existing highway infrastructure. To fully integrate this strategy, future TCRs will include an operational analysis of heavily-congested urban route segments. The results of this analysis will determine which specific operational improvements will become concept improvements.

District 10 strives to improve the quality and usefulness of its TCRs. Future updates will be expanded to include performance measures and, if available, plans that help incorporate specific, context-sensitive features into highway projects.

State Route 4 Transportation Concept Report
The TCR provides long range system planning for highways, and identifies the potential future need for capacity increasing improvements. Employing Highway Capacity Manual (HCM 2010) methodologies, the TCR projects current traffic volumes twenty years into the future and compares future outcomes with the current facility and concept LOS, recommends future concept facilities, and defines the Ultimate Transportation Corridor (UTC) needed for the preservation of future right of way beyond its twenty year planning horizon.

This TCR addresses the portion of State Route 4 (SR-4) that originates from the Contra Costa County line through San Joaquin, Stanislaus, Calaveras and Alpine Counties. The portion of SR-4 that runs through Calaveras County has been addressed through a Corridor System Management Plan (CSMP) as part of the bond funding for the Angels Camp Bypass. Segment factsheets are included, but the CSMP should still be the primary document consulted. SR-4 is on the Interregional Road System (IRRS). The concept LOS standard for facilities with an IRRS designation in District 10 is ‘D’ for urban, and ‘C’ for rural. As SR-4 is on the Freeway and Expressway system from the Contra Costa county line to the un-built State Route 65, along this segment, the design requirements for future facilities would be expressway at a minimum. Portions of this segment are subject to freeway agreements, along with a portion of the route from south of Arnold in Calaveras County through to the intersection with SR-207 in Alpine County.

The Federal Highways Administration (FHWA) functionally classified SR-4 as a Principal Arterial or Major Collector depending on urban or rural development in the most recent California Road System maps. SR-4 is on the Federal Highway System (FHS) for the freeway portion accessing the Port of Stockton from SR-99, and is on the National Network. From Port of Stockton Expressway in San Joaquin County to SR-207, SR-4 is a Terminal Access route consistent with the Surface Transportation Assistance Act’s (STAA) provisions. The segment between Tracy Boulevard and Port of Stockton Expressway conforms to the California legal truck standard, and advisory truck routes are found on the segments west of Tracy Boulevard (to Contra Costa County) and east of SR-207 (to SR-4’s eastern terminus at SR-89). SR-4, with the exception of the freeway portion, is pedestrian and bicycle accessible. SR-4 is designated as a State and federal scenic highway from east of Arnold to SR-89, and is eligible for consideration as a scenic highway east of Angels Camp.

Current and future LOS for SR-4 are deficient throughout San Joaquin, Stanislaus, and Calaveras Counties (with the exception of the freeway segment between I-5 and the Port of Stockton). Capacity increasing efforts are not addressed in the San Joaquin Council of Government’s (SJCOG) 2011 Regional Transportation Plan (RTP), and the Calaveras Council of Government’s (CALACOG) 2007 RTP identifies the Wagon Trail project as an effort to address a portion of these reported deficiencies. No deficiencies are reported for Alpine County.

Initial planning documents do not consider costs, design, or prioritization, and are subject to refinement and revision as better information or methods become available. The information provided reflects best practices and do not necessarily constitute standards, specifications, or regulations. Every effort has been made by the District 10 Planning Division to ensure the accuracy and precision of the data presented.
Nine segments of SR-4 in San Joaquin County were analyzed in this TCR. The division of these segments followed considerations of changes in traffic volume or its composition, a change in the number of lanes, and whether the segment was urban or rural. This method deviates from that suggested in HCM (2010), but provides for a more concise characterization of the need for capacity increases, versus operation improvements generally beyond this document’s scope.

Future forecast volumes were obtained through three linear projections: 1) from past traffic volumes for the previous twenty years to present, and extended twenty years further; 2) from the local transportation planning jurisdiction’s travel demand model (TDM); and 3) from the Department of Finance’s (DOF) twenty year population growth projection for San Joaquin County. The three projections are then compared for consistency, and may result in one projection being dropped, usually because it overestimates or underestimates future growth compared to the last validated transportation planning jurisdiction’s TDM.

Comparison was made between District 10’s corridor planning efforts for SR-4 with District 4’s efforts contained in their SR-4 Transportation Corridor Concept Report (TCCR, 2001) and SR-4 CSMP (2010). For the adjoining segment (identified as segment M in the TCCR, but unreported in the CSMP) the “operational concept configuration (draft)” is reported to be a four lane conventional highway for 2025 with a 40% growth in traffic over time (DOF’s 2011 projections have this growth at 220%). The TCCR recommends a four lane conventional highway from Brentwood to the Old River Bridge, however, the CSMP reports a Brentwood Bypass that will develop a four lane freeway facility to Balfour Road west of Brentwood from an existing two lane expressway, and the expressway concept likely supercedes the TCCR. District 10 envisions a future need for expansion to a four lane expressway which best fits SR-4’s inclusion on the Freeway and Expressway System between Contra Costa Interstate 80 (I-80) and SR-99, as well as being part of the IRRS for the segment between Old River Bridge and Tracy Boulevard. The prominent constraint upon widening to concept is the Old River Bridge. Roadway construction to either conventional or expressway design would likely be an insignificant part of the overall cost.

Depending on its context, San Joaquin (SJ-4) presents four distinct facilities. West of I-5, SR-4 is a conventional highway on into Contra Costa County. A second facility is the truncated freeway access to the Port of Stockton from I-5, and currently terminating at Fresno Avenue. Third is the Crosstown Freeway that connects I-5 with SR-99. Last is the conventional highway east of SR-99 through developed agricultural land.

Segments one, two, and three of SJ-4 present several unique system planning issues. All are within the Sacramento and San Joaquin River Delta. Segment one originates at the Old River Bridge (a two lane drawbridge built in 1915—elevation eight feet above mean sea level) runs across Victoria Island to the Middle River Bridge (a two lane truss bridge built in 1915, eight feet above mean sea level) and follows the levee to Tracy Boulevard. The segment possesses narrow lanes and sharp turns consistent with its designation as an advisory truck route. Segment two continues on the levee from Tracy Boulevard to the San Joaquin River Bridge (a two lane through truss swing bridge built in 1933, ten feet above mean sea level). Segment three proceeds from the San Joaquin River Bridge across Moss Tract and has an elevation less than ten feet above mean sea level. Any future efforts to improve the capacity of these facilities will need to address bridge improvement or replacement. The three bridges present operational considerations with speed reduction on the approach due to reduced lane width, and the acute angle of approach, along with intermittent congestion and driver delay associated with bridge openings. Non-standard shoulders and lane widths combined with a lack of parallel streets and roads for detour contribute to severe congestion events.

State highways in the Delta experience engineering and maintenance challenges due to the high content of peat in the soils. Oxidation and compaction of peat contributes to high rates of subsidence, reducing pavement life.

In addition, future planning efforts should anticipate concerns with inundation due to sea level rise, land subsidence, and changes in precipitation and flood regimes due to global warming. Mapping shows segments one and two to be currently below sea level from west of Old River Bridge to east of Middle River Bridge, with a currently projected rise in sea level by 2100 to be between 31 and 69 inches, with an estimate of 5 to 8 inches by 2030 (State of California Sea Level Rise Interim Guidance Document, October, 2010)1. Recent studies suggest that global warming has increased flood risk2.

Segment four provides freeway access from the National Truck Network to the Port of Stockton via Fresno Avenue and Washington Streets. Recent efforts to extend the freeway from Fresno Avenue to Navy Drive are underway (EA 10-051101), with a future alignment through to existing SJ-4 at the Port of Stockton Expressway proposed. With completion of these facilities, a realignment of SJ-4 would be in place, with a facility having the potential for providing a third major freight corridor into the Bay Area.

Segment five provides a freeway commute connection between I-5 and SR-99 in Stockton, and provides convenient freight access between the Port of Stockton and the two intermodal rail facilities at Latrop and Mariposa Road, east of Stockton. Unlike segment four, the capacity of segment five is currently exceeded, and plans are in place to increase the number of lanes and modify interchanges.

Although it is unclear at this time what the proportion of the traffic mix between interregional and regional work commutes is, some consideration should be given to further improving transit and car pooling along segment five, as well as for both the I-5 and SR-99 corridors. Recent work based upon the 2003 subway strike in Los Angeles, indicates that investment in public transit along congested corridors may perform far better in alleviating congestion than previous studies had shown (Subways, Strikes, and Slowdowns: The Impacts of Public Transit on Traffic Congestion, Michael L. Anderson, National Bureau of Economic Research, February 2013, Working Paper 18757).

Segments six through nine serve farms east of Stockton, but much of the traffic is interregional, originating from either Calaveras or Tuolumne Counties. The facility is a two lane conventional highway, with current volumes at or below capacity. To effectively serve the best public interest, maintaining an efficient highway has to be balanced with appropriate and timely expenditure. This intent is expressed by the term concept LOS. Concept LOS reflects the level of highway efficiency weighed across the largest number of drivers. Absent competing land uses, the only apparent improvement is the addition of lanes in order to retain a concept LOS. However, when other performance measures are taken into consideration, operation improvements may serve as a better means to retain concept LOS. Operation improvements should be the first consideration before seeking to address a highway’s need with a capacity
increase, as they are less expensive, and, on average, require less time to implement. The most prominent operational improvement for conventional highways would be the development and implementation of access management plans, particularly for those segments where turning movements play a significant role in accidents or diminished operations. Increased passing opportunities on expressways, and auxiliary lanes on freeways that reduce weaving are other examples of operation improvements that retain or enhance concept LOS.

At the time of the 2010 Census, Stockton's population (291,707) was comprised of these general ethnic racial categories: 37% White, 12.2% African-American, 1.1% Native American, 21.5% Asian, and 0.6% Pacific Islander. Of the population, 40.3% self identified as Latino or Hispanic. Median household income is $35,453 (below both the County and State averages of $41,282 and $47,493). For Stockton, 23.9% of the population is below the federal poverty line (17.7% for San Joaquin County as a whole; 2000 Census). Currently, the Stockton—Lodi Metropolitan Statistical Area (MSA, which was the seventy-sixth largest MSA by population) has been combined into the San Joaquin—San Francisco—Oakland MSA, which is the fifth largest MSA in the country.

Land uses along the SJ-4 corridor are highly variable. Since, local agency general plans characterize and distribute future population density, and would influence future traffic volumes, SJ-4 is subject to the adjacent land uses of the San Joaquin County General Plan for segments one, two, seven, eight, and nine; and the City of Stockton's General Plan for segments three through six. For the San Joaquin General Plan, the land uses fall under agricultural and rural residential uses which permit numerous access points on the highway. These present some challenge when upgrading a conventional highway to expressway, as highway access rights need to be restricted when meeting design criteria of the Highway Design Manual. Within the Stockton General Plan most freeway portions of SJ-4 and the adjacent land uses and neighborhood values constrain capacity increases, since these are in areas of developed neighborhoods or industrial use. Only segments three and six might see resolution of conflicting uses through the implementation of bypasses to avoid adverse affects to existing commercial or residential development.

SJ-4 is a principal connection to non-automobile transportation in San Joaquin County. Lacking light rail and other dedicated transit along most of the route, near segment five, commuters may access both Amtrak and the Altamont Commuter Express (ACE) to San Jose (which can transfer to the Bay Area Rapid Transit (BART) stations in Livermore and Pleasanton); and the Stockton Greyhound Bus Station. Regional and local transit routes 51, 52, 90, 91, and 380 have portions of their routes on SJ-4. With the exceptions of segments four and five, SJ-4 is bicycle accessible (though access may be constrained at the Delta bridges), and within the city limits of Stockton, the route employs sidewalk and pedestrian crossings. Outside of Stockton, SJ-4 serves Farmington as the community’s main street. It is only there that considerations of complete streets and context sensitive solutions would apply, elsewhere on the route they are not at the forefront of planning consideration.

On segment six there is an at grade rail crossing. Located at PM 19.940 between Stagecoach Road and South Olive Avenue, the at grade crossing was improved by a local street improvement project on Stagecoach Road. The at grade crossing is not currently addressed as either a tier I or tier II project on the 2011 RTP.

Other than its service as a direct truck route to the Port of Stockton, SJ-4 plays a secondary role in the movement of goods and services compared to other National Network routes such as I-5, I-205, I-580, and SR-99 in San Joaquin County. Much of its role serves as a connector between the I-5 and SR-99, though in the future, an important parallel terminal access route to the envisioned light industrial and commercial development along Sperry Road will exist. SJ-4's role as a feeder route to other local terminal access routes may be enhanced by intersection improvements (for example Jack Tone Road) or interchange improvements with currently designated truck routes to enable truck movement in all directions.

Modeling and analysis indicate that all segments will be deficient by 2030 except for segment four. For segments one through three, and five, the deficiency appears directly related to future growth within San Joaquin County. Segments six through nine appear related to growth in interregional traffic originating from Calaveras and Tuolumne Counties. Currently, efforts to extend SJ-4 into the Port of Stockton may effectively realign the highway, and bypass segment three and the eastern portion of segment two.

Segment five presents several planning issues. Current planned projects in the SJCOG RTP conform to a concept facility of an eight lane freeway. The current UTC is eight lanes as well. Modeling based on the forecast volumes for 2030 suggest that at that date, should the facility be eight lanes, the concept LOS will still be exceeded, and the concept facility may be ten lanes. The need for ten lanes depends upon three factors:

- Within the Stockton area, alternate truck and commuter routes will remain un-built. Construction of Sperry Road and Arch Road improvements between I-5 and SR-99 would potentially redirect truck and commuter traffic away from the Cross-town Freeway.
- The forecast volumes reflect assumptions of population growth prior to the economic recession. AADT volumes have declined since 2008, and with a large volume of unoccupied housing units, growth in San Joaquin County commuter traffic has declined. If such a trend persists, it will require a reduction in the forecast future population growth rate.
- Segment five was constructed in an urban setting, with adequate set asides for future expansion. Without adequate set asides, the cost for expansion of the facility would be unfeasible, and require development of new routes in a rural context (e.g. unconstructed traversable routes 234 and 235).

In considering these three factors, the concept facility will remain eight lanes, but the UTC will change to ten lanes.
### SAN JOAQUIN COUNTY FACT SHEETS—SEGMENT 1

**STATE ROUTE 4**

**TRANSPORTATION CONCEPT REPORT**

**SAN JOAQUIN COUNTY**

#### Description:
- **Segment Location:** San Joaquin Co. Line to Tracy Blvd.
- **Post Mile:** 0.000-5.96
- **Functional Classification:** Minor Arterial
- **Local Planning Jurisdiction:** San Joaquin Council of Governments (SJCOG)
- **Other Agency/Entity:** None

#### Post Mile: 0.000-5.96

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<td>to Antioch</td>
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**Current Transportation Network**

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**Existing Facility:**
- Two lane conventional highway

**Volume/Capacity:**
- Average Daily Traffic: 9,200
- Peak Hour Volume: 12,000
- Peak Hour Directional Split: 70/30
- Truck Volume % of Total ADT: 9.1
- Peak Hour % of Trucks: TBD

**Peak Hour Volume:**
- PM: 12,000
- PM: 20,070

**Speed Limits:**
- Rural/Urban: 55 MPH

**Bicycle Facility:**
- Yes

**Airports:**
- Yes

**Intermodal Freight Facilities:**
- No

### Operational Performance

#### Current Level of Service (LOS):
- D

#### Peak Hour:
- PM: 0.000-5.96
- PM: 1080830

#### Bicycle Facility:
- Existing

#### Pedestrian Facility:
- No

#### Transit Bus:
- No

#### Existing Transportation Network:
- Four lane expressway

### Intelligent Transportation System (ITS) Elements & Detection

#### ITS Element:
- TMS

#### Status:
- Existing

#### Direction:
- Both

### Pilot Program

#### 2020 Program:
- Four lane expressway
- Ultimate Transportation Corridor: Four lane expressway

### Comments:
- This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.
### Segment 2

**State Route 4**

**Transportation Concept Report**

**San Joaquin County**

**Description:** From Tracy Blvd. to San Joaquin River Bridge

**Functional Classification:** Minor Arterial

**Bridge Needs:** Distressed Lane Miles 12.63

**Truck Volume % of Total ADT:** 9.2 9.2 9.2

**Peak Hour % of Trucks:** 7.4 7.4 7.4

**Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi-modal at this time.

**Concept Level of Service:** 2020

**Ultimate Transportation Corridor:** Four lane expressway

**Comments:**

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**Bridge Needs:** Distressed Lane Miles 12.63

**Present Serviceability Rating:** 2

**Level of Service:** Peak

**Grade %:** N/A

**Shoulder Width (ft.):** N/A

**Median Width (ft.):** N/A

**Right of Way Width (ft.):** 50-140

**Functional Classification:** Minor Arterial

**Facility Type:** Scenic Highway (Designated)

**Concept Facility:** Four lane expressway

**Ultimate Transportation Corridor:** Four lane expressway

**Comments:**

There are no programmed projects in this segment.

**Control improvement project for safety and capacity.**

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**Environmental Status**

**Degree of Impact:**
- Flood Plains: None
- Wetlands: None
- Cultural Resources: Low
- Strategic Highway Network: None
- Special Status Species: None
- Leaking Underground Tanks: None
- Possible Hazardous Waste: None
- Ozone: Non Attainment
- Particulate Matter 10 microns: Non Attainment
- Particulate Matter 2.5 microns: Non Attainment/Maintenance
- Carbon Monoxide: Maintenance

**Bicycle Facility**

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**Roadbed Information (approximate)**

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**Local Planning Jurisdiction:** San Joaquin Council of Governments (SJCOG)

**Other Agency/Entity:** San Joaquin County

**Post Mile Location Description**

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<th>Post Mile</th>
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<tr>
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**Planning and Development**

**Intelligent Transportation System (ITS) Elements & Detection**

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**Note:** This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.
**SAN JOAQUIN COUNTY FACT SHEETS—SEGMENT 3**

### Description:
- From San Joaquin River Bridge to I-5

#### Post Mile:
- 14.147-15.912

**Functional Classification:**
- Principal Arterial

**Number of Lanes:**
- Two

**Right of Way Width:**
- 50-125

**Shoulder Width:**
- 0-8

**Bridge Needs:**
- Distressed Lane Miles: 3.70

**Principal Arterial Location:**
- San Joaquin, River, Cordes U/C

**Bridge Name:**
- 29-0050, 29-0051

### SAN JOAQUIN COUNTY

**Area:**
- San Joaquin Council of Governments (SJCOG)

### SEGMENT 3

**Location:**
- Stockton Metro

**Level of Service (LOS):**
- PM 14.147-15.912

**LCS LOSPLAN**
- PM 14.045

**HCS LOSPLAN**
- PM 14.045

**HCS LOSPLAN**
- PM 14.045

**HCS LOSPLAN**
- PM 14.045

**Peak Hour % of Trucks:**
- PM 14.045

**Peak Hour Directional Split:**
- PM 14.045

**Volume/Capacity:**
- PM 14.045

**Peak Hour Volume:**
- PM 14.045

**Average Daily Traffic:**
- 23,170

**Grade %:**
- 12.0%

**Wetlands:**
- High

**Losing Underground Tanks:**
- High

**Special Status Species:**
- Possible Hazardous Waste: Low

### Travel Forecast Data

**Peak Hour Volume:**
- 2,870

**Volume/Capacity:**
- 2,870

**Peak Hour Directional Split:**
- 70/30

**Peak Hour % of Trucks:**
- PM 14.045

**Average Daily Traffic:**
- 23,170

**Peak Hour Volume:**
- 2,870

**Grade %:**
- 12.0%

**Wetlands:**
- High

**Losing Underground Tanks:**
- High

**Special Status Species:**
- Possible Hazardous Waste: Low

### Concept Facility:
- Four lane expressway

### Comments:
- There are no Existing ITS Elements in this Segment.

### Programmed Projects

**Contractor Improvement Project for Safety and Capacity:**
- Bridge

**Install sign, beacon, and HAR support:**
- Bridge

**Install RWIS in both directions:**
- Bridge

**Install CMS and CCTV in both directions:**
- Bridge

**Install sign, beacon, and HAR support:**
- Bridge

**Interchange improvement:**
- Bridge

**Note:** This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.
## SAN JOAQUIN COUNTY FACT SHEETS—SEGMENT 4

### TRANSPORTATION CONCEPT REPORT

#### STATE ROUTE 4

**Description:**
From Fresno Avenue to I-5

**Post Mile:**
115.316-R16.059

**Length:**
0.665

**Functional Classification:**
Freeway

**Local Planning Jurisdiction:**
San Joaquin Council of Governments (SJCOG)

**Other Agency/Entity:**
City of Stockton

<table>
<thead>
<tr>
<th>Segment Location</th>
<th>SEGMENT 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Post Mile</strong></td>
<td>115.316-R16.059</td>
</tr>
<tr>
<td><strong>Length</strong></td>
<td>0.665</td>
</tr>
<tr>
<td><strong>Functional Classification</strong></td>
<td>Freeway</td>
</tr>
<tr>
<td><strong>Local Planning Jurisdiction</strong></td>
<td>San Joaquin Council of Governments (SJCOG)</td>
</tr>
<tr>
<td><strong>Other Agency/Entity</strong></td>
<td>City of Stockton</td>
</tr>
</tbody>
</table>

### SAN JOAQUIN COUNTY SEGMENT 4

**Segment Route Concept**
2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Date: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multimodal at this time.

<table>
<thead>
<tr>
<th>Segment Route Concept</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Segment Route Concept</strong></td>
<td>Four lane freeway</td>
</tr>
<tr>
<td><strong>Post Mile</strong></td>
<td>115.316-R16.059</td>
</tr>
<tr>
<td><strong>Concept Facility:</strong></td>
<td>Four lane freeway</td>
</tr>
<tr>
<td><strong>Ultimate Transportation Corridor:</strong></td>
<td>Four lane freeway</td>
</tr>
</tbody>
</table>

### Terminology

- **LOS** (Level of Service)
- **ADT** (Average Daily Traffic)
- **ITS** (Intelligent Transportation System)

### Bridge Needs

- Distressed Lane Miles: 5.60

### Distressed Lane Miles

- **Type:** Freeway
- **Location:** S-4/I-5 Connector

### Environmental Status

- **Degree of Impact:** Low
- **Degree of Impact:** Low
- **Degree of Impact:** Low

### Air Quality

- **Ozone:** Non Attainment
- **Particulate Matter 2.5 m:** Non Attainment/Maintenance
- **Particulate Matter 10 m:** Maintenance

### Peak Hour Volume

- 2,045
- 2,430
- 3,385

### Level of Service (LOS) calculated using Highway Capacity Software (HCS+) and Florida Department of Transportation HIGHPLAN Location

<table>
<thead>
<tr>
<th>LOS</th>
<th>Peak Hour Volume</th>
<th>Peak Hour Directional Split</th>
<th>Peak Hour % of Trucks</th>
<th>Truck Volume % of Total ADT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS1</td>
<td>2,045</td>
<td>60/40</td>
<td>7.2</td>
<td>0.75</td>
</tr>
<tr>
<td>LOS1</td>
<td>2,430</td>
<td>60/40</td>
<td>7.2</td>
<td>0.75</td>
</tr>
<tr>
<td>LOS1</td>
<td>3,385</td>
<td>60/40</td>
<td>7.2</td>
<td>0.75</td>
</tr>
</tbody>
</table>

### Existing Transportation Network

- **Peak Hour % of Trucks:** 7.2
- **LOS:** PM
- **Volume/Capacity:** 7.2

### Travel Forecast Data

- **Peak Hour Volume:** 28,460
- **Average Daily Traffic:** 17,200
- **Peak Hour Directional Split:** 60/40
- **Peak Hour % of Trucks:** 7.2
- **Truck Volume % of Total ADT:** 0.75

### Bicycle Facility

- **Location:** Port of Stockton

### Pedestrian Facility

- **Location:** Port of Stockton

### Transit Bus

- **Location:** Port of Stockton

### Facility Type

- **Freeway**
- **Scenic Highway (Eligible)**

### Functional Classification

- **Freeway**
- **Scenic Highway (Designated)**

### Non-Maintained

- **Non-Maintained Maintenance**

### Programmed Projects

- **115.316-R16.059**

### Intelligent Transportation System (ITS) Elements & Detection

- **ITS Element:** There are no existing ITS Elements in this Segment.

### Comments

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

---

**Note:** This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.
**San Joaquin County Fact Sheets—Segment 5**

**State Route 4**

**Description:**
- All 1-4 miles of SR-99 (Route Break)

**Post Mile:**
- R16.06-R19.44

**Urban/Urbanized:**
- Urban

**Length:**
- 3.381

**Functional Classification:**
- Freeway

**Local Planning Jurisdiction:**
- San Joaquin Council of Governments (SJCOG)

**Other Agency/Entity:**
- City of Stockton

---

**Functional Classification:**
- Freeway

**Facility Type:**
- Scenic Highway (Designated)

**Interregional Road System:**
- Yes

**National Network, Terminal Access:**
- Yes

**Freeway Expressway System:**
- Yes

**Strategic Highway Network:**
- Yes

**Freeway Agreement:**
- Yes

**Access to Intermodal Freight Facility:**
- Low

**Pedestrian Facility:**
- Low

**Bicycle Facility:**
- Low

**Airports:**
- Low

**Intermodal Commuter Facilities:**
- Low

**Intermodal Freight Facilities:**
- Low

---

**Type of Right of Way:**
- 12

**Right of Way Width:**
- 100-300

**Shoulder Width:**
- 0-13

---

**Number of Lanes:**
- Six

**Lane Width (ft.):**
- 12

**Flat Right of Way:**
- Yes

**N/A Right of Way:**
- No

**Shoulder Width (ft.):**
- 12-24

**Median Width (ft.):**
- 12-24

**Distressed Lane Miles:**
- 6.40

**Bridge Needs:**
- R19.20

**Present Serviceability Rating:**
- 3

**Bridge Name:**
- Mormon Slough

**Functional Classification:**
- Freeway

**Facility Type:**
- Scenic Highway (Eligible)

---

**Non-Maintenance:**
- Non Maintenance

**Non-Maintenance Maintenance:**
- Non Maintenance/Maintenance

---

**Peak Hour Volume:**
- 17,722

**Average Daily Traffic:**
- 96,190

**Peak Hour Directional Split:**
- 60%

**Peak Hour % of Trucks:**
- 7.2

---

**Travel Forecast Data**

**Posted Speed:**
- 65 MPH

**Existing Facility:**
- Six lane freeway

**Volume/Capacity:**
- Average Daily Traffic: 96,190

**Peak Hour % of Trucks:**
- 7.2

**Peak Hour % of Total ADT:**
- 60%

**Peak Hour Directional Split:**
- 60%

**Peak Hour Volume:**
- 17,722

**Volume/Capacity:**
- Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN

**Peak Hour Directional Split:**
- 60%

**Peak Hour Volume:**
- 17,722

**Volume/Capacity:**
- Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN

---

**Programmed Projects**

- There are no programmed projects in this segment.

---

**Programmed Projects**

- There are no Existing ITS Elements in this Segment.

---

**Comments:**

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

---

**State Route 4 Transportation Concept Report**

---

**State Route 4 Transportation Concept Report**
### SAN JOAQUIN COUNTY FACT SHEETS—SEGMENT 6

#### STATE ROUTE 4 MANAGEMENT LOCATION

**Description:**
- Jct. of SR-99 to Walker Ln. (End of Urban Boundaries)

**Post Mile:**
- 19.750-20.690

**Rural/Urban/Urbanized:**
- Urbanized

**Length:**
- 0.944 miles

**Urban City Limits:**
- Yes

**Functional Classification:**
- Principal Arterial

**Local Planning Jurisdiction:**
- San Joaquin Council of Governments (SJCOG)

**Other Agency/Entity:**
- City of Stockton

#### Number of Lanes:
- Two

**Lane Width:**
- 12 feet

**Right of Way Width:**
- 80-200 feet

**Shoulder Width:**
- 8-12 feet

**Median Width:**
- 6-60 feet

**Distressed Lane Miles:**
- 1.70 miles

**Bridge Needs:**
- Present Serviceability Rating: 3

**Bridge Name:**
- SR-4/SR-99 Separation

**Functional Classification:**
- Principal Arterial

**Scenic Highway (Designated):**
- No

**Scenic Highway (Eligible):**
- No

**High Emphasis Route:**
- No

**National Network, Terminal Access:**
- Terminal Access

**Surface Transportation Assistance Act (STAA):**
- Yes

**Freeway Expressway System:**
- Yes

**Advisory:**
- No

**Additional Restrictions:**
- None

**Access to Intermodal Freight Facility:**
- No

**Air Quality:**
- Ozone:
  - Non Attainment
- Particulate Matter 10 m:
  - Maintenance
- Particulate Matter 2.5 m:
  - Maintenance

**Carbon Monoxide:**
- Non Attainment

**Degree of Impact:**
- Waterbodies: Low

**Non Attainment:**
- None

**Wetlands:**
- Low

**Leaking Underground Tanks:**
- Moderate

**Special Status Species:**
- Low

**Possible Hazardous Waste:**
- Moderate

**Hazardous Waste:**
- Moderate

**Flood Plains:**
- Low

**Cultural Resources:**
- High

**Highway Capacity Software (HCS):**
- Calculated using Florida Department of Transportation HIGHPLAN Location: 7/17/2010

**Level of Service (LOS):**
- LOS does not reflect multi modal at this time

**Travel Forecast Data:**
- 2007 2015 2030

<table>
<thead>
<tr>
<th>Year</th>
<th>Particulate Matter ‘10 m</th>
<th>Particulate Matter ‘2.5 m</th>
<th>Carbon Monoxide</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>7,000</td>
<td>5545</td>
<td>2007</td>
</tr>
<tr>
<td>2015</td>
<td>9,000</td>
<td>5545</td>
<td>2015</td>
</tr>
<tr>
<td>2030</td>
<td>14,880</td>
<td>5545</td>
<td>2030</td>
</tr>
</tbody>
</table>

**Bicycle Facility:**
- Yes

**Airports:**
- Yes

**Intermodal Commuter Facilities:**
- Yes

**Intermodal Freight Facilities:**
- Yes

**Peak Hour % of Trucks:**
- PM

**Level of Service (LOS):**
- No

**Existing Facility:**
- Two lane conventional highway

**Volume/Capacity:**
- 84,000

**Average Daily Traffic:**
- 7,000

**Peak Hour Volume:**
- 3.7

**Peak Hour Directional Split:**
- 55/45

**Peak Hour % of Total ADT:**
- 4.6

**Truck Volume % of Total ADT:**
- 4.6

**Peak Hour of Trucks:**
- 3.7

**Pedestrian Facility:**
- Yes

**Park and Rides:**
- Yes

**Freight Distribution:**
- Yes

**Transit Bus:**
- Yes

**Shared Lane Access:**
- No

**Freeway Agreement:**
- No

**Highway Capacity Software (HCS):**
- Calculated using Highway Capacity Software (HCS+) Location: Florida Department of Transportation HIGHPLAN Location: 7/17/2010

**Level of Service (LOS):**
- LOS does not reflect multi modal at this time

**Existing Facility:**
- Two lane conventional highway

**Volume/Capacity:**
- 84,000

**Average Daily Traffic:**
- 7,000

**Peak Hour Volume:**
- 3.7

**Peak Hour Directional Split:**
- 55/45

**Peak Hour % of Total ADT:**
- 4.6

**Truck Volume % of Total ADT:**
- 4.6

**Peak Hour of Trucks:**
- 3.7

**Pedestrian Facility:**
- Yes

**Park and Rides:**
- Yes

**Freight Distribution:**
- Yes

**Transit Bus:**
- Yes

**Shared Lane Access:**
- No

**Freeway Agreement:**
- No

**Highway Capacity Software (HCS):**
- Calculated using Highway Capacity Software (HCS+) Location: Florida Department of Transportation HIGHPLAN Location: 7/17/2010

**Level of Service (LOS):**
- LOS does not reflect multi modal at this time

**Existing Facility:**
- Two lane conventional highway

**Volume/Capacity:**
- 84,000

**Average Daily Traffic:**
- 7,000

**Peak Hour Volume:**
- 3.7

**Peak Hour Directional Split:**
- 55/45

**Peak Hour % of Total ADT:**
- 4.6

**Truck Volume % of Total ADT:**
- 4.6

**Peak Hour of Trucks:**
- 3.7

**Pedestrian Facility:**
- Yes

**Park and Rides:**
- Yes

**Freight Distribution:**
- Yes

**Transit Bus:**
- Yes

**Shared Lane Access:**
- No

**Freeway Agreement:**
- No

**Highway Capacity Software (HCS):**
- Calculated using Highway Capacity Software (HCS+) Location: Florida Department of Transportation HIGHPLAN Location: 7/17/2010

**Level of Service (LOS):**
- LOS does not reflect multi modal at this time

**Existing Facility:**
- Two lane conventional highway

**Volume/Capacity:**
- 84,000

**Average Daily Traffic:**
- 7,000

**Peak Hour Volume:**
- 3.7

**Peak Hour Directional Split:**
- 55/45

**Peak Hour % of Total ADT:**
- 4.6

**Truck Volume % of Total ADT:**
- 4.6

**Peak Hour of Trucks:**
- 3.7

**Pedestrian Facility:**
- Yes

**Park and Rides:**
- Yes

**Freight Distribution:**
- Yes

**Transit Bus:**
- Yes

**Shared Lane Access:**
- No

**Comments:**
- There are no planned projects in this segment.
SAN JOAQUIN COUNTY FACT SHEETS—SEGMENT 7

TRANSPORTATION CONCEPT REPORT

STATE ROUTE 4

SAN JOAQUIN COUNTY

POST MILE: 20.690-24.870

MINOR ARTERIAL

2-LANE WIDTH (FT.): 12

FLAT

RIGHT OF WAY WIDTH (FT.): 80-350

N/A

SHOULDER WIDTH (FT.): 2-8

3-8

ACCESSIBLE TO BICYCLES: Yes

Yes

BRIDGE NEEDS: Distressed Lane Miles

0.00

Bridge# 209-72

Bridge Name: Duck Creek

FUNCTIONAL CLASSIFICATION: Minor Arterial

SCENIC HIGHWAY (DESIGNATED): No

SCENIC HIGHWAY (ELIGIBLE): No

INTERREGIONAL ROAD SYSTEM: Conventional highway

TRUCKING NETWORK: Yes

High Impact Routes: No

Surface Transportation Assistance Act (STAA): Yes

California Legal: Yes

Advisory: No

Additional Restrictions: None

Freeway Agreement: No

Access to Intermodal Freight Facility: No

DEGREE OF IMPACT: Degree of Impact

Environmental Status

Wetlands: Leaking Underground Tanks:

Low

Low

Degree of Impact

Flood Plains: Cultural Resources:

Moderate

Low

Degree of Impact

Non-Attainment/Maintenance

Ozone

Particulate Matter 10 m

Particulate Matter 2.5 m

Carbon Monoxide

Degree of Impact

Non Attainment

Non Attainment

Non Attainment/Maintenance

Existing Transportation Network

State Route 4-5

Programmed Projects

There are no planned projects in this segment.

Planned

1

Programmed Projects

There are no programmed projects in this segment.

Post Mile Location

Description

20.690-24.870

Rural/Urban/Urbanized: Rural

Mile 20.690-24.870

0.19

Location On Route

Pedestrian Facility

There are no existing ITS Elements in this Segment.

Park and Ride

Transit Bus

There are no existing ITS Elements in this Segment.

LOS C

Pedestrian Access

Bicycle Access

Truck Access

Bus Access

Air Quality

Bicycle Facility

Airports

Intermodal Commuter Facilities

Intermodal Freight Facilities

Existing

Non Existing

Non Existing

Existing

Concept Level of Service:

Four lane expressway

2030

There are no planned projects in this segment.

Amongst Transportation System (Pilot Element) and Detection

Post Mile

Element Status Direction

20.690-24.870

Programmed Projects

0.19

Location

There are no planned projects in this segment.

Interagency Coordination

Post Mile

There are no programmed projects in this segment.

PM 20.690-24.870

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Location
**San Joaquin County Facts Sheets—Segment 8**

**State Route 4 (SR-4)**

**Transportation Concept Report**

**Description:**
- Jack Tone Rd. to Escalon Rd. (Farmington)
- Rural/Urban/Urbanized: Rural
- Local Planning Jurisdiction: San Joaquin Council of Governments (SJCOG)

**Functional Classification:** Minor Arterial

**Number of Lanes:**
- Lane Width (ft.): 12
- Right of Way Width (ft.): N/A
- Shoulder Width (ft.): N/A
- Median Width (ft.): None

**Distressed Lane Miles:**
- Present Serviceability Rating: 3

**Peak Hour % of Trucks:**
- PM: 4.0

**Peak Hour Volume:**
- PM: 420

**Level of Service (LOS) Plan:**
- PM: C

**Peak Hour Directional Split:**
- PM: 60/40

**Park and Ride Facilities:**
- Location: On Route

**Pedestrian Facility:**
- Location: Location

**Bicycle Facility:**
- Location: Location

**Intelligent Transportation System (ITS) Elements & Detection:**
- There are no existing ITS elements in this Segment.

**Transportation Concept Level of Service:**
- 2030: Four lane expressway

**Intelligent Transportation System (ITS) Elements & Detection:**
- There are no planned projects in this segment.

**Comments:**
- There are no programmed projects in this segment.

**Programmed Projects:**
- There are no programmed projects in this segment.

**Environmental Status:**
- Degree of Impact: Moderate
-Posted Speed: 55 MPH

**Travel Forecast Data:**
- Average Daily Traffic: 3,800

**Existing Facility:**
- Length: Within City Limits: No
- Functional Classification: Two lane conventional highway

**Peak Hour % of Total ADT:**
- PM: 5.0

**Peak Hour % of Trucks:**
- PM: 4.0

**Peak Hour Volume:**
- PM: 4,490

**Peak Hour Directional Split:**
- PM: 60/40

**Level of Service (LOS):**
- PM: D

**Level of Service (LOS) Plan:**
- PM: D

**Peak Hour Directional Split:**
- PM: 60/40

**Park and Ride Facilities:**
- Location: Location

**Pedestrian Facility:**
- Location: Location

**Bicycle Facility:**
- Location: Location

**Intelligent Transportation System (ITS) Elements & Detection:**
- There are no existing ITS elements in this Segment.
### SAN JOAQUIN COUNTY FACT SHEETS—SEGMENT 9

**State Route 4**

**Transportation Concept Report**

**San Joaquin SR-4 Segment 9**

**Description:**
- Location: Major Rd. To The San Joaquin/Santa Rosa Co. Line
- Post Mile: 33.080-38.059
- Urban/Rural: Rural
- Functional Classification: Minor Arterial
- Local Planning Jurisdiction: San Joaquin County
- Other Agency/Entity: San Joaquin County
- Postmile: 33.080-38.059

**Number of Lanes:**
- Use: Two
- Lane Width (ft.): U

**Terrain:**
- Flat: Yes
- Right of Way Width (ft.): 80-130
- Shoulder Width (ft.): 4-16
- Median Width (ft.): None
- Accessible to Bicycles: Yes

**Distressed Lane Miles:**
- Total: 10.90

**Minimum Arterial**

<table>
<thead>
<tr>
<th>Two Lane Width (ft.)</th>
<th>Flat</th>
<th>Right of Way Width (ft.)</th>
<th>Shoulder Width (ft.)</th>
<th>Median Width (ft.)</th>
<th>Accessible to Bicycles</th>
<th>Distressed Lane Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Yes</td>
<td>80-130</td>
<td>4-16</td>
<td>None</td>
<td>Yes</td>
<td>10.90</td>
</tr>
</tbody>
</table>

**Facility Type:**
- Conventional highway
- Scenic Highway (Designated): No
- Scenic Highway (Eligible): No

**Highway System:**
- National Network, Terminal Access
- Surface Transportation Assistance Act (STAA): Yes
- California Legal: Yes
- Advisory: No
- Additional Restrictions: None
- Access to Intermodal Freight Facility: No

**Level of Service (LOS):**
- LOS in this segment: Not Assessed

**Peak Hour Volume:**
- 565 PM
- 680 PM
- 1005 PM

**Peak Hour Directional Split:**
- 60/40

**Functional Classification:**
- Minor Arterial

**Postmile:**
- 33.080: N/A

**Bridge Needs:**
- Present Serviceability Rating: 3

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

### Air Quality

<table>
<thead>
<tr>
<th>Air Quality</th>
<th>Ozone</th>
<th>Non Attainment/Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Non Attainment</td>
<td></td>
</tr>
</tbody>
</table>

### Environmental Status

<table>
<thead>
<tr>
<th>Environmental Status</th>
<th>Degree of Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flood Plains:</td>
<td>Moderate/High</td>
</tr>
<tr>
<td>Cultural Resources:</td>
<td>Low</td>
</tr>
<tr>
<td>Wetlands:</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Special Status Species:</td>
<td>Moderate</td>
</tr>
<tr>
<td>Possible Hazardous Waste:</td>
<td>Low</td>
</tr>
</tbody>
</table>

### Programmed Projects

- Post Mile: 33.080-38.059
- Location: PM 33.080-38.059
- Description: There are no programmed projects in this segment

### Concept Level of Service:
- 2030: Four lane expressway

### Concept Facility:
- 2030: Four lane expressway

### Ultimate Transportation Corridor:
- Four lane expressway

### Comments:
- There are no programmed projects in this segment

### Existing Transportation Network

- Travellink:

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2015</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCS</td>
<td>0.22</td>
<td>0.27</td>
<td>0.32</td>
</tr>
<tr>
<td>LOSPLAN</td>
<td>0.18</td>
<td>0.20</td>
<td>0.26</td>
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</table>

### Bicycle Facility

<table>
<thead>
<tr>
<th>Bicycle Facility</th>
<th>Airports</th>
<th>Intermodal Commuter Facilities</th>
<th>Intermodal Freight Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park and Ride</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Transit Bus</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

### Pedestrian Facility

<table>
<thead>
<tr>
<th>Pedestrian Facility</th>
<th>Park and Ride</th>
<th>Freight Distribution</th>
<th>Transit Bus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Location</td>
<td>Location</td>
<td>Location</td>
</tr>
<tr>
<td>Location</td>
<td>Location</td>
<td>Location</td>
<td>Location</td>
</tr>
</tbody>
</table>

### Intelligent Transportation System (ITS) Elements & Detection

- There are no ITS Elements in this segment.

### Postmile

- There are no ITS Elements in this segment.

### Bridge Needs

- Present Serviceability Rating: 3

### Notes:
- This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.
For the portion of SR-4 that runs through Stanislaus County, much of the traffic can be considered interregional as no population or work centers exist on or near the segment. The context is rural and agricultural.

SR-4 was divided into two segments. This division followed considerations of change in traffic volume, its composition, or its flow, and conforms with the methodology suggested in HCM (2010).

To characterize LOS, two software applications were employed—HCS 5.4 and FDOT 2009 software (both are packaged together under the McTrans HCS trademark). Typically the two softwares provide equivalent results and serve as a useful means to assess possible modeling errors.

Future forecast volumes were obtained through three linear projections: 1) from past traffic volumes for the previous twenty years to present, and extended twenty years further, 2) from the local transportation planning jurisdiction’s TDM, and 3) from the Department of Finance’s twenty year population growth projection for Stanislaus County. The three projections are then compared for consistency, and may result in one projection being dropped, usually because it overestimates or underestimates future growth compared to the last validated transportation planning jurisdiction’s TDM.

Land uses along the SR-4 corridor conform to the Stanislaus County General Plan. General plans typically characterize and distribute future population density, and would influence future traffic volumes, however this influence is negligible for SR-4 given there is no current or future proposed development along these segments. As the current and likely future land uses are agricultural, increased traffic from access to the facility is not anticipated.

SR-4 supports few multimodal opportunities. There is no current transit service on the route at this time. Although the route supports moderate recreational bicycle use, the narrow lane widths and lack of shoulders might preclude bicycle use if traffic volumes were greater. No sidewalks are present.

The route plays a role in the interregional transport of goods and services, by linking Stockton (along with the Bay Area) to Angels Camp, Copperopolis, and Sierra Nevada recreational areas. The route is STAA compliant to Copperopolis. The route provides recreational travel to local wineries, lakes, and forests.

Modeling and analysis indicate both segments will experience a deficient LOS by 2030. As both segments are subject to concerns with vertical sight distance, operational improvements such as passing lanes may address most of the forecast deficiency. There are currently no projects in the StanCOG RTP to address this deficiency. Future analysis may be required.
### Stanislaus County Facts Sheets - Segment 1

**Description:** San Joaquin Co. Line to Milton Road

<table>
<thead>
<tr>
<th>Post Mile</th>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.540</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Functional Classification:** Minor Arterial

**Other Agency/Entity:** Stanislaus Council of Governments

**Number of Lanes:** Two

**Right of Way Width (ft.):** 13

**Shoulder Width (ft.):** 4-175

**Bridge Needs:** Distressed Lane Mile

### Stanislaus County

<table>
<thead>
<tr>
<th>Post Mile</th>
<th>Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.540</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Functional Classification:** Minor Arterial

**Other Agency/Entity:** Stanislaus Council of Governments

**Number of Lanes:** Two

**Right of Way Width (ft.):** 13

**Shoulder Width (ft.):** 4-175

**Additional Restrictions:** No

**Data Source:** 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi-modal at this time.

**Travel Forecast Data**

<table>
<thead>
<tr>
<th>Year</th>
<th>LOS D</th>
<th>LOS E</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>0.30</td>
<td>0.45</td>
</tr>
<tr>
<td>2015</td>
<td>0.26</td>
<td>0.45</td>
</tr>
<tr>
<td>2030</td>
<td>0.32</td>
<td>0.47</td>
</tr>
</tbody>
</table>

**Peak Hour Volume:** 675

**Average Daily Traffic:** 4,000

**Peak Hour Directional Split:** 70/30

**Peak Hour % of Total ADT:** 5.4

**Volume/Capacity:**

- **I-5 Element:** 0%
- **Status:** N/A
- **Direction:** N/A

### Stanislaus County

**Post Mile | Location | Description |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.540</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Functional Classification:** Scenic Highway (Designated)

**Other Agency/Entity:** Stanislaus Council of Governments

**Number of Lanes:** Two

**Right of Way Width (ft.):** 13

**Shoulder Width (ft.):** 4-175

**Additional Restrictions:** No

**Data Source:** 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi-modal at this time.

**Travel Forecast Data**

<table>
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<tr>
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</tr>
</thead>
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<tr>
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**Peak Hour Volume:** 675

**Average Daily Traffic:** 4,000

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**Peak Hour % of Total ADT:** 5.4

**Volume/Capacity:**

- **I-5 Element:** 0%
- **Status:** N/A
- **Direction:** N/A

### Stanislaus County

**Post Mile | Location | Description |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4.540</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Functional Classification:** Scenic Highway (Eligible)

**Other Agency/Entity:** Stanislaus Council of Governments

**Number of Lanes:** Two

**Right of Way Width (ft.):** 13

**Shoulder Width (ft.):** 4-175

**Additional Restrictions:** No

**Data Source:** 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi-modal at this time.

**Travel Forecast Data**

<table>
<thead>
<tr>
<th>Year</th>
<th>LOS D</th>
<th>LOS E</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.47</td>
</tr>
<tr>
<td>2030</td>
<td>0.32</td>
<td>0.47</td>
</tr>
</tbody>
</table>

**Peak Hour Volume:** 675

**Average Daily Traffic:** 4,000

**Peak Hour Directional Split:** 70/30

**Peak Hour % of Total ADT:** 5.4

**Volume/Capacity:**

- **I-5 Element:** 0%
- **Status:** N/A
- **Direction:** N/A

---

**Note:** This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.
**State Route 4** Transportation Concept Report

**Caltrans Department of Transportation District 10**

**Stanislaus County Fact Sheets—Segment 2**

<table>
<thead>
<tr>
<th>Post Mile</th>
<th>Length (mi)</th>
<th>Functional Classification</th>
<th>Other Agency/Entity</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.54-8.88</td>
<td>4.340</td>
<td>Minor Arterial</td>
<td>Stanislaus Council of Governments</td>
</tr>
</tbody>
</table>

### Traffic Forecast Data

- **Travel Forecast Data**
  - **2007**
    - **Peak Hour Volume**: 55 MPH
    - **Existing Facility**: Two lane conventional highway
    - **Peak Hour Volume**: 4,600
    - **Peak Hour Directional Split**: 70/30
    - **Peak Hour % of Trucks**: 3.6
  - **2010**
    - **Peak Hour Volume**: 6,900
    - **Peak Hour Directional Split**: 70/30
    - **Peak Hour % of Trucks**: 3.6

### Plan View

- **Route Designations**
  - **STANISLAUS COUNTY SEGMENT 2**
  - **Milton Road to Calaveras Co. Line**
  - **Postmile**: Rural/Urban/Urbanized
  - **Level of Service**: Peak Hour Volume: 55 MPH

### Concept Level of Service

- **Concept Facility**: Four lane expressway
- **Concept Class**: Class III
- **Environmental Status**: Degree of Impact: Moderate to High

### Programmed Projects

- **There are no programmed projects for this segment**
Caltrans produced a CSMP (The State Route 4 Corridor System Management Plan (2007)), for the portion of SR-4 from the Stanislaus County line in the west to the Alpine County line in the east. Data provided in that report is summarized and updated in the following segment fact sheets, but the report should be consulted as the primary document on current conditions and needs on the corridor. The purposes of CSMPs differ from TCRs as they consider the gains of a specific capital project in enhancing a local transportation system’s performance and outline means to conserve those improvements, rather than attempting to assess future needs for an entire corridor. After the Angels Camp Bypass traffic volumes stabilize, revisions to current and future forecasts will need to be updated in the next CSMP update and future TCRs.

Twelve segments of SR-4 were analyzed in the CSMP 2007, in the TCR these were changed to eleven. For TCRs, division of highways into segments for purposes of system evaluation and analysis follow considerations of changes in traffic volume or its composition, a change in the number of lanes, whether the segment was urban or rural, and changes in transportation planning or land use planning agency in order to develop a level of service performance measure. However, for the CSMP the division into segments followed a scheme in that segments broke at major intersections where the change in traffic volume did not necessarily change by 10% or that the lane configuration of the highway did not change. This reflects the CSMP’s emphasis on identifying parallel routes in part to conserve the project’s reduction in traffic delay. Both methods deviate from that suggested in HCM (2000, p. 21-13). In future TCRs, it is anticipated that fewer segments will be employed, as none of the current modeling software make significant distinctions between two lane conventional highways and two lane expressways as is the condition for SR-4 east of Angels Camp.

Due to different methods of analysis between the CSMP and that used in this reports’ fact sheet for the now constructed Angels Camp Bypass, results may differ. The future CSMP update will address any inconsistencies in the analysis.
**CALAVERAS COUNTY FACT SHEETS—SEGMENT 1**

### 4. State Route 4

#### Transportation Concept Report

**Location:** Mariposa Rd. to O’Byrnes Ferry Road

**Post Mile:** 0.000/R8.143

**Length:** 6.143

**Functional Classification:** Minor Arterial

**Local Planning Jurisdiction:** Calaveras County

**Other Agency/Entity:** Calaveras County Council of Governments

<table>
<thead>
<tr>
<th>Number of Lanes:</th>
<th>Lane Width (ft.):</th>
<th>Shoulder Width (ft.):</th>
<th>Median Width (ft.):</th>
<th>Distressed Lane Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two</td>
<td>See CSMP</td>
<td>See CSMP</td>
<td>See CSMP</td>
<td>See CSMP</td>
</tr>
</tbody>
</table>

### Roadway Designations

- **Minor Arterial**
- **Expressway**

### Planners

- **Present Serviceability Rating:** See CSMP

### Possible Hazards

- **High Emphasis Route:** Yes
- **Limited Access:** No
- **Advisory:** No
- **Additional Restrictions:** No
- **Access to Intermodal Freight Facility:** No

### Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi-modal at this time.

### Environmental Status

- **Degree of Impact:** Moderate to High
- **High Emphasis Route:** Yes
- **Critical Highway Network:** Freeway System
- **Flood Plains:** Yes
- **Wetlands:** Yes
- **Special Status Species:** Yes
- **Access to Bicycles:** Yes
- **Pedestrian Facility:** Yes
- **Bicycle Facility:** Yes
- **Grade %:** <3%
- **Rolling:** Yes

### Traffic Forecast Data

- **2030:**
  - **55 MPH Intermodal Commuter Facilities:** Yes
  - **PM 0.000-R8.143:** Yes
  - **Location:** Copperopolis
  - **LOS:** C

### Concept Level of Service: 2030

- **Four lane expressway**

### Planned Projects

- **Programmed Projects:** Yes

### Notes:

- **TFS Element:** Consult CSMP
- **Other Agency/Entity:** Calaveras County Council of Governments

---

**Intelligent Transportation System (ITS) Elements & Detection**

- **ITS Element:** Consult CSMP
- **Status:** Located/CSMP

---

**Note:** This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.
### CALAVERAS COUNTY FACT SHEETS—SEGMENT 3

**State Route 4**

**Transportation Concept Report**

**Caltrans Department of Transportation District 10**

**Calaveras County**

**Segment Location:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Post Mile: 14.10/18.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Classification:</td>
<td>Minor Arterial</td>
</tr>
<tr>
<td>Local Planning Jurisdiction:</td>
<td>Calaveras County</td>
</tr>
<tr>
<td>Other Agency/Entity:</td>
<td>Calaveras County Council of Governments</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Lanes:</th>
<th>Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Width (ft.):</td>
<td>See CSMP</td>
</tr>
<tr>
<td>Right of Way Width (ft.):</td>
<td>See CSMP</td>
</tr>
<tr>
<td>Shoulder Width (ft.):</td>
<td>See CSMP</td>
</tr>
<tr>
<td>Median Width (ft.):</td>
<td>See CSMP</td>
</tr>
<tr>
<td>Bridge Needs:</td>
<td>Deteriorated Lane Miles</td>
</tr>
<tr>
<td>Present Serviceability Rating:</td>
<td>See CSMP</td>
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<tr>
<td>Bridge Name:</td>
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### Route Designations

<table>
<thead>
<tr>
<th>Facility Type:</th>
<th>Scenic Highway (Designated): No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to Intermodal Freight Facility:</td>
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</tr>
</tbody>
</table>

### Strategic Highway Network

<table>
<thead>
<tr>
<th>State Route 4 Segment 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Segment 3</strong></td>
</tr>
<tr>
<td>Other State Highways</td>
</tr>
<tr>
<td>Local Roads</td>
</tr>
<tr>
<td>County Line</td>
</tr>
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</table>

### Proposed Level of Service (LOS):

<table>
<thead>
<tr>
<th>Segment Route Concept</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS 'D'</td>
</tr>
</tbody>
</table>

### Post-Mile Location Description

<table>
<thead>
<tr>
<th>Postmile</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.10/18.000</td>
<td>For planned and programmed projects, consult CSMP</td>
</tr>
</tbody>
</table>

### Environmental Issues

<table>
<thead>
<tr>
<th>Type of Transportation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Quality</td>
</tr>
<tr>
<td>Ozone</td>
</tr>
<tr>
<td>Nonattainment</td>
</tr>
<tr>
<td>Attainment</td>
</tr>
<tr>
<td>Unclassified</td>
</tr>
</tbody>
</table>

### Travel Forecast Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Average Daily Traffic</th>
<th>Peak Hour Volume</th>
<th>Peak Hour % of Trucks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>5,900</td>
<td>650</td>
<td>3.8</td>
</tr>
<tr>
<td>2015</td>
<td>7,212</td>
<td>862</td>
<td>3.8</td>
</tr>
<tr>
<td>2030</td>
<td>14,168</td>
<td>1,698</td>
<td>3.1</td>
</tr>
</tbody>
</table>

### Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi-modal at this time.
Calaveras County Fact Sheets—Segment 4

Description: Stockton Road (West) to State Route 49
Post Mile: 19.000 - 21.090
Length: 2.090
Functional Classification: Minor Arterial
Local Planning Jurisdiction: Calaveras County, City of Angels
Other Agency/Entity: Calaveras County Council of Governments

Table:
- Number of Lanes: 2
- Lane Width (ft.): See CSMP
- Right of Way Width (ft.): See CSMP
- Shoulder Width (ft.): See CSMP
- Median Width (ft.): See CSMP
- Distressed Lane Miles: See CSMP

Other:
- Accessible to Bicycles: Yes
- Median: Yes
- Roll
- Grade %: <3%
- Speed Limit: 55 MPH
- Peak Hour Volume: 580
- Peak Hour Directional Split: 57/43
- Peak Hour % of Trucks: 4.6
- Peak Hour % of Bikes: 2.6
- Existing Facility: Two lane expressway
- Future Facility: Four lane expressway
- Level of Service: C
- Average Daily Traffic: 12,400
- Travel Forecast Data: 2006 5,900, 2015 6,900, 2030 12,400
- inundation (optional)
- Flood Plains: N/A
- Wetlands: Low
- Cultural Resources: Moderate to High
- Leaking Underground Tanks: Low
- Special Status Species: Moderate to High
- Possible Hazardous Waste: Low to Moderate Lead, NOA

Degree of Impact
- Cultural Resources: High
- Leaking Underground Tanks: Low
- Possible Hazardous Waste: Low to Moderate Lead, NOA

Intelligent Transportation System (ITS) Elements & Detection
- ITS Element: CSMP
- Status: Contact CSMP
- Direction: L

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

Programmed Projects
- For planned and programmed projects, consult CSMP

Segment Route Concept
- Concept Level of Service:
- Concept Facility: 2030
- Ultimate Transportation Corridor: Four lane expressway

ITS Element
- ITS Element: Contact CSMP

Air Quality
- Ozone: Nonattainment
- Particulate Matter 10 m: Unclassified
- Particulate Matter 2.5 m: Unclassified
- Carbon Monoxide: Attainment
- Air Quality Focus Route/Gateway Route: Surface Transportation Assistance Act (STAA)

Bicycle Facility
- Bicycle Facility: No
- Bike Lanes: No
- Bike Path: No
- Bike Storage: No
- Bike Parking: No

Public Transit
- Public Transit: Yes
- Buses: Yes
- Park and Ride: Yes

Level of Service:
- LOS: C
- Peak Hour Volume: 580
- Peak Hour Directional Split: 57/43
- Peak Hour % of Trucks: 2.6
- Level of Service (LOS): C

Volume/Capacity:
- Volume: 580
- Capacity: 1,000

Other:
- Category: Four lane expressway
- Post Mile: 19.000
- Location: Calaveras County, City of Angels

No Final approval of LOS was conducted using Highway Capacity Manual (HCM) and Final availability of Transportation Planning Council.

The values and data contain in this report may be subject to change. This report is for conceptual planning and preliminary engineering and not for construction.

For planned and programmed projects, consult CSMP.

Note: This information is for overview purposes only and does not replace a full report from Right of Way, Environmental, or any other Branch or Division.
<table>
<thead>
<tr>
<th>Description</th>
<th>Calaveras County Segment 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length:</td>
<td>2.201</td>
</tr>
<tr>
<td>Functional Classification:</td>
<td>Minor Arterial</td>
</tr>
<tr>
<td>Local Planning Jurisdiction:</td>
<td>City of Angels</td>
</tr>
<tr>
<td>Other Agency/Entity:</td>
<td>Calaveras County Council of Governments</td>
</tr>
</tbody>
</table>

**Segment Location:**

- California Legal: Yes
- Terminal Access: Yes
- National Network, Terminal Access: Yes
- Expressway: Yes
- National Highway System: No
- Interregional Road System: Yes
- Freeway Agreement: No
- Strategic Highway Network: No
- Focus Route/Gateway Route: No
- High Emphasis Route: No
- National Highway System: No
- Scenic Highway (Designated): Yes
- High Emphasis Route: No
- Local Planning Jurisdiction: Yes
- National Network, Terminal Access: Yes
- Expressway: Yes
- National Highway System: No
- Scenic Highway (Designated): Yes
- High Emphasis Route: No
- Local Planning Jurisdiction: Yes

### Functional Classification:

- Minor Arterial
- Scenic Highway (Designated): Yes
- Local Planning Jurisdiction: Yes
- Strategic Highway Network: No
- Focus Route/Gateway Route: No
- High Emphasis Route: No
- National Network, Terminal Access: Yes
- Expressway: Yes
- National Highway System: No
- Scenic Highway (Designated): Yes
- High Emphasis Route: No
- Local Planning Jurisdiction: Yes

### Number of Lanes:

- Two Lane Width (ft.): See CSMP
- Shoulder Width (ft.): See CSMP
- Distressed Lane Miles: See CSMP
- Bridge Needs: See CSMP

### Transportation Concept Report:

- Post Mile Location Description: Rural
- Postmile: R21.090/R23.291
- Existing Facility: Two lane expressway
- Concept Facility: Four lane expressway
- Ultimate Transportation Corridor: Four lane expressway

#### Level of Service (LOS):

- LOS 2015
- LOS 2030

#### Environmental Status:

- Cultural Resources: Low to Moderate Lead
- Special Status Species: Low to Moderate Lead

### Travel Forecast Data:

- Average Daily Traffic: 7,000 8,400 11,800
- Peak Hour Volume: 21,090 23,400
- Peak Hour Directional Split: 57/43 57/43 57/43
- Peak Hour % of Trucks: 3.2 3.2 3.2

### Concept Planning:

- For planned and programmed projects, consult CSMP

### Notes:

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**Calaveras County Fact Sheets—Segment 6**

### Transportation Concept Report

**State Route 4**

**Description:**
- Right of Way
- Environmental

**Post Mile:**
- 22.788 to 29.240

**Functional Classification:**
- Minor Arterial
- Two Lane Width (ft.): See CSMP
- Right of Way Width (ft.): See CSMP
- Shoulder Width (ft.): See CSMP
- Median Width (ft.): See CSMP
- Distressed Lane Miles: See CSMP

**Concept Level of Service:**
- C

**Concept Facility:**
- Four lane expressway

**Ultimate Transportation Corridor:**
- Four lane expressway

**Level of Service (LOS) Calculation:**
- Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN

**Travel Forecast Data:**
- Volume/Capacity:
  - 2006: 6,050
  - 2015: 7,865
  - 2030: 13,310
- Average Daily Traffic:
  - 2006: 6,050
  - 2015: 7,865
  - 2030: 13,310

**Peak Hour Volume:**
- 2006: 6,050
- 2015: 7,865
- 2030: 13,310

**Peak Hour Directional Split:**
- 2006: 8.5
- 2015: 8.5
- 2030: 8.5

**Peak Hour % of Trucks:**
- 2006: 8.8
- 2015: 8.8
- 2030: 8.8

**Peak Hour % of Total ADT:**
- 2006: 8.5
- 2015: 8.5
- 2030: 8.5

**Peak Hour % of No. Trucks:**
- 2006: 6.8
- 2015: 6.8
- 2030: 6.8

**Age:**
- 2006

**LOS:**
- Level of Service (LOS) calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: LOS 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi-modal at this time.

**Peak Hour Directional Split:**
- 2006: 57/43
- 2015: 57/43
- 2030: 57/43

**Peak Hour % of Trucks:**
- 2006: 6.8
- 2015: 6.8
- 2030: 6.8

**Peak Hour % of Total ADT:**
- 2006: 8.5
- 2015: 8.5
- 2030: 8.5

**Peak Hour % of No. Trucks:**
- 2006: 6.8
- 2015: 6.8
- 2030: 6.8

**Peak Hour Volume:**
- 2006: 6,050
- 2015: 7,865
- 2030: 13,310

**Peak Hour Directional Split:**
- 2006: 57/43
- 2015: 57/43
- 2030: 57/43

**Peak Hour % of Total ADT:**
- 2006: 8.5
- 2015: 8.5
- 2030: 8.5

**Peak Hour % of No. Trucks:**
- 2006: 6.8
- 2015: 6.8
- 2030: 6.8

**Operational Information (Surveillance):**
- Traffic Camera
- Speed Camera

**Other Agency/Entity:**
- Calaveras County Council of Governments

**Programmed Projects:**
- 2030: Four lane expressway

**Programmed Projects:**
- 2020: Four lane expressway

**Comments:**
- For planned and programmed projects, consult CSMP

**Note:**
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### CALAVERAS COUNTY FACT SHEETS—SEGMENT 7

#### Segment 7

<table>
<thead>
<tr>
<th>Description</th>
<th>Functional Classification</th>
<th>Accessible to Bicycles</th>
<th>Shoulder Width (ft.)</th>
<th>Median Width (ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pennsylvania (south to stockton)</td>
<td>Minor Arterial</td>
<td>Yes</td>
<td>See CSMP</td>
<td>See CSMP</td>
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</table>

#### Segment Route Concept

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Peak Hour Volume</th>
<th>Peak Hour % of Trucks</th>
<th>Peak Hour Directional Split</th>
<th>Truck Volume % of Total ADT</th>
<th>Level of Service (LOS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS E</td>
<td>9.000</td>
<td>5.4</td>
<td>57/43</td>
<td>54</td>
<td>PM</td>
</tr>
</tbody>
</table>

#### Concept Facility: 2030

- Fork Mix: 39% 1/2-2 Lane Expressway, 3% 2 Lane Highway
- Ultimate Transportation Corridor: Four Lane Expressway
- Comments: For planned and programmed projects, consult CSMP

### Environmental Status

- Flood Plains: High
- Wetlands: Moderate to High
- Leaking Underground Tanks: Moderate to High
- Possible Hazardous Waste: Low to Moderate Lead

### Travel Forecast Data

- Volume/Capacity: 12,430
- Average Daily Traffic: 17,600
- Peak Hour Volume: 57/43
- Peak Hour Directional Split: 54
- Truck Volume % of Total ADT: 54
- Level of Service (LOS): PM

- Air Quality
  - Ozone: Nonattainment
  - Particulate Matter 10 m: Nonattainment
  - Particulate Matter 2.5 m: Unclassified
  - Carbon Monoxide: Unclassified

### Intermodal Freight Facilities

- Location: N/A
- Operations: N/A
- Type: N/A
- Description: N/A

### Planned Projects

- Concept Facility: Four lane conventional on existing, four lane expressway on new alignment
- Ultimate Transportation Corridor: Four lane expressway
- Comment: For planned and programmed projects, consult CSMP
### Transportation Concept Report

#### Segment Location
- **State Route**: 4
- **Segment**: 8
- **Description**: Calaveras SR-4 Segment 8

#### Calaveras County
- **Post Mile**: 30.065-39.79
- **Location**: Rural
- **Planning Jurisdiction**: Calaveras County
- **Other Agency/Entity**: Calaveras County Council of Governments

#### Transportation Concepts

<table>
<thead>
<tr>
<th>Concept Facility</th>
<th>2030</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>Four lane expressway</td>
<td>Yes</td>
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#### Travel Forecast Data

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume/Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>D 0.81</td>
</tr>
<tr>
<td>2015</td>
<td>D 0.81</td>
</tr>
<tr>
<td>2030</td>
<td>D 0.81</td>
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</table>

#### Level of Service (LOS)

<table>
<thead>
<tr>
<th>Peak Hour % of Trucks</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3</td>
<td>D</td>
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</table>

#### Final LOS

<table>
<thead>
<tr>
<th>Peak Hour % of Trucks</th>
<th>LOS</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.065-39.79</td>
<td>D</td>
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</tbody>
</table>

#### Environmental Status

<table>
<thead>
<tr>
<th>Degree of Impact</th>
<th>Degree of Impact</th>
</tr>
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<tbody>
<tr>
<td>High</td>
<td>Moderate to High</td>
</tr>
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</table>

#### Projected Programs

<table>
<thead>
<tr>
<th>Projected Programs</th>
<th>Planned</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Location</td>
</tr>
</tbody>
</table>

#### Intelligent Transportation System (ITS) Elements & Detection

<table>
<thead>
<tr>
<th>ITS Element</th>
<th>Status</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Additional Restrictions

| Access to Intermodal Freight Facility | No |

#### Final HCS LOS

<table>
<thead>
<tr>
<th>Location</th>
<th>Post Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.065-39.79</td>
<td>PM</td>
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</table>

#### Final HCS LOS

<table>
<thead>
<tr>
<th>Location</th>
<th>Post Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>30.065-39.79</td>
<td>PM</td>
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</tbody>
</table>

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**CALAVERAS COUNTY FACT SHEETS—SEGMENT 9**

**State Route 4 Transportation Concept Report**

**Caltrans Department of Transportation District 10**

**Calaveras County Segment 9**

**Description:** Lakemont Drive to East Moran Road

**Post Mile:** 39.79-R42.620

**Functional Classification:** Minor Arterial

**Local Planning Jurisdiction:** Calaveras County

**Other Agency/Entity:** Calaveras County Council of Governments

**Number of Lanes:** Two

**Lane Width (ft.):** See CSMP

**Right of Way Width (ft.):** See CSMP

**Shoulder Width (ft.):** See CSMP

**Median Width (ft.):** See CSMP

**Distressed Lane Miles:** See CSMP

**Scenic Highway (Designated):** Conventional

**Scenic Highway (Eligible):** Yes

**High Emphasis Route:** No National Network, Terminal Access

**Surface Transportation Assistance Act (STAA):** Yes

**Freeway Expressway System:** No Advisory

**Strategic Highway Network:** No Additional Restrictions

**Access to Intermodal Freight Facility:** Yes

**Flood Plains:** High

**Wetlands:** Low to Moderate

**Special Status Species:** Possible Hazardous Waste

**Flood Plains:** High

**Wetlands:** Low to Moderate

**Special Status Species:** Possible Hazardous Waste

**Volume/Capacity:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Peak Hour Volume</th>
<th>Peak Hour Directional Split</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1,050</td>
<td>57/43</td>
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<tr>
<td>2015</td>
<td>1,070</td>
<td>57/43</td>
</tr>
<tr>
<td>2030</td>
<td>1,070</td>
<td>57/43</td>
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</table>

**Air Quality:**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>2006</th>
<th>2015</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ozone</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>Particulate Matter 10 m</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
</tr>
<tr>
<td>Particulate Matter 2.5 m</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
<td>Nonattainment</td>
</tr>
</tbody>
</table>

**Peak Hour % of Total ADT:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Peak Hour % of Total ADT</th>
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</thead>
<tbody>
<tr>
<td>2006</td>
<td>3.3</td>
</tr>
<tr>
<td>2015</td>
<td>3.3</td>
</tr>
<tr>
<td>2030</td>
<td>3.3</td>
</tr>
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</table>

**Peak Hour % of Trucks:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Peak Hour % of Trucks</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>2.4</td>
</tr>
<tr>
<td>2015</td>
<td>2.4</td>
</tr>
<tr>
<td>2030</td>
<td>2.4</td>
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</table>

**Level of Service (LOS):**

<table>
<thead>
<tr>
<th>Year</th>
<th>LOS</th>
<th>LOS Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>E</td>
<td>Yes</td>
</tr>
<tr>
<td>2015</td>
<td>E</td>
<td>Yes</td>
</tr>
<tr>
<td>2030</td>
<td>E</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Level of Service (LOS) calculated using Highway Capacity Software (HCS-11F) and Florida Department of Transportation HIGHPLAN 2009 Multilane and Two-Lane Highway Level of Service. Analysis for Conceptual Planning and Preliminary Engineering Version Data: 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multi-modal at this time.**

**Planned Projects:**

<table>
<thead>
<tr>
<th>Concept Level of Service</th>
<th>Concept Facility</th>
<th>Ultimate Transportation Corridor</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned</td>
<td>2030</td>
<td>Four lane conventional on existing, four lane expressway on new alignment</td>
<td>For planned and programmed projects, consult CSMP</td>
</tr>
</tbody>
</table>

**Intelligent Transportation System (ITS) Elements & Detection:**

<table>
<thead>
<tr>
<th>ITS Element</th>
<th>Status</th>
<th>Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consult CSMP</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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State Route 4 Transportation Concept Report

Calaveras County

Segment 10

Introduction

Description:
- Road Manner Routed to Biennial Crossing

Post Mile: R42.620-R47.090

Functional Classification:
- Minor Arterial

Area Description:
- Rural

Other Agency/Entity:
- Calaveras County Council of Governments

Bridge Needs:
- Distressed Lane Miles

Bridge Name:
- See CSMP

Bridge Status:
- Present Serviceability Rating

Table: Summary of Design Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Lanes:</td>
<td>Two</td>
</tr>
<tr>
<td>Lane Width (ft.):</td>
<td>See CSMP</td>
</tr>
<tr>
<td>Shoulder Width (ft.):</td>
<td>See CSMP</td>
</tr>
<tr>
<td>Rolling Grade %:</td>
<td>&lt;3%</td>
</tr>
<tr>
<td>Right of Way Width (ft.):</td>
<td>See CSMP</td>
</tr>
<tr>
<td>Median Width (ft.):</td>
<td>See CSMP</td>
</tr>
<tr>
<td>Accessible to Bicycles:</td>
<td>Yes</td>
</tr>
<tr>
<td>Accessible to Pedestrians:</td>
<td>Yes</td>
</tr>
<tr>
<td>Accessible to Trucks:</td>
<td>Yes</td>
</tr>
<tr>
<td>Peak Hour % of Trucks:</td>
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<tr>
<td>Postmile</td>
<td>R42.620-R47.090</td>
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<tr>
<td>Presence Modality</td>
<td>Yes</td>
</tr>
<tr>
<td>Location</td>
<td>Location</td>
</tr>
<tr>
<td>Equipment</td>
<td>Location</td>
</tr>
</tbody>
</table>
| Volume/Capacity                   | Average Daily Traffic: 3,640

Volume/Capacity:
- Average Daily Traffic: 3,640
- Peak Hour Volume: 695

Peak Hour Directional Split:
- 2006: 57/43
- 2015: 57/43
- 2030: 57/43

Level of Service (LOS):
- LOS Plan D

Air Quality:
- Ozone: Nonattainment
- Particulate Matter 10 m: Unclassified
- Particulate Matter 2.5 m: Unclassified
- Carbon Monoxide: Unclassified

Water Quality:
- Wetlands: Leaking Underground Tanks: Moderate to High
- Flood Plains: Cultural Resources: High

Level of Service:
- Level of Service: C

Overall Project Level:
- Project Level: Planned

Environmental Status:
- Strategic Highway Network: No
- Freeway Agreement: Yes
- National Network, Terminal Access: No

Traffic Forecast Data:
- Existing Facility: Four lane expressway
- Peak Hour Volume: 812

Travel Forecast Data:
- Average Daily Traffic: 4,550
- Peak Hour Volume: 870

Accommodation Status:
- Development Status: Planned

Programmed Projects:
- For planned and programmed projects, consult CSMP

Note:
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Comments:
- See CSMP

Table: Additional Restrictions

<table>
<thead>
<tr>
<th>Restriction</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Wetlands:</td>
<td>Leaking Underground Tanks: Moderate to High</td>
</tr>
<tr>
<td>Strategic Highway Network:</td>
<td>No</td>
</tr>
<tr>
<td>National Network, Terminal Access:</td>
<td>No</td>
</tr>
<tr>
<td>Access to Intermodal Freight Facility:</td>
<td>Yes</td>
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</tbody>
</table>

Table: Designed Level of Service

<table>
<thead>
<tr>
<th>Year</th>
<th>Level of Service</th>
<th>LOS Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>2015</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>2030</td>
<td>C</td>
<td>D</td>
</tr>
</tbody>
</table>

Table: Design Parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Postmile</td>
<td>R42.620-R47.090</td>
</tr>
<tr>
<td>Project Level</td>
<td>Planned</td>
</tr>
<tr>
<td>Project Status</td>
<td>Location</td>
</tr>
<tr>
<td>Equipment</td>
<td>Location</td>
</tr>
</tbody>
</table>
| Volume/Capacity                   | Average Daily Traffic: 3,640

Volume/Capacity:
- Average Daily Traffic: 3,640
- Peak Hour Volume: 812

Peak Hour Directional Split:
- 2006: 57/43
- 2015: 57/43
- 2030: 57/43

Level of Service (LOS):
- Level of Service: C

Overall Project Level:
- Project Level: Planned

Environmental Status:
- Strategic Highway Network: No
- Freeway Agreement: Yes
- National Network, Terminal Access: No

Traffic Forecast Data:
- Existing Facility: Four lane expressway
- Peak Hour Volume: 812

Travel Forecast Data:
- Average Daily Traffic: 4,550
- Peak Hour Volume: 870

Accommodation Status:
- Development Status: Planned

Programmed Projects:
- For planned and programmed projects, consult CSMP

Note:
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Comments:
- See CSMP
### Segment 11

- **State Route:** 4
- **Transportation Concept Report:**
- **Location:** Calaveras County

#### Segment Location
- **Description:** Snake Crossing to Alpine Co. Line
- **Post Mile:** R4.000/R65.865
- **Rural/Urban/Urbanized:** Rural
- **Grade %:**
  - Rolling
- **Rush Hour % of Trucks:** 2.2
- **Volume/Capacity:**
  - 2006: 1,230
  - 2015: 1,685
  - 2030: 2,110

#### Functional Classification
- **Minor Arterial**
- **Local Planning Jurisdiction:** Calaveras County

#### Environmental Status
- **Wetlands:** Leaking Underground Tanks: Low
- **Flood Plains:**
  - Moderate to High
- **Existing Facility Type:**
  - Yes
  - Functional Classification: Two lane expressway

#### Peak Hour Volume
- **PM:** 1,770

#### Peak Hour Directional Split
- **91/9%**

#### Level of Service
- **R3S:** Location
- **LOSPLAN:** Location

#### Bicycle Facility
- **Air Quality**
- **Particulate Matter 10 m:** Moderate to High
- **Particulate Matter 2.5 m:** Moderate to High
- **Carbon Monoxide:**
- **Ozone:**
- **Nonattainment**
- **Degree of Impact**
  - Hydrological: High
  - Cultural Resources: Low
  - Potential Hazardous Waste: Low

#### Other Agency/Entity
- **Calaveras County Council of Governments**

#### Programmed Projects

#### Notes
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Within Alpine County, the least populated county in California, SR-4 functions primarily as a recreation route, rather than a route serving inter-regional transportation needs. SR-4 provides access to the community and associated ski resort of Bear Valley, and terminates as an expressway at SR-207. Beyond SR-207 the highway is subject to winter closure.

SR-4 was divided into four segments. These divisions follow considerations of changes in traffic volume, its composition, or its flow; or a change in topography, or intersection with another highway. This method deviates from that suggested in HCM (2010), but provides for a more concise characterization for the need for capacity increases, verses operation improvements generally beyond this document’s scope.

To characterize LOS, two software applications were employed—HCS 5.4 and FDOT 2009 software (both are packaged together under the McTrans HCS trademark). Typically the two softwares provide equivalent results and serve as a useful means to assess modeling errors. In contexts where the traffic volumes are low, however, the LOS results may diverge greatly, but the volume to capacity ratio will remain equivalent.

Future forecast volumes were obtained through two linear projections: 1) from past traffic volumes for the previous twenty years to present, and extended twenty years further, 2) from the Department of Finance’s twenty year population growth projection for Alpine County. The two projections are then compared for consistency, and may result in one projection being dropped, usually because it overestimates or underestimates future growth.

The population of Alpine County is 1,175. Within that population, 75% of the residents report themselves as white, 20.4% as Native American, with the remainder other races. Of the total population, 7.1% report that they have Latino or Hispanic ancestry. The median age of residents is 46.7 years, compared to 35.2 years for the State as a whole (2010 census). The median household income was $41,875 which was below the median statewide household income of $47,493 (2000 Census). Current Department of Finance population projections indicate a population decline of 2.7% for 2012, this follows a population decline of 6.2% for 2011. Approximately 20% of the population has incomes below the federal poverty line (2000 Census). A significant proportion of the County population is represented by members of the federally recognized Washoe tribe at Hung-a-Lel-Ti near Woodfords.

Land uses along the SR-4 corridor conform to either the Stanislaus or Toiyabe National Forest Plans (segments two through four), and the Alpine County General Plan (2010, segment one). General plans characterize and distribute future population density, and would influence future traffic volumes, while forest plans emphasize land uses necessary to conserve or protect natural resources, and would not directly influence future traffic volumes. The Alpine County General Plan (2010) stresses the preservation of local communities, and development compatible with the natural setting of Alpine County. The Plan anticipates fostering little to no population growth, and anticipates a highway maintenance model consistent with current local revenues and expenditures.

SR-4 supports few multimodal opportunities. There is no current transit service on the route at this time. Although the route supports moderate recreational bicycle use, the narrow lane widths and shoulders might preclude bicycle use if traffic volumes were greater. No sidewalks are present.

Only segment one plays any role in the interregional transport of goods and services, it connects Bear Valley to local and regional markets. Segments two through four possess narrow lanes, are advisory truck routes, and possess several locations with narrow lanes or sharp turns that preclude most truck use. Truck counts along the route most likely reflect recreation vehicle travel.

Modeling and analysis indicate segment one will experience deficient LOS by 2030. This likely reflects the gradual grade that characterizes the segment, which led to the segment being classified as rolling. Operational improvements such as climbing or passing lanes may address this need, rather than efforts to increase capacity.

The Alpine County Local Transportation Commission (ACLTC) RTP, 2010 indicates that no financially constrained or programmed projects exist at the time of the final draft of this document. The document embraces a “maintenance emphasis alternative”, to, in part, avoid expenditure for capacity increasing highway projects, given current funding uncertainties and a declining population base. Furthermore, the RTP indicates that future capacity increases within Alpine County would be incompatible with local planning.
### Segment 2

**Description:**
- Project: SR-291 to Lake Alpine
- Length: 0.695
- Functional Classification: Minor Arterial
- Local Planning Jurisdiction: Alpine County
- Other Agency/Entity: Alpine County Local Transportation Commission

**Functional Capacity:**
- Number of Lanes: Two
- Lane Width (ft.): 10
- Median Width (ft.): N/A
- Shoulder Width (ft.): N/A
- Distressed Lane Miles: 0.00

**Interregional Road System:**
- Component: Yes
- Type: Conventional Highway

**Highway Design:**
- Concept Level of Service: 2030

**Intelligent Transportation System (ITS) Elements & Detection:**
- Postmile ITS Element Status: Location Location Location Location Location Location

**Travel Forecast Data:**
- Year: 2007, 2015, 2030
- Existing Facility: Yes
- Ultimate Transportation Corridor: Yes

**Water Resources:**
- Flood Plains: Moderate
- Special Status Species: Possible

**Air Quality:**
- Ozone: Unclassified Non-attainment
- Particulate Matter 10 m: Unclassified

**Environmental Status:**
- Infrastructure Status:
  - Grade: Wetlands: Leaking Underground Tanks: Low
  - Cultural Resources: Moderate
  - Focused Projects: Yes

**Level of Service (LOS) Calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN:**
- Level of Service:
  - 2007: PM, LOS C
  - 2015: PM, LOS C
  - 2030: PM, LOS C

**Comments:**
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---

**Programmed Projects**

<table>
<thead>
<tr>
<th>Description</th>
<th>Location</th>
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</tr>
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<tbody>
<tr>
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**Proposed Projects**

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<th>Concept Level of Service:</th>
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<tbody>
<tr>
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<td></td>
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</tbody>
</table>

**Interregional Transportation System (ITS) Elements & Position:**
- Existing: PM 291
- Existing: I-55
- Existing: SR-291

---

**4. TRANSPORTATION CONCEPT REPORT**

### ALPINE COUNTY FACT SHEETS—SEGMENT 2

**State Route 4**

**Transportation Concept Report**

**Segment 2**

**Local Planning Jurisdiction:** Alpine County

**Other Agency/Entity:** Alpine County Local Transportation Commission

**Nearby Local Roads:**
- Alpine County
- Bear Valley

**Bridge Name:**
- Alpine County
- Bear Valley

**Bridge Needs:**
- Distressed Lane Mils: 0.00

**Highway Design:**
- Concept Level of Service: 2030

**Intelligent Transportation System (ITS) Elements & Detection:**
- Postmile ITS Element Status: Location Location Location Location Location Location

**Travel Forecast Data:**
- Year: 2007, 2015, 2030
- Existing Facility: Yes
- Ultimate Transportation Corridor: Yes

**Water Resources:**
- Flood Plains: Moderate
- Special Status Species: Possible

**Air Quality:**
- Ozone: Unclassified Non-attainment
- Particulate Matter 10 m: Unclassified

**Environmental Status:**
- Infrastructure Status:
  - Grade: Wetlands: Leaking Underground Tanks: Low
  - Cultural Resources: Moderate
  - Focused Projects: Yes

**Level of Service (LOS) Calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN:**
- Level of Service:
  - 2007: PM, LOS C
  - 2015: PM, LOS C
  - 2030: PM, LOS C

**Comments:**
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**ALPINE COUNTY FACT SHEETS—SEGMENT 2**

**State Route 4**

**Transportation Concept Report**

**Segment 2**

**Local Planning Jurisdiction:** Alpine County

**Other Agency/Entity:** Alpine County Local Transportation Commission

**Nearby Local Roads:**
- Alpine County
- Bear Valley

**Bridge Name:**
- Alpine County
- Bear Valley

**Bridge Needs:**
- Distressed Lane Mils: 0.00

**Highway Design:**
- Concept Level of Service: 2030

**Intelligent Transportation System (ITS) Elements & Detection:**
- Postmile ITS Element Status: Location Location Location Location Location Location

**Travel Forecast Data:**
- Year: 2007, 2015, 2030
- Existing Facility: Yes
- Ultimate Transportation Corridor: Yes

**Water Resources:**
- Flood Plains: Moderate
- Special Status Species: Possible

**Air Quality:**
- Ozone: Unclassified Non-attainment
- Particulate Matter 10 m: Unclassified

**Environmental Status:**
- Infrastructure Status:
  - Grade: Wetlands: Leaking Underground Tanks: Low
  - Cultural Resources: Moderate
  - Focused Projects: Yes

**Level of Service (LOS) Calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN:**
- Level of Service:
  - 2007: PM, LOS C
  - 2015: PM, LOS C
  - 2030: PM, LOS C

**Comments:**
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**State Route 4 Transportation Concept Report**

**Alpine County Segment 3**

**Description:**
- Lake Alpine to Ebbetts Pass Summit climbing lane and no service from PM 3.296

**Post Mile:** 3.890-18.556

**Functionality:**
- Minor Arterial
- Local Planning Jurisdiction: Alpine County

**Grade %:**
- >3

**Bridge Needs:**
- Increased Lane Miles: 5.20

**Designated:**
- Minor Arterial
- Scenic Highway (Designated): Yes

**Functionality:**
- Conventional Highway
- Trucking Network: Yes

**Highway**
- National Network, Terminal Access: No
- Surface Transportation Assistance Act (STAA): No

**Freeways/Expressway:**
- No

**Level of Service:**
- Trucking Network: Yes
- Affected Area: Yes

**Existing Transportation Network:**
- Federal Highway System: No
- California Highways: No

**Special Status Species:**
- Possible Hazardous Waste: Low

**Air Quality:**
- Ozone: Unclassified
- Particulate Matter 10 m: Unclassified
- Carbon Monoxide: Unclassified

**Environmental Status:**
- Wetlands: Low
- Leaking Underground Tanks: Low

**Transportation Concept Report**

**State Route 4 Transportation Concept Report**

**TRANSPORTATION CONCEPT REPORT**

<table>
<thead>
<tr>
<th>Post Mile</th>
<th>Year</th>
<th>Functional Classification</th>
<th>Facility Type</th>
<th>Infrastructure</th>
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<th>Future Use</th>
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<td>Yes</td>
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**Peak Hour Volume:**
- Yes

**Peak Hour Directional Split:**
- 70/30

**Volume/Capacity:**
- Yes

**Level of Service:**
- Yes

**Peak Hour % of Trucks:**
- 1.6

**Level of Service (LOS) Calculated using Highway Capacity Software (HCS+T7F) and Florida Department of Transportation HIGHPLAN 2005 Multilane and Two-Lane Highway Level of Service Analysis for Conceptual Planning and Preliminary Engineering Version Data 7/17/2010. All LOS reflects vehicles only. LOS does not reflect multimodal at this time.

**Existing Projects:**
- No

**Future Projects:**
- No

**Highway Capacity Software (HCS+T7F)**

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<td>B</td>
<td>In Progress</td>
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**Existing älirial:**

**Future Use:**
- No

**Intelligent Transportation System (ITS) Elements & Detection**

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**Comments:**
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**ALPINE COUNTY FACT SHEETS—SEGMENT 4**

**STATE ROUTE** 4- **TRANSPORTATION CONCEPT REPORT**

**ALPINE COUNTY**

**Segment Location:** SEGMENT 4

**Description:** Alpine Pass Summit to State Route 89

**Post Mile:** 16.565-31.677

**Post Mile Location:** 31.677

**Travel Forecast Data**

**2007** **2015** **2030**

<table>
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<th>Yes/No</th>
<th>Yes/No</th>
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</table>

**Peak Hour Directional Split:** 70/30 70/30 70/30

**Peak Hour Volume:** 70/30 70/30 70/30

**Peak Hour % of Trucks:** 3.2 3.2 3.2

**Peak Hour % of Total ADT:** 4.0 4.0 4.0

**Peak Hour Volume % of Total ADT:** 4.0 4.0 4.0

**Volume/Capacity:** 3.2 3.2 3.2

**Degree of Impact:** Degree of Impact

**Facility Type:** Yes

**Bridge Type:** Bridge Name: Silver Creek

**Bridge Needs:** Distressed Lane Miles 7.50

**Other Agency/Entity:** Alpine County Local Transportation Commission

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Bicycle Routes: Refers to travel ways specific to users employing bicycles. There are three general classifications: ‘I’—bicycles share street with automobiles without separation; ‘II’—bicycles share street within their own designated lane; and ‘III’—bicycles travel independent of automobile traffic, often sharing right of way with pedestrians or equestrians.

California Environmental Quality Act (CEQA): Passed in 1971, CEQA provides the framework in which undertakings that may affect the environment are evaluated and if found to be adverse are to be mitigated for, as part of the governmental decision making process. For local governments, implementation of general plans and land use designations became a requirement and a benchmark for which changes in zoning or land uses could be assessed.

Census Designation: The designation of rural (population below 5,000), or urbanized (population between 5,000 and 50,000), or urban (populations of 50,000 or greater) highways are obtained from the California Road System Maps published by FHWA, based upon census designated urbanized areas, and urbanized clusters. The most recent version dates from 2007.

Conventional Highway: Designated by the Federal Highway Administration, these segments of state highways serve to either support interstate commerce, national defense, or other responsibilities of the federal government. As such they are eligible for federal funding, and subject to the national Environmental Policy Act (NEPA).

Focus Route: see Interregional Road System.

Freeway: A divided arterial highway with full access control and grade separations at intersections.

Highway Capacity Manual (HCM): Published by the National Research Council’s Transportation Research Board, the HCM is the national standard for methodologies to evaluate and estimate highway performance. Approved software packages developed to reduce the computation effort associated with the HCM are Highway Capacity Software’s (HCS) various modules and the Florida Department of Transportation’s ARTPLAN, FREEPLAN, and HIGHPLAN. The most recent update of HCM is for 2010, though several of the software interfaces are not yet currently available. Several analyses performed for this document were consistent with the older HCM 2000.

Concept Level of Service: see Level of Service.

Concept Facility: Highway facility that best maintains the Concept LOS at the end of the twenty year planning period.

Environmental Status: A qualitative risk inventory of costs and time required to address impacts of highway improvements to resources of environmental value, often given in five parameters (low, low to moderate, moderate, high, and high).

Expressway: Highway, usually an arterial, typically with access limited to at grade road intersections.

Federal Highway System: Designated by the Federal Highway Administration, these segments of state highways serve to either support interstate commerce, national defense, or other responsibilities of the federal government. As such they are eligible for federal funding, and subject to the national Environmental Policy Act (NEPA).

Focus Route: see Interregional Road System.

Freeway: A divided arterial highway with full access control and grade separations at intersections.

Highway Capacity Manual (HCM): Published by the National Research Council’s Transportation Research Board, the HCM is the national standard for methodologies to evaluate and estimate highway performance. Approved software packages developed to reduce the computation effort associated with the HCM are Highway Capacity Software’s (HCS) various modules and the Florida Department of Transportation’s ARTPLAN, FREEPLAN, and HIGHPLAN. The most recent update of HCM is for 2010, though several of the software interfaces are not yet currently available. Several analyses performed for this document were consistent with the older HCM 2000.

Interregional Road System (IRRS): A State planning effort that emphasized highways within the Freeway and Expressway system that provided network connections to urban places statewide, but were not yet constructed to freeway or expressway standards. The most recent expression of this plan (1998) discussed Focus and High Emphasis routes, and established short term and long term improvements for these specific routes.

Mountainous: see Terrain.

National Environmental Policy Act (NEPA): Established in 1971, this environmental policy applies to federal undertakings or efforts that have a federal nexus. Federal agencies were tasked to develop policies and standards to evaluate and assess the environmental impacts of federal undertakings, while the Act established general policies regarding public notification and report standards.

Rolling: see Terrain.

Rural: see Census Designation.

Terrain: refers to topography specific to its affect on trucks and other heavy vehicle operation (see HCM). Level terrain contains any combination of grades or horizontal or vertical alignments that permit heavy vehicles to maintain the same speed as passenger cars; rolling terrain contains any combination of grades or horizontal or vertical alignments that causes heavy vehicles to operate at crawl speed for significant distances or at frequent intervals. HCM methodologies address highway segments with level or rolling terrain with a set of constant values. Mountainous terrain requires separate upgrade or downgrade analysis, and recommends that any segment with grades between 2% and 3% with a length of more than half a mile be considered a separate segment.

Surface Transportation Assistance Act (STAA): Federal highway legislation that included federal design standards and requirements for trucks (see Truck Routes).

Truck Routes: may refer to either federal standards (contained in STAA) or California standards. Routes with an STAA designation permit travel by tractor trailers with a fifty five foot long trailer, or tandems with trailers no greater than twenty eight and a half feet, while California legal routes permit the overall truck length to sixty five feet total for single and seventy five for tandems. Advisory truck routes usually possess highway geometrics that limit truck length for safe operation. Restricted truck routes have legal restrictions on the type of truck or activity.

Urban: see Census Designation.

Urbanized: see Census Designation.
## APPENDIX B: ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AADT</td>
<td>Annual Average Daily Traffic</td>
</tr>
<tr>
<td>ACE</td>
<td>Altamont Commuter Express</td>
</tr>
<tr>
<td>ACOE</td>
<td>U.S. Army Corps of Engineers</td>
</tr>
<tr>
<td>ADA</td>
<td>Americans with Disabilities Act of 1990</td>
</tr>
<tr>
<td>ADT</td>
<td>Average Daily Traffic</td>
</tr>
<tr>
<td>AHS</td>
<td>Automated Highway System</td>
</tr>
<tr>
<td>ACLTC</td>
<td>Alpine County Local Transportation Commission</td>
</tr>
<tr>
<td>APE</td>
<td>Area of Potential Effects</td>
</tr>
<tr>
<td>ATIS</td>
<td>Advance Transportation Information System</td>
</tr>
<tr>
<td>AVI</td>
<td>Automated Vehicle Identification</td>
</tr>
<tr>
<td>BART</td>
<td>Bay Area Rapid Transit</td>
</tr>
<tr>
<td>BN&amp;SF</td>
<td>Burlington Northern and Santa Fe Railroad</td>
</tr>
<tr>
<td>BMS</td>
<td>Bridge Management System</td>
</tr>
<tr>
<td>CALACOG</td>
<td>Calaveras Council of Governments</td>
</tr>
<tr>
<td>CCTV</td>
<td>Closed Circuit Television</td>
</tr>
<tr>
<td>CEQA</td>
<td>California Environmental Quality Act</td>
</tr>
<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CHIN</td>
<td>California Highway Information Network</td>
</tr>
<tr>
<td>CHP</td>
<td>California Highway Patrol</td>
</tr>
<tr>
<td>CMIA</td>
<td>Corridor Mobility Improvement Account</td>
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<td>CMS</td>
<td>Changeable Message Sign</td>
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<tr>
<td>CNDDB</td>
<td>California Natural Diversity Data Base</td>
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<td>CO</td>
<td>Carbon Monoxide</td>
</tr>
<tr>
<td>COG</td>
<td>Council of Governments</td>
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<tr>
<td>CSMP</td>
<td>Corridor System Management Plan</td>
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<td>CSS</td>
<td>Context Sensitive Solutions</td>
</tr>
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<td>CTC</td>
<td>California Transportation Commission</td>
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<td>CY</td>
<td>Calendar Year</td>
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<tr>
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<td>EXPW</td>
<td>Expressway</td>
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<td>F&amp;E</td>
<td>Freeway and Expressway System</td>
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<td>King Pin to Rear Axle</td>
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<tr>
<td>LOS</td>
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<td>LU</td>
<td>Legacy for Users</td>
</tr>
<tr>
<td>MOU</td>
<td>Memorandum of Understanding</td>
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<tr>
<td>MVTM</td>
<td>Million Vehicle Miles Traveled</td>
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<td>NB</td>
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<tr>
<td>NHS</td>
<td>National Highway System</td>
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<td>Roadside Weather Information System</td>
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<td>SAFETEA-LU</td>
<td>Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users</td>
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<td>SB</td>
<td>Southbound</td>
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<td>SHOPP</td>
<td>State Highway Operations Protection Program</td>
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<td>SHS</td>
<td>State of California Highway System</td>
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<td>SJCOG</td>
<td>San Joaquin Council of Governments</td>
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<td>Single Occupancy Vehicle</td>
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<td>SPRR</td>
<td>Southern Pacific Railroad</td>
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<td>SR</td>
<td>State Route</td>
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<td>STAA</td>
<td>Surface Transportation Assistance Act</td>
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<td>STANCOG</td>
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<tr>
<td>STIP</td>
<td>State Transportation Improvement Program</td>
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### APPENDIX B: ACRONYMS

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<td>Transportation Corridor Concept Report</td>
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<tr>
<td>TCR</td>
<td>Transportation Concept Report</td>
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<tr>
<td>TDM</td>
<td>Transportation Demand Management, Travel Demand Model</td>
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<tr>
<td>TIP</td>
<td>Transportation Improvement Plan</td>
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<td>TMC</td>
<td>Transportation Management Center</td>
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<td>TMP</td>
<td>Transportation Management Plan</td>
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<td>TMS</td>
<td>Traffic Monitoring Station/Transportation Management System</td>
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<td>TOS</td>
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<td>TSDP</td>
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<td>Under-crossing</td>
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1 This estimate is a lower bound, as ice melt from glaciers and icesheets have yet to be parameterized. Recent studies suggest the contribution from glaciers and icesheets might double the rate of sea level rise.

2 Delta Subsidence in California—“The Sinking Heart of the State” USGS FS-05-00, April 2000.