Caltrans

May 2014
California
Department of
Transportation

CALIFORNIA 139

DRAFT STATE ROUTE TRANSPORTATION CONCEPT REPORT

Route Location

District 2

State Route 139
Transportation Concept Report
Month 2014
California Department of Transportation
District 2

About System Planning and Transportation Concept Reports

System Planning is the long-range transportation planning process for the California Department of Transportation (Caltrans). The System Planning process fulfills Caltrans' statutory responsibility as owner/operator of the State Highway System (SHS) (Gov. Code §65086) by identifying deficiencies and proposing improvements to the SHS. Through System Planning, Caltrans focuses on developing and integrated multimodal transportation system that meets Caltrans' goals of safety, mobility, delivery, stewardship, and service. Development of System Planning products is part of the continuing, cooperative and comprehensive transportation planning process and provides an opportunity for public, stakeholder, and agency participation.

The Transportation Concept Report (TCR) is a California Department of Transportation System Planning Document that includes an analysis of a transportation route or corridor. A TCR establishes a 20-year consensus-based concept for how California State highways should operate and broadly identifies the nature and extent of improvements needed to attain that operating conditions. Caltrans District 2 endeavors to maintain a target Level of Service (LOS) at the transition between LOS "C" and LOS "D" on State highway facilities. A TCR identifies long-range objectives for a route and helps to guide short-term decisions for improvements.

The State Route (SR) 139 TCR is a collection of route information and data including current and projected operating characteristics of SR 139 in Caltrans District 2. The plan evaluates operational conditions and identifies potential improvements. Many different elements are considered such as development and growth trends, land uses, and local road connections. The plan considers existing State, local and regional plans and studies, while emphasizing the importance of stakeholder involvement in the planning process. The TCR should be considered when developing other area plans and studies. Projects developed for SR 139; need to be evaluated for consistency with this TCR.

The benefits of an adopted TCR include:

- Identifying, prioritizing, and addressing the greatest needs within the route.
- Protecting infrastructure.
- Logical sequencing of projects.
- Efficient use of available funding.
- A common vision for the future of the route.

Additional Information

For additional information on the SR- 139 Transportation Concept Report contact:

California Department of Transportation-District 2
Office of System Planning

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Internet Site: http://www.dot.ca.gov/dist2/planning/conceptrpts.htm

Disclaimer: The information and data contained in this document are for planning purposes only and should not be relied upon for final design of any project. Any information in this Transportation Concept Report (TCR) is subject to modification as conditions change and new information is obtained. Although planning information is dynamic and continually changing, District 2 System Planning Division makes every effort to ensure the accuracy and timeliness of the information contained in the TCR. The information in the TCR does not constitute a standard, specification, or regulation, nor is it intended to address design policies and procedures.

California Department of Transportation

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1657 Riverside Drive
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Traveler Information Links

Homepage – Caltrans District 2

Homepage: http://www.dot.ca.gov/dist2/

Visitors to the homepage are able to click on icons that take them to websites such as **QuickMap**, **One Stop Shop** and **Chain Control Maps & Info**. On the homepage, there is also a list of traffic alerts that is updated daily. The traffic alerts notify drivers about projects that could impact travel on state highways in the District. The bottom of the page shows Caltrans District 2 "Tweets." The links provided below are accessible from the District 2 homepage unless otherwise noted.

Maps – Traffic Information, Construction and Weather

One Stop Shop: http://oss.weathershare.org/

One Stop Shop provides real-time roadway information for western states on a map. The types of information include traffic speed, active and inactive changeable message signs (CMSs), closed circuit television (CCTV) cameras, chain restrictions, construction, incidents, information, commercial vehicle information, road weather information systems (RWIS) and RWIS with road temperatures lower than 32°. Clicking on the different icons opens pop-up boxes with the information related to each icon. For example, clicking on an RWIS icon shows weather information such as temperature, wind direction and freezing point. Clicking on a construction icon shows information such as the location of the project, the start and end date, and any expected traveler delay.

Maps – Traffic Information

QuickMap: http://quickmap.dot.ca.gov/

This map-based platform shows site visitors real-time traffic information including traffic speed, lane closures, incidents, message signs, cameras and chain controls. Clicking on the different icons opens pop-up boxes with the information related to each icon. For example, clicking on a lane closure icon causes a box to open displaying information such as location, direction and time period. Clicking on a camera icon opens the image the camera is capturing for the chosen location. QuickMap applies to the entire state.

Maps – Construction

Construction Projects: http://www.dot.ca.gov/dist2/projects.htm

This page displays a map where visitors can click on a county within District 2 which takes them to another page with a list projects occurring during that construction season. The project information listed includes county, project name, description, project manager and estimated construction timeframe.

Maps – Weather & Chain Control

Traffic Cameras & Road Weather Information: http://www.dot.ca.gov/dist2/travelmap.htm
This link opens a map of District 2 that indicates CCTV, RWIS and CCTV/RWIS locations. Visitors to the site may click on a dot shown on the map to open the camera image of current roadway conditions, weather data, or both.

Chain Control: http://www.dot.ca.gov/dist2/chainup/allcntys.htm
This site displays a map of District 2 and chain control information which is updated during regular business hours during major snow events. The information includes road closures, truck holds, truck screens, vehicle screen and metering traffic. It also shows the chain control requirement levels such as R-1M, R-1, R-2 and R-3. A legend which defines the chain control codes and terms can be found by clicking on any of the icons in the "Chain Control Legend" box.

National Weather Service – Weather for Travelers: http://www.wrh.noaa.gov/sto/brief/caltransbriefdist2.php
A travel forecast for any location in the country can be accessed from this link. The page opens up to a map with different user selected layers, including radar, satellite, observation controls and webcams. The observation controls include wind and temperature data. The website is currently in an experimental phase.

Highway Information (Non-map)

Planned Lane Closures:
http://www.lcswebreports.dot.ca.gov/lcswebreports/MainMenuPreAction.do?district=Statewide

Site visitors can search for closures on state highways within California by clicking on a District. Users can then specify county, route, dates and time period. Search queries can be as narrow or as open as desired. Search results appear in report format in a new screen, and include information regarding whether the closure is in-progress, completed or canceled. The closure is listed as "no status" if it is for a future date.

California Highway Information: http://www.dot.ca.gov/cgi-bin/roads.cgi
Not accessible from the District 2 homepage. Visitors to the site can check current highway conditions, such as traffic control, lane closures and wind advisories for any state highway in California by entering the highway number. Identical information can be obtained by calling the Caltrans Highway Information Network (CHIN): 800.427.7623.

California Highway Patrol (CHP) Traffic Incident Information Page: http://cad.chp.ca.gov/

Not accessible from the District 2 homepage. Visitors to the site can select a CHP Communication Center anywhere in California and retrieve incidents within the jurisdiction. The screen refreshes every 60 seconds. Clicking on "details" will result in a display of information pertaining to the selected incident, such as time, status and location.

Highway Conditions Report: http://www.dot.ca.gov/hq/roadinfo/Hourly

Not accessible from the District 2 homepage. This site lists highway information for every state highway in California. Information is presented in numerical order of the highways. For example, the first highway listed is State Route (SR) 1; the second highway is SR 2, then SR 4, then I-5 and so on through I-980. The site is updated hourly and provides information such as traffic control, lane closures, expected delays, detours and wind advisories.

Traveler Information Resources											
	Statewide Information Available	Accessible from District 2 Homepage	Map Format	Chain Requirements/ Weather-Related Road Closures	Incidents	CMS	CCTV	RWIS	Real-Time Traffic Conditions (speed, for example)	Weather	Construction/Planned Lane Closures
One Stop Shop: http://oss.weathershare.org/	•	•	•	•	•	•	•	•	•	•	•
QuickMap: http://quickmap.dot.ca.gov/	•	•	•	•	•	•	•		•		•
Construction Projects: http://www.dot.ca.gov/dist2/projects.htm		•	•								•
Traffic Cameras & Road Weather Information: http://www.dot.ca.gov/dist2/travelmap.htm		•	•				•	•		•	
Chain Control: http://www.dot.ca.gov/dist2/chainup/allcntys.htm		•	•	•							
National Weather Service: http://www.wrh.noaa.gov/sto/brief/caltransbriefdist2.php	•	•	•							•	
Planned Lane Closures: http://www.lcswebreports.dot.ca.gov/lcswebreports/MainMenuPreAction.do?district=Statewide	•	•									•
California Highway Information (800.427.7623): http://www.dot.ca.gov/cgi-bin/roads.cgi	•										•
CHP Traffic Incident Information: http://cad.chp.ca.gov/	•				•						
Highway Conditions Report: http://www.dot.ca.gov/hq/roadinfo/Hourly	•										•

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EXECUTIVE SUMMARY

Route Description

State Route (SR) 139 is a rural, low volume route that passes through Lassen, Modoc and Siskiyou Counties. It is coterminous with SR 299 for 20 miles in Modoc County. Along the section of SR 139 from SR 299 to Oregon, the route is part of the Interregional Road System and the proportion of trucks increases to 30% of vehicle Annual Average Daily Traffic (AADT) along some sections. It is mountainous over Antelope Grade, rolling in most of Lassen and Modoc Counties and level in northern Modoc and Siskiyou Counties. Some attractions near the route include Eagle Lake in Lassen County, Tule Lake Segregation Center in Modoc County and Lava Beds National Monument and the Tule Lake National Wildlife Refuge in Siskiyou County.

Key Issues

Some of the key issues are as follows:

- ***The route is remote*** – There are long distances between services such as fuel and rest areas. Inappropriate and undesirable activities such as using unofficial places as a restroom, littering, camping, installing unpermitted mailboxes and creating unpermitted access points on SR 139 occur as a result of the route's remoteness.
- ***Wildlife*** – A section of SR 139 in Modoc County passes through the winter range for deer. During seasons with above average snowfall, deer tend to congregate on and near SR 139 from Clear Lake Road to County Road 114 (MOD 30.4-40.5). Written comments were received from over 40 individuals, organizations and agencies expressing concern about this issue. There are also some sensitive species within the vicinity of the route, especially where water is present.
- ***Ice and snow*** – sections of the route at higher elevations on north facing slopes or shaded by trees tend to experience winter weather conditions more than other sections.
- ***Limited availability and awareness of traveler information*** – There is limited availability of utilities for operation of new traveler information technology along SR 139. Given this constraint, there is a reasonable amount of coverage along SR 139, but less than what is available for other routes in the District. Public awareness of available traveler information is limited. Traveler information is useful during inclement weather, construction and incidents or for any roadway user who wishes to learn more about current conditions along the route.
- ***Large agricultural vehicles in northern Modoc and Siskiyou Counties*** – There are some slow-moving extra-large agricultural vehicles on the highway that can impede traffic in both directions along SR 139.
- ***Vehicles traveling at varying speeds*** – On any section of SR 139, drivers use the route for different purposes and tend to drive at different speeds. Agricultural vehicles and vehicles pulling in and out of historical marker turnouts tend to be slower than interregional trucks and local residents using the route for intraregional travel. This tendency for variation in speed is most apparent in northern Modoc and Siskiyou Counties; approximately the northernmost 25 miles of the route.

- ***Trucks north of Termo Grasshopper Road (LAS 43.3)*** – Truck volumes increase north of Termo Grasshopper Road and the truck designation becomes STAA[1] for the remainder of the route to the north. Although truck volumes increase, the lane width between Termo Grasshopper Road and Adin is generally 10 feet with no paved shoulder. The pavement is subject to greater wear from the increased exposure to trucks.
- ***Limited paved shoulders*** – Much of SR 139 has limited paved shoulder width, especially in Lassen County.
- ***Short deceleration lane at SR 161*** – The SR 139 junction with SR 161 is at a skewed angle. The deceleration lanes are short for movements from northbound SR 139 onto State Line Road and from southbound Oregon 39 onto westbound SR 161. Vehicles sometimes use the travel lane to begin decelerating.
- ***Susanville bicycle and pedestrian facilities*** – There are intermittent sidewalks for pedestrians. Bicyclists must ride in the travel lane due to parked cars along the shoulder.

Route Concept

The existing route is a two-lane conventional highway. The route concept established for 2032 in this TCR is two-lane conventional highway.

SR 139 Route Concept (20-Year) Two-Lane Conventional Highway

Programmed Projects, Concepts and Management Strategies

Examples of *programmed* projects along SR 139 include chain-on area improvements and maintenance in various locations in Lassen County and rehabilitation and CCTV & RWIS projects in Modoc County. Examples of *planned* projects include bridge rail improvements and sidewalk and bicycle facility projects in Lassen County. In Modoc County, some examples of *planned* projects include HAR flashers and pavement improvements. Examples of potential future *concepts* include standard lane and shoulder widths between Termo Grasshopper Road and SR 299 in Lassen and Modoc Counties, addressing potential deer/vehicle conflicts in Modoc County and improving deceleration lanes at SR 161.

[1] STAA refers to the Surface Transportation Assistance Act of 1982. STAA routes allow "interstate" STAA trucks which are defined in **Appendix F: Truck Information**

STAKEHOLDER PARTICIPATION

There are many opportunities for public input throughout the project development process. Caltrans solicits and records public input during the identification of a project need, during the environmental study process and at other relevant project milestones. Public involvement for route specific planning offers unique opportunities for Caltrans to obtain and use region-wide community input about a route. Because routes like SR 139 span multiple jurisdictions, planning efforts must take care to address individual community issues along with region-wide issues. These issues can include local traffic flow, economic/business development, multimodal opportunities, traveler information systems, regional mobility, and safety.

In partnership with Caltrans District 2 and the Regional Transportation Planning Agencies for the counties of Lassen, Modoc and Siskiyou, the following outreach efforts were made during the TCR process.

State and federal laws require public involvement to be a part of transportation decision making. While such laws are meant to promote fairness and equity in decision making, Caltrans realizes that there are recognizable benefits to involving the public early and continuously. Some benefits from public engagement include increasing credibility, strengthening public support, and improving public trust. Involving the public early can result in using resources more efficiently to address public concerns and reduce the need to reevaluate decisions.

Key elements of public outreach:

- Media Outreach: press releases, emails, phone calls, flyers, community calendar.
- Public Workshops: Tulelake (Wednesday, March 12, 2014) and Susanville (Thursday, March 13, 2014).

Tulelake. Wednesday, March 12, 2014

Susanville. Thursday, March 13, 2014

- Outreach to Native American Tribes.
- Communication with RTPA staff to discuss key items to be included in the report such as issues along SR 139.

- Internet Website – Press releases about the workshops and announcement that SR 139 is in progress. Included contact email for TCR lead person.
- Local Transportation Commission Meetings – Presented TCR updates and draft and final versions of the SR 139 TCR.

The final step in the approval process for a TCR in District 2 includes seeking acceptance from regional partners, and District 2 staff who were directly involved in review/approval of the TCR. The Report Signature Sheet documents support for the planning and outreach process used, and serves to acknowledge that this TCR presents reasonable concepts for future development and management of the route within the subject jurisdictions.

See the following appendices for further information:

- **Appendix A: County Information**
- **Appendix B: Public Outreach Activities & Public Involvement**
- **Appendix C: Tribal Fact Sheets**
- **Appendix D: Non-Federally Recognized Tribes Fact Sheet**

REPORT SIGNATURE SHEETS

State Route 139 Transportation Concept Report

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State Route 139 Transportation Concept Report

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RESOLUTIONS OF CONCURRENCE

- Lassen County – X Page(s)
- Modoc County – X Page(s)
- Siskiyou County – X Page(s)

GENERAL ROUTE INFORMATION

ROUTE DESCRIPTION

State Route (SR) 139 begins at SR 36 in Susanville in Lassen County and ends in Siskiyou County at SR 161 at the Oregon state line, where it becomes Oregon State Route 39. The majority of SR 139 is a two-lane conventional highway with some passing opportunities. SR 139 links rural areas with small towns in northeastern California. Development along the route is limited, with a few homes and small rural communities.

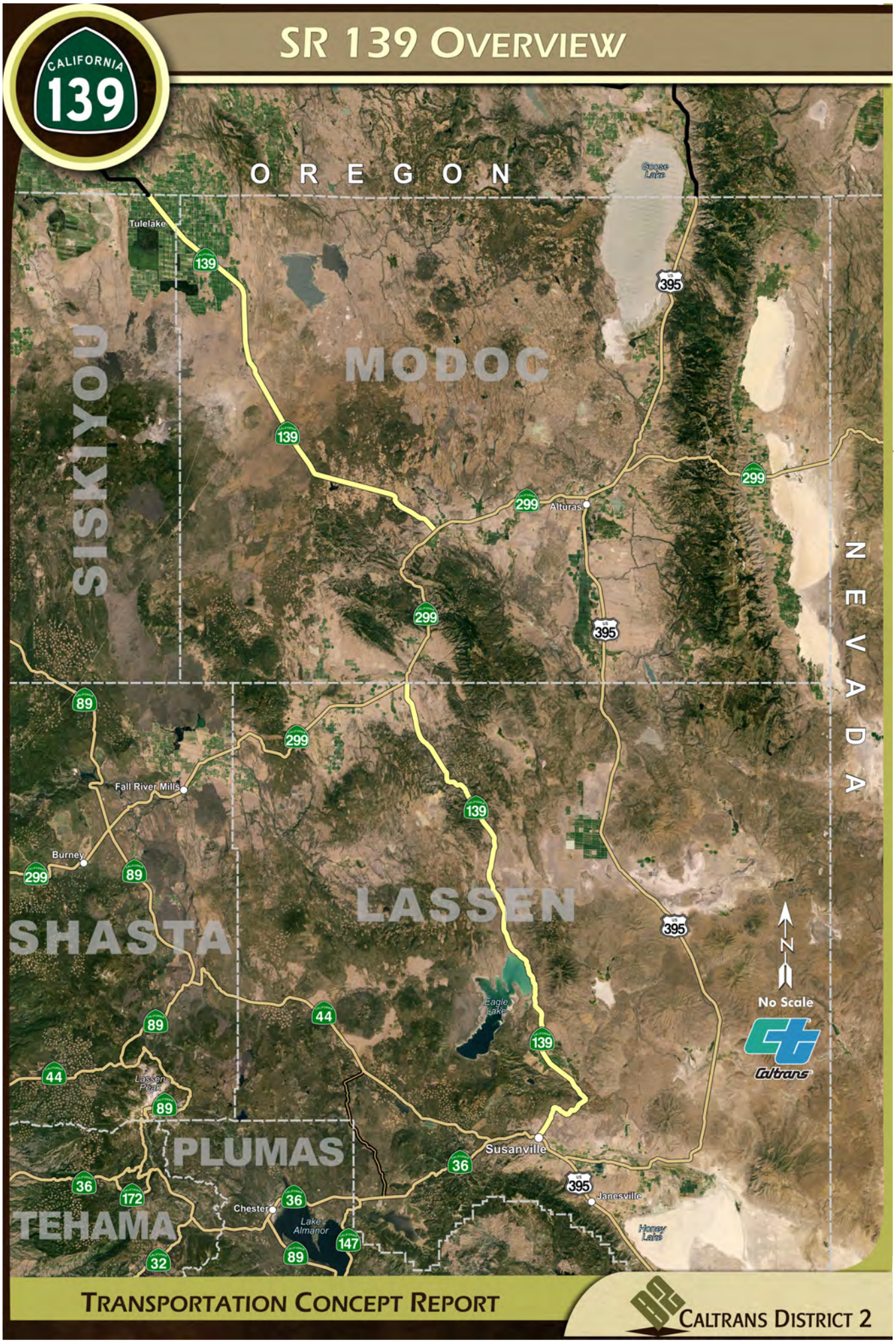
SR 139 has two mountain passes, both of which are located in Lassen County: at Lassen Post Mile[2] 7.4 (LAS 7.4) is Antelope Summit (elevation 5472) and at LAS 20.5 is Willow Creek Hill (elevation 5739). SR 139 provides access to recreational attractions including Eagle Lake, Lava Beds National Monument and Tule Lake National Wildlife Refuge.

ROUTE LOCATION

Route 139 is a south to north route in the northeastern portion of the state between State Route 36 to the Oregon border. See **Figure 1: Map of SR 139** on the following page.

[2] Using miles and counties, the Post Mile system identifies specific and unique locations in the California Highway System. Post Mile values increase usually from south to north or west to east depending on the general direction the route follows within the state. The Post Mile values increase from the beginning of a route within a county to the next county line. The post mile values start over again at each county line. Since SR 139 passes through Lassen, Modoc and Siskiyou Counties, the post mile references appear using county abbreviations LAS, MOD and SIS.

SR 139 Overview



Transportation Concept Report

Caltrans District 2

LEGAL DESCRIPTION

The California State Highway System consists of routes described in the California Streets and Highways Code. Division 1, Chapter 2, Article 3. (Section 439) describes SR 139 as follows:

> *Route 139 is from*
> *Route 36 in Susanville to Route 299 near Adin.*
> *Route 299 near Canby to the Oregon state line near Hatfield.*

MAJOR ROUTE CONNECTIONS

SR 139 crosses three other state highways: SR 36, SR 299 and SR 161.

- *SR 36* crosses west to east in Northern California through six counties (Humboldt, Trinity, Shasta, Tehama, Plumas and Lassen) between the Pacific Ocean to US 395 in Lassen County. SR 36 is a High Emphasis Route and Focus Route between SR 44 and US 395. For more information about SR 36, see the 2012 *SR 36 Transportation Concept Report*: http://www.dot.ca.gov/dist2/planning/conceptrpts.htm
- *SR 299* is a west to east highway from US 101 on the Pacific Coast to the Nevada border near Cedarville. SR 299 and SR 139 join in Adin and are coterminous for 20 miles between Adin and Canby. For more information about SR 299, see the 2009 *State Route 299 Transportation Concept Report (TCR):* http://www.dot.ca.gov/dist2/planning/conceptrpts.htm
- *SR 161* is a 20 mile, low volume highway in northeaster Siskiyou County that parallels the Oregon border connecting US 97 near Dorris to SR 139 north of Tulelake at SIS 5.0.

The following three tables show other major road connections along SR 139.

Table 1: Other Major Road Connections in Lassen County

Name	Location	Functional Classification
North Street/ Second Street	LAS 0.1	Major Collector
Fourth Street	LAS 0.3	Major Collector
Paul Bunyan Road	LAS 0.4	Minor Arterial
Skyline Road North/ Skyline Road East	LAS 1.2	Minor Arterial
Eagle Lake Road	LAS 30.8	Major Collector
Termo Grasshopper Road	LAS 43.3	Minor Arterial
Susanville Road	LAS 61.5	Minor Arterial

Table 2: Other Major Road Connections in Modoc County

Name	Location	Functional Classification
Lookout-Hackamore Road	MOD 17.4	Minor Arterial
Old Alturas Highway	MOD 40.5	Major Collector
Great Northern Road	MOD 47.7	Major Collector

Table 3: Other Major Road Connections in Siskiyou County		
Name	**Location**	**Functional Classification**
E Street	SIS 1.0	Minor Collector
Main Street	SIS 1.5	Local Road

ROUTE PURPOSE, TRIP GENERATING FACILITIES AND TRAVEL PATTERNS

From south to north in northeastern California, SR 139 passes through two broad regional settings that can be defined by its connections to other key routes: SR 36 to SR 299 in the south and SR 299 to SR 161 at the Oregon border in the north.

SR 36 to SR 299

Greater Susanville Area (defined as incorporated and unincorporated areas within and just outside of Susanville, approximately LAS 0.0-2.0):

From south to north, SR 139 begins at SR 36 within the City of Susanville in Lassen County. The route passes several businesses, offices and residences until near Hall Street (LAS 0.7). Skyline Road is a minor arterial that crosses SR 139 near LAS 1.2. Future travel patterns in this area could be affected by the Skyline Extension project connecting Johnstonville Road (2 miles east of SR 139) to SR 36. To the west along Skyline Road is Diamond Mountain Casino and in the eastbound direction is the southern edge of Lassen College, some open space and agricultural land.

Continuing north, SR 139 passes Lassen College (LAS 1.4), then the route crosses Spring Ridge Drive (LAS 1.9) which leads to Banner Lassen Medical Center to the east and the Susanville Indian Rancheria to the west. **Table 1** on page 13 lists some of the major road connections in this area. Within the Greater Susanville Area, the route is used for purposes such as commuting for work, errands and school. Bicyclists and pedestrians are common between SR 36 and Lassen College.

North of the Greater Susanville Area to SR 299

After Spring Ridge Drive, SR 139 ascends over Antelope Grade, passes through some agricultural fields and grazing areas before reaching Eagle Lake. The lake is a major attraction and trip generating facility along the route for tourists and residents alike, drawing local and regional travelers. Spaulding and Stones Bengard are two communities along the western and northern shores of the lake with both seasonal and year-round residences. Many trips in this section of the route are recreational and for intraregional commuting between Susanville and Eagle Lake or rural places near the route. Some long distance cyclists ride on SR 139 as part of a loop following SR 36, County Road A1 and SR 139 between Susanville and Eagle Lake.

About 15 miles north of Eagle Lake is Termo Grasshopper Road, which turns eastbound and after 18 miles, connects to US 395, 50 miles north of Honey Lake. For Lassen County residents, SR 139 is an alternative to US 395 which is a south-north route east of SR 139. To save time, some trucks and other vehicles follow routing that uses US 395, Termo Grasshopper Road, SR 139, Lassen County Road A2 and Lookout Cutoff Road to SR 139 in Modoc County. North of Termo Grasshopper Road, the volume and sizes of trucks is greater. There is also an increase in interregional trucks.

At a regional level, SR 139 north of Eagle Lake is an important connection for communities, ranches and rural homes outside of population centers. Many people living in these rural areas use SR 139 for commuting, shopping, errand-running and travelling to transportation hubs and medical appointments in cities such as Susanville, Alturas and Klamath Falls. Logging occurs near the route and trucks transport the wood to areas outside the region for processing. There tend to be some delivery trucks and some trucks that deliver wood chips to Honey Lake Power along this section.

About 20 miles north of Termo Grasshopper Road, SR 139 joins SR 299 for 20 miles from Adin to Canby. The community of Adin, in the Big Valley area, offers services such as gas, food and lodging.

SR 299 Junction to SR 161 Junction/Oregon Border

The northern part of the route begins at the northern SR 299 junction near Canby. This part of the route, from Canby (MOD R0.2) to Oregon is part of the Interregional Road System and is an important link for goods movement. The first 40 miles north of the SR 299 junction pass through the Modoc National Forest until five miles south of Newell. Because there are few trip-generating facilities along these 40 miles the primary route purpose here is interregional goods movement and intraregional commuting.

Newell is a small community approximately five miles north of the Modoc National Forest in the northwestern corner of Modoc County. The Tule Lake Segregation Center National Historic Landmark, part of the Tule Lake Unit of the WWII Valor in the Pacific National Monument, is a trip generating facility located in Newell.

The Siskiyou County line is located about six miles north of Newell. One mile north of the county line is the City of Tulelake, adjacent to the highway to the west of SR 139. West of the City of Tulelake is Tulelake National Wildlife Refuge, a trip generating facility in Siskiyou County. The route, being part of the Volcanic Legacy Scenic Byway for the final four miles of the route north of Tulelake before its end at SR 161, is itself a trip generating facility. Beyond SR 161/Oregon State Line, the route becomes Oregon State Highway 39 which continues about 20 miles north to Klamath Falls, a city that attracts trips from Northern California.

The northernmost 20 miles of SR 139 pass through an important agricultural area. Harvest time in the region begins in April and concludes in the late fall. Trucks from this area carry agricultural goods from farms in the Tulelake region to markets and processing facilities in other parts of California. These goods-carrying trucks are in addition to the interregional commercial trucks common along SR 139 from SR 299 to Oregon. Cross-border business is conducted by farmers on both sides of the state line near this part of the route.

SR 139 along this section is a popular route for vehicles travelling for recreational purposes, primarily during summer months. Recreational travelers use SR 139 to reach destinations along the route or as a link in longer trips to destinations farther away, such as Oregon and Nevada. Attractions along or near SR 139 in Modoc and Siskiyou Counties include Lava Beds National

Monument, Tule Lake Segregation Center and the Klamath Basin National Wildlife Refuge Complex[3].

There are some temporary events that affect traffic volumes and patterns along SR 139 in Modoc and Siskiyou Counties. Every July, there is a pilgrimage to the Tule Lake Segregation Center in Newell, a former war relocation center where citizens and non-citizens of Japanese ancestry were incarcerated during World War II. The Segregation Center Park Headquarters are temporarily housed at the Tulelake-Butte Valley Fairgrounds in the City of Tulelake. Two additional events are held annually around Labor Day: the Tulelake-Butte Valley Fair in Tulelake and Burning Man in northern Nevada. Both events attract over 60,000 people.

In addition to the route's purpose for interregional goods movement and recreational travel, commuting for work, errands and school are also common locally and regionally to Klamath Falls, Oregon and Alturas. Bicycles and pedestrians sometimes travel in the vicinity of Newell and Tulelake to commute to work or for school. Occasionally, there are interregional bicyclists along SR 139.

Table 4: Common Destinations and Types of Trips on SR 139

Trip Purpose	Destinations	Type of Trip
Recreation	Eagle Lake (20-30 miles north of Susanville)	Local, Regional
	Modoc National Forest (northern Lassen County and most of Modoc County near SR139)	Local, Regional, Interregional
	Historical and cultural sites: Emigrant Trail, Modoc War interpretive sites, Tule Lake Segregation Center and Camp Tulelake (northwestern Modoc and northeastern Siskiyou Counties)	Regional, Interregional
	Lava Beds National Monument (west of route in Siskiyou County)	Regional, Interregional
Commuting	Susanville, Tulelake, Newell, Adin	Local, Regional
Goods Movement	Larger cities off-route such as Reno and Klamath Falls and processing facilities in other parts of the state.	Regional, Interregional
	Infrequent delivery trucks to homes and businesses along the route.	Local, Regional
Errands such as medical appointments and shopping; driving to transportation hubs	Alturas, Susanville, Tulelake, Klamath Falls	Local, Regional

ROUTE TERRAIN

Route 139 is mostly rural and terrain ranges in elevation from 4,000 feet to 5,700 feet. The highest point along the route is in Lassen County at Willow Creek Hill, 5739 feet (LAS 20.46). Antelope Summit, elevation 5472, is about five miles north of Susanville.

The northbound climb out of Susanville along Antelope Grade is a 6% grade along a curvilinear alignment. The surrounding landscape is rocky with desert shrubs and pines and offers views of

[3] The Klamath Basin National Wildlife Refuge Complex encompasses a group of refuges in the Tule Lake area and southern Oregon. About three-fourths of the 60,000 annual visitors (travelling on average, three people per vehicle) to Tule Lake National Wildlife Refuge were nonlocal, mostly from other parts of northern California, southern Oregon and northwestern Nevada.

the valley below. North of Antelope Grade, the route descends gradually into Willow Creek Valley where the trees thin out to open range and farmland. The route crosses Willow Creek at the bottom of the valley. Heading north, the terrain returns to rolling with a minor summit at Willow Creek Hill before descending toward Eagle Lake.

The east side of the route in the vicinity of Eagle Lake slopes uphill and supports vegetation typical of a high desert environment: various shrubs and some small pines and junipers. To the west side of the route is Eagle Lake. In recent years, the width of the shore has been expanding as the lake levels drop. The shore is level and supports various grasses. The stretch of highway along Eagle Lake is about 10 miles long until Eagle Lake Road.

North of Eagle Lake Road, the route is rolling and tree density varies from somewhat dense to very sparse, typical of a high desert environment. The higher elevations are covered mostly by medium to tall conifers while the lower elevations are rockier with grasses, shrubs and the occasional short juniper.

The northernmost five miles of SR 139 in Lassen County level off and become primarily open range with some gently sloping low hills to the east and west of the route. The land is rocky with some hardy grasses and shrubs, while the tops of the hills are speckled with short juniper trees. On a clear day, it is possible to see the snow-capped peak of Mount Shasta, 70 miles northwest of the route.

From the SR 299 junction near Canby to the north along SR 139, the first 40 miles pass over rolling forested hills within the Modoc National Forest before reaching the irrigated agricultural fields just south of the small community of Newell. Vegetation in this rolling section of the route in Modoc County includes various grasses, shrubs and conifers. Density of trees varies from somewhat dense conifer forest to open fields with grasses and bushes. A broad expanse of land was burned in a 1996 fire and a subsequent reforesting effort occurred along SR 139. The trees are not yet mature, resulting in a landscape with the young replanted trees, shrubs and grasses.

From Newell, past Tulelake to the Oregon state line and beyond, the route is completely level and passes through irrigated farmlands of potatoes, hay and onions. As the route passes Newell, there are some plateaus close to the route to the west and further away to the east. In the distance to the north is a view of the foothills of Stukel Mountain (6525 feet) in Oregon.

ROUTE DESIGNATIONS

Table 5: Route Designations			
	Lassen County	**Modoc County**	**Siskiyou County**
State Highway System	Yes	Yes	Yes
Interregional Road System	No	Yes; between SR 299 and Siskiyou County Line	Yes
High Emphasis	No	Yes; between SR 299 and Siskiyou County Line	Yes
Focus Route	No	No	No
Freeway & Expressway System	Yes	Yes	Yes
National Highway System	Yes; between SR 36 and Hall Street	Yes; between SR 299 and Siskiyou County Line	Yes
Strategic Highway Network	No	No	No
Federal Functional Classification	Other Principal Arterial between SR 36 and Hall Street. Minor Arterial between Hall Street and Modoc County Line.	Minor Arterial between Lassen County Line and SR 299. Principal Arterial between SR 299 and Siskiyou County Line	Principal Arterial
Truck Designation	CA Legal Advisory Route Between SR 36 and 5 Dot Road. California Legal Network Between 5 Dot Road and Termo Grasshopper Road. Terminal Access (STAA) Between Termo Grasshopper Road and Modoc County Line.	Terminal Access (STAA)	Terminal Access (STAA)

For additional information on designations see **Appendix E: Route Designations**.

Table 6: Scenic Designations							
Segment #	**1**	**2**	**3**	**4**	**5**	**6**	**7**
National Scenic Byway – Volcanic Legacy Scenic Byway	No	No	No	No	No	No	Yes; between Main Street and SR 161
State Scenic Highway	No	No	No	No	Eligible	Eligible	Eligible

COMMUNITY CHARACTERISTICS AND LAND USE

Demographic Characteristics

Table 7 displays 2010 US Census data for the two incorporated cities along the route (Susanville and Tulelake), Newell (a census designated place [CDP] in Modoc County), and the three counties through which SR 139 passes: Lassen, Modoc and Siskiyou.

Table 7: County, City and Census Designated Place Census Data						
	Lassen County[1]	Susanville[1]	Modoc County	Newell (CDP)	Siskiyou County	Tulelake
Total Population	34,895	17,947	9,686	449	44,900	1,010
65+	3,474	1,184	1,905	40	8,782	102
Male Population	22,416	13,145	4,878	236	22,395	511
Female Population	13,479	4,802	4,808	213	22,505	499
White	25,532	11,269	8,084	199	38,030	563
Black	2,834	2,249	82	2	571	1
American Indian	1,234	612	370	23	1,814	15
Asian	356	198	78	1	540	1
Native Hawaiian and Other Pacific Islander	165	111	21	5	80	-
Hispanic or Latino	6,117	4,259	1,342	271	4,615	601
Median Household Income	$ 51,921	$ 48,588	$ 37,482	$ 23,403	$ 37,948	$ 28,088
Median House Value	$ 189,400	$ 172,600	$ 158,200	$ 122,500	$ 215,200	$ 84,600
30 percent or more of Household Income for Gross Rent	57.4%	64.7%	53.9%	84.9%	59.0%	59.6%
Percent Unemployed	11.2%	11.4%	11.6%	32.2%	14.7%	10.3%
Population Projection, 2030	38,828	19,970	10,347	480	48,883	1,100
Population per Square Mile	8	2,263	2	187	7	2,465
Individuals Below Poverty Level	15.4%	19.5%	19.9%	37.4%	19.6%	26.9%

[1]There are three prisons located in Lassen County: the High Desert State Prison and the California Correctional Center, both in Susanville, and the Herlong Federal Correctional Institution east of Susanville. The institutionalized population in Lassen County and Susanville is 9,604 and 8,400, respectively. The institutionalized population is included in the total population.

Land Use, Economic Base and Future Growth

The three counties the route passes through have many similarities: they are rural and much of the land is publicly owned. The most common types of land use within the counties include parks and open space, timber, recreation and agriculture. There are some residential and commercial uses located in cities and communities along the route.

The economy of counties along SR 139 is based in agriculture, ranching, forestry, recreation and tourism. Agricultural commodities produced in the counties include alfalfa hay, barley, wheat, oats, rye, mint, potatoes, horseradish, peas, onions, timber and livestock. Prior to the 1990s, timber production was a significant component of the economy in these counties. Although the harvest has decreased, logging still occurs, but the number of saw mills has declined.

Many residents in Lassen, Modoc and Siskiyou Counties are employed in service providing, farming and government positions. There was a drop in farm jobs in the late 1990s and early

2000s. Top public employers include various federal, state and local agencies and schools. Unemployment is higher in the three counties than the state average.

Forecasted job characteristics for the North Mountains Region (including Lassen, Modoc and Siskiyou Counties) are as follows:

Table 8: Occupations with Most Forecasted Growth 2010-2020, North Mountains Region

2010-2020 Occupations with the Most Openings	2010-2020 Fastest Growing Occupations
1. Cashiers	1. Home Health Aides
2. Forest and Conservation Technicians	2. Heating, Air Conditioning, and Refrigeration Mechanics and Installers
3. Waiters and Waitresses	3. Personal Care Aides
4. Combined Food Preparation and Serving Workers, Including Fast Food	4. Fitness trainers and Aerobics Instructors
5. Farmers, Ranchers, and Other Agricultural Managers	5. Management Analysts

Source: Occupations in Demand (2014 State of California Employment Development Department)

Each county is discussed below in terms of its land use, economic base and potential future growth. A city or community along SR 139 within each county is also discussed. Overall, the growth along the route is anticipated to be low, with the exception of Susanville.

Lassen County

Outside of Susanville, land use is primarily parks and open space, timber, recreation and agriculture. The Susanville Indian Rancheria is located just north of Susanville. Most of the public lands in the County are managed by the Bureau of Land Management and the US Forest Service. There is potential future growth on tribal lands and in the Eagle Lake and Big Valley areas.

Susanville

Land use in Susanville is residential, commercial and public facilities. There could be new development including medical offices, residences, retail and parks. There is potential for expansion of the prison.

Modoc County

Land use in Modoc County is primarily parks and open space, timber, recreation, grazing and agriculture. Most public lands in the County are managed by the US Forest Service; most of the Modoc County portion of the route passes through the Modoc National Forest. Potential for future growth would be in the Big Valley area.

Newell

Land use in Newell includes residential, commercial, recreation and public facilities. The surrounding land use is open space and agriculture. The Tule Lake Segregation Center in Newell is currently open and is in the process of restoring the former jail on the site. Migrant housing is located in Newell for farm workers who work in the nearby fields from early May through late October.

Siskiyou County

Land use in Siskiyou County is primarily parks and open space, timber, recreation, grazing and agriculture. Most public lands in the County are managed by the US Forest Service. Most future development in Siskiyou County is likely to occur in cities and communities along the I-5 corridor, well west of SR 139.

Tulelake

Land use in Tulelake includes residential, commercial and public facilities. The surrounding land is open space and agriculture. Future growth could occur with development of local attractions.

ROUTE OVERVIEW

This section provides an overview of the various modal networks on the route. It covers vehicles, freight, bicycles, pedestrians and transit. It includes information about connectivity and continuity of these modes.

VEHICLES

SR 139 is a two-lane conventional highway with passenger vehicles being the primary user group. Seasonally, RVs are common in the vicinity of attractions.

The types of vehicles and trip purposes vary by location along the route. The route can be discussed as four different sections, each unique in terms of patterns of travel. From south to north, the sections are ***SR 36 to Spring Ridge Road***, ***Spring Ridge Road to SR 299***, ***SR 299 to County Road 114***, and ***County Road 114 to the Oregon Border***.

1. ***SR 36 to Spring Ridge Road (LAS 0.0-1.9):*** This section comprises the southernmost 1.9 miles of the route within and near Susanville. There are about 6,600 passenger and light duty vehicles per day in the Susanville area, making up about 99% of the AADT. Most trips in this section are local for commuting to work or school, shopping and medical appointments.

2. ***Spring Ridge Road to SR 299 (LAS 1.9-MOD 0.2):*** The second part consists of the remaining length of SR 139 in Lassen County and a short section in Modoc County and ends at SR 299 (MOD 0.2). Most of the vehicles between Susanville and Eagle Lake are passenger cars and a few RVs and small delivery trucks. Termo-Grasshopper Road (LAS 43.3), which connects US 395 and SR 139, is a frequently used link in longer distance trips between Reno and Oregon. Daily passenger and light vehicle volumes between Spring Ridge Road and SR 299 are around 700 vehicles per day, representing about 86% of the AADT.

3. ***SR 299 to County Road 114 (MOD R0.2-40.5):*** The third section is part of the Interregional Road System and begins at the northern SR 299 junction in Modoc County. This section crosses through the Modoc National Forest. Passenger and light duty vehicles are mostly interregional and travel for recreational purposes. There are also some residents who live in rural areas near the route who travel in passenger vehicles for commuting to work or school, shopping and medical appointments. There are about 800 passenger and light duty vehicles per day, making up about 70% of total AADT.

4. ***County Road 114 to the Oregon Border (MOD 40.5-SIS 5.0):*** The fourth and final section of SR 139 in this discussion passes through small farming communities interspersed among irrigated farmlands. Passenger and light duty vehicles are interregional, recreational and local for the purposes of commuting to work or school, shopping and medical appointments. There are about 2,000 passenger and light duty vehicles per day, making up about 82% of the total AADT.

FREIGHT

Movement of freight in the vicinity of SR 139 is accomplished primarily by truck and rail.

The following table shows truck designations along SR 139.

Table 9: Truck Designations by Beginning and Ending Post Mile

Beginning Post Mile	Ending Post Mile	Location Description	Truck Designation
LAS 0.000	LAS 15.100	SR 36 to 5 Dot Road	California Legal Advisory Route
LAS 15.100	LAS 43.266	5 Dot Road to Termo- Grasshopper Road	California Legal Network
LAS 43.266	LAS 66.635	Termo- Grasshopper Road to Modoc County Line	Terminal Access (STAA)
MOD 0.000	MOD 0.230	Lassen County Line to SR 299	Terminal Access (STAA)
MOD R0.231	MOD 50.684	SR 299 to Siskiyou County Line	Terminal Access (STAA)
SIS 0.000	SIS 5.043	Modoc County Line to SR 161/ Oregon State Line	Terminal Access (STAA)

STAA – Surface Transportation Assistance Act (1982).

Route 139 is a California Legal Advisory Route from SR 36 (LAS 0.0) to 5 Dot Road (LAS 15.1). From 5 Dot Road (LAS 15.1) to Termo-Grasshopper Road (LAS 43.3) is part of the California Legal Network. The rest of the route is categorized as Terminal Access (STAA). Termo-Grasshopper Road (LAS 43.3) is a frequently used connection between US 395 and SR 139 for trucks travelling between Reno and the Pacific Northwest. **Appendix F: Truck Information** includes additional information about these designations and a map of the truck freight network in District 2.

The section of SR 139 from SR 36 to Termo Grasshopper Road (LAS 0.0-43.3) is not open to STAA trucks due to the combination of steep grade and curvilinear alignment on Antelope Grade. The basic issue is that a longer STAA truck cannot stay within its designated lane while moving through some of the curves on the grade (commonly referred to as “off-tracking”). The prohibition of STAA trucks on this section of SR 139 does not have an adverse impact on freight movement; however, as STAA trucks are allowed on US 395 which parallels SR 139 about twenty miles to the east. STAA trucks may use either US 395 to SR 299 to access the portion of SR 139 north of SR 299 or US 395 to Termo Grasshopper Road onto SR 139 then north. State Routes 36, 44 and 299 also provide similar (albeit less direct) west-east STAA access to SR 139 north of SR 299.

Given the proximity of parallel routes which provide STAA access and availability of funding, it is not a District priority to change the truck designation for SR 139 south of Termo Grasshopper Road. While projects will not be pursued strictly to achieve STAA access, projects developed to achieve other goals (such as adding shoulders or curve improvements) should be designed to accommodate STAA trucks.

The District will prioritize standard lane and shoulder widths on the portion of SR 139 between Termo Grasshopper Road and SR 299 (LAS 43.3-MOD 0.2) where STAA trucks are already allowed. North of SR 299, in Modoc and Siskiyou Counties, SR 139 is part of the Interregional Road System and a High Emphasis Route. Most of this portion of the route, which is designated as Terminal Access for STAA trucks, has standard lane widths.

Trucks found along the southern part of the route are mostly short distance delivery trucks, transporting items to communities along Eagle Lake Road (LAS 30.8) and rural homes along all parts of the route. Trucks along this part of the route also transport livestock, wood chips and agricultural products such as hay, associated with the public and agricultural lands the route passes through. Trucks transporting gravel are found north of Termo-Grasshopper Road (LAS 43.3), as are interregional STAA trucks transporting consumer goods. Trucks north of the SR 299 junction carry all of the above plus a greater variety of agricultural items (like potatoes, alfalfa and rice). Perez Inspection Station (MOD 23.2) is located south of the Oregon border for vehicles entering California.

Figure 2: Perez Inspection Station

Rail

The Burlington Northern and Santa Fe Railway (BNSF) crosses Route 139 at grade near MOD 47.7 with trains crossing about three times each day. Perez Overhead is located at MOD 30.6 and passes over the Modoc Northern Railroad, a short line in Northern California. This railroad runs roughly parallel to SR 139 and is close to the route from approximately MOD 41.0 to the Oregon border (SIS 5.0). In general, train volumes have declined.

BICYCLES

Bicycles are allowed on the entire length of SR 139. Total shoulder widths in the Susanville area range from zero to four feet, zero feet in the rest of Lassen County and at least four feet in most

of Modoc and Siskiyou Counties. The terrain is mountainous to rolling in Lassen County, rolling to level in Modoc County and level in Siskiyou County.

In the Susanville area, bicyclists are mostly local and travel for the purposes of commuting (many commute to Lassen College at LAS 1.4), recreation and some errand-running.

North of Susanville to Newell in northern Modoc County, cyclists are less common than in the more populated areas. For this part of the route, they are long distance and travel recreationally or as a lifestyle. From Newell to the Oregon border, there are local and long distance cyclists as well. The local cyclists commute to work and school and use bicycles for small shopping trips. The long distance cyclists travel for recreation and for a lifestyle.

In general, there tend to be more long distance recreational cyclists on weekends than on weekdays. Also, cyclists are less likely to ride during inclement weather, but this tendency is more common for recreational than commuter trips.

For more information regarding bicycle facilities in District 2, see the District 2 Cycling Guide: http://www.dot.ca.gov/dist2/pdf/bikeguide.pdf

PEDESTRIANS

Pedestrians are permitted along the entire length of SR 139.

In Susanville, many of the pedestrians are schoolchildren on their way to or from the elementary school just east of SR 139 on Fourth Street. During school arrival and dismissal times, a crossing guard is present at the intersection. There is an intermittent sidewalk in Susanville from SR 36 to Hall Street. There are curb ramps on the corners at Skyline Road, but no sidewalks going in any direction along SR 139 or Skyline.

There are very few pedestrians north of Susanville, but occasionally pedestrians use SR 139 in the vicinity of communities along the route such as Tulelake and Adin. Pedestrians in the small communities travel for purposes such as errand-running or commuting to work or school. There are no sidewalks on SR 139 outside of Susanville and pedestrians use the shoulders.

TRANSIT REGIONAL

Provision of transit in rural areas is challenging for a number of reasons including: long distances, limited/ dispersed population base, scheduling difficulty and limited funding. Regional transit services available on or near SR 139 are as follows:

In Lassen County:

Lassen Rural Bus System
- Includes the Susanville City Fixed Route
- Also serves the Southern, Eastern and Western parts of the county, including seasonal service to Eagle Lake.

Susanville Indian Rancheria
- Provides service to Westwood, Chester, Red Bluff and Redding

Mt. Lassen Cab Company
Dial-a-Ride
Vehicle for Hire Voucher programs
Lassen Senior Services
Mount Lassen Motor Transit

In Modoc County:

Sage Stage

- Service out of Alturas to Susanville, Reno, Burney, Canby and Klamath Falls, Oregon. The service to Klamath Falls from Alturas includes a stop in Tulelake.

Dial-a-Ride

- In Alturas, Modoc Estates and California Pines.

In Siskiyou County:

Siskiyou Transit and General Express (STAGE) does not operate in the eastern part of the county.

TRANSIT - INTERREGIONAL

Bus

There is no interregional bus service in close proximity to SR 139.

Airports

Major carrier commercial service is not available near SR 139.

General Aviation Airports near the route include Susanville Municipal, Spaulding, Adin and Tulelake Municipal Airports.

Rail

There are no public railroad services near SR 139.

ENVIRONMENTAL CONSIDERATIONS

Caltrans strives to maintain, operate, and improve the highway in a manner sensitive to the environmental setting. Environmental issues are addressed in the System Planning process and the project planning and development process as early as feasible. Known environmental issues and concerns are included in a TCR so that planners, engineers, and other project development staff can incorporate environmental factors into project design from the outset.

Some of the key environmental issues along SR 139 are:

National Lands

- Modoc National Forest
- Tule Lake National Wildlife Refuge (adjacent)
- Lava Beds National Monument (adjacent)
- Tule Lake Unit of the WWII Valor in the Pacific National Monument

Farmland/Timberland

There is prime farmland and farmland of statewide importance adjacent to SR 139, especially in Modoc and Siskiyou counties near Tulelake. There are some Williamson Act program properties also consisting of prime agricultural land and non-prime agricultural land. The non-prime land is rangeland and open space.

There is relatively minor timber production adjacent to SR 139.

Cultural Resources

There is high sensitivity in areas near SR 139 for historic and prehistoric resources due to availability of water.

Historic Trails

The Applegate Trail and the Lassen (cutoff) Trail cross SR 139.

Other Historic Feature

The railroad spur that crosses SR 139 near MOD 44.4 could be historically significant, having served the Segregation Center during WWII.

Visual Aesthetics

SR 139 is mostly in a very remote, natural and undeveloped setting with scenic vistas and federally-managed land. Therefore, aesthetics is an important consideration in future decisions regarding SR 139.

Floodplains

Floodplains that are either adjacent to or cross SR 139 include:

- *Barry Creek* – near Hall Street in Susanville
- *Willow Creek* – about two miles north of Merillville Road and in Northern Lassen County (various locations between approximately LAS 54.0 – 60.0)
- *Eagle Lake*
- *Slate Creek* – about four miles south of Termo Grasshopper Road
- *Said Valley Reservoir* – just north of Termo Grasshopper Road
- *Howards Gulch* – about two miles north of SR 299 in Modoc County
- *Lost River* – near the Oregon state line

Hazardous Materials

- There is one potentially contaminated site along the highway. This site is located at the intersection of SR 139 and Main Street in Tulelake. The contaminant of concern is gasoline in soil and groundwater. Depending on the type of work going on in the vicinity of this intersection, a soil and/or groundwater study may be necessary.

Naturally Occurring Asbestos

- Naturally Occurring Asbestos has not been found in the vicinity of this corridor.

Air Quality

State Ambient Air Quality Designations

The Northeast Plateau Air Basin is in attainment or unclassified for all criteria pollutants except PM_{10} which is non-attainment. Common sources of PM_{10} in the area include dust and dirt from unpaved roads, burning and wood stoves. PM_{10} is highest in the fall and winter.

National Ambient Air Quality Designations

The Northeast Plateau Air Basin is in either attainment or unclassified for all criteria pollutants.

Waters and Wetlands

Though SR 139 travels through arid mountain ecological units, it is also characterized by a series of drainage basins occupied by shallow lakes and wetlands that are resource rich. Further studies would need to include delineation of state and federal waters including wetlands.

There are wetlands adjacent to the route near Willow Creek, Eagle Lake, Slate Creek, Said Valley, Howard's Gulch, Loveness Road and Boles Road. There are also some irrigation channels in the vicinity of Newell and Tulelake in northern Modoc and northeastern Siskiyou Counties.

Some potential issues associated with the proximity of the wildlife refuges along the northern part of the route include:

- Wetlands
- Migratory birds
- Known presence of several endangered species
- Section 4(f) impacts to activities, attributes and features

Species Considerations

SR 139 is a biologically resource-rich area because it is very rural (i.e. minimal human development), is adjacent to aquatic areas in a primarily arid landscape and, due to the endemic restrictions of geology, topography, climate and ecology; has several unique ecosystems which lend themselves to rare species.

Species listed under various federal and state laws

- Modoc Sucker and Critical Habitat: Willow Creek area (LAS 46.0-61.0).
- Lost River Sucker and Critical Habitat: Lost River area and associated drainages in Tule Lake Basin (MOD 40.0 to SIS 5.0).
- Shortnose Sucker and Critical Habitat: Lost River area and associated drainages in Tule Lake Basin (MOD 40.0 to SIS 5.0).
- Oregon Spotted Frog and critical habitat: aquatic features in Klamath and Pit River Basins.
- Swainson's Hawk
- Bank Swallow
- Willow Flycatcher
- Greater Sandhill Crane
- Golden Eagle (also protected under the Migratory Bird Treaty Act)

State Species of Concern & Rare Plants

Multiple California Department of Fish and Wildlife (CDFW) species of concern may exist along SR 139. California Native Rare Plant species and aquatic communities information is found in the California Natural Diversity Database.

Two-Season Survey Protocols

None of the species identified above has a two-season survey protocol.

Large Game Animals-Wildlife Crossing Incidents

There is a stretch of the route in Modoc County that can have deer present during winter months of some years. The issue has been recognized by local and regional agencies. For more information regarding deer and SR 139, see **Appendix G: Deer and SR 139**.

Bat Colonies

Likely habitat for a number of bat species, for at minimum night roosting, could be at bridge locations such as Willow Creek (PM 17.0), Meadow Channel (PM 16.9), Howard Gulch (PM R2.2) and Perez OH (PM 30.6).

Fish Passage

Two culvert locations in Lassen County (LAS 52.3 and LAS 53.0) have been identified as fish passage barriers. Both culverts are located on Willow Creek, which was historically occupied by federally endangered Modoc sucker fish. The upper reaches of Willow Creek provide suitable habitat for this species, however, the culverts are perched and may be completely or substantially restricting fish passage.

ROUTE SEGMENTATION

Introduction

For purposes of analysis, highways are divided into smaller pieces called segments. Each segment selected has one or more characteristics that distinguish it from other segments.

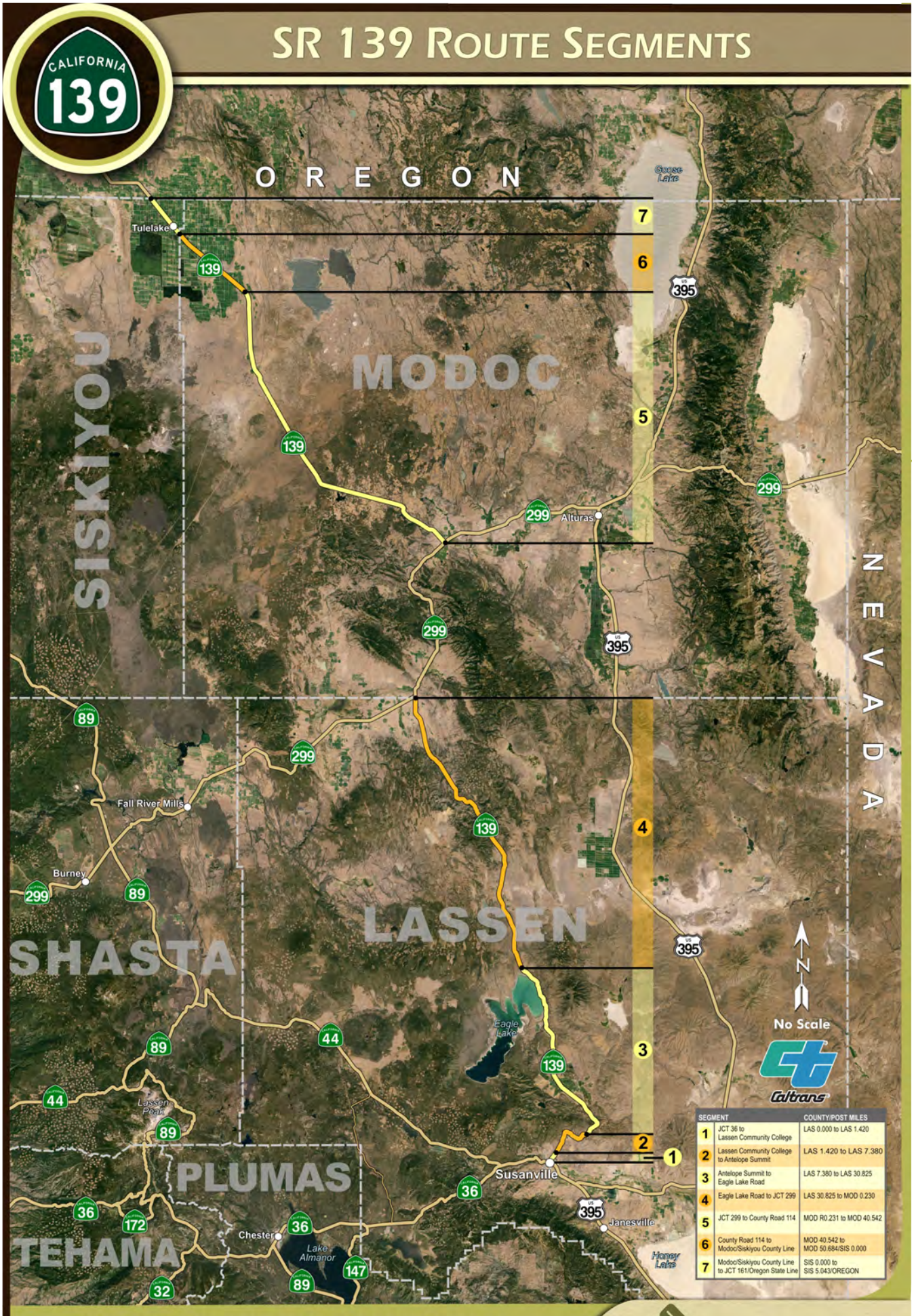
Criteria considered in the selection of segments for analysis include:

- Change in function or use of route.
- Significant changes in AADT.
- Significant changes in terrain or grade.
- Junction/crossing of other highway or major facility.
- Urban/rural boundaries or other significant change in land use.
- District/County boundaries.

State Route 139 is broken down into seven segments for analysis purposes.

Table 10: SR 139 Route Segments					
SR 139 Route Segments					
Segment No.	Location Description	Begin		End	
		County	Post Mile	County	Post Mile
1	SR 36 to Lassen Community College	Lassen	0.000	Lassen	1.420
2	Lassen Community College to Antelope Summit	Lassen	1.420	Lassen	7.380
3	Antelope Summit to Eagle Lake Road	Lassen	7.380	Lassen	30.825
4	Eagle Lake Road to SR 299	Lassen	30.825	Modoc	0.230
5	SR 299 to County Road 114	Modoc	R0.231	Modoc	40.542
6	County Road 114 to Modoc/ Siskiyou County Line	Modoc	40.542	Modoc/ Siskiyou	50.684/0.000
7	Modoc/ Siskiyou County Line to SR 161/ Oregon State Line	Modoc/ Siskiyou	0.000	Siskiyou/ Klamath (Oregon)	5.043/0.000

SR 139 Route Segments



SEGMENT		COUNTY/POST MILES
1	JCT 36 to Lassen Community College	LAS 0.000 to LAS 1.420
2	Lassen Community College to Antelope Summit	LAS 1.420 to LAS 7.380
3	Antelope Summit to Eagle Lake Road	LAS 7.380 to LAS 30.825
4	Eagle Lake Road to JCT 299	LAS 30.825 to MOD 0.230
5	JCT 299 to County Road 114	MOD R0.231 to MOD 40.542
6	County Road 114 to Modoc/Siskiyou County Line	MOD 40.542 to MOD 50.684/SIS 0.000
7	Modoc/Siskiyou County Line to JCT 161/Oregon State Line	SIS 0.000 to SIS 5.043/OREGON

Transportation Concept Report

Caltrans District 2

ROUTE PERFORMANCE

LEVEL OF SERVICE

Level of Service (LOS) is a qualitative measure used to analyze highway performance and to describe operating conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six levels are defined for each type of facility analyzed. Letters designate each level, from "A" to "F", with LOS "A" representing the best operating conditions and LOS "F" the worst.

ROUTE PERFORMANCE TABLE

The Performance Table below provides current and future volume and LOS information for SR 139.

Table 11: Route Performance

Current Year 2012							AADT Growth Rate (Vehicles/Year)	Future Year 2032					
Segment Number	AADT	Peak Hour (PH)	Total Trucks	5+ axle Trucks	DVMT	LOS		AADT	Peak Hour (PH)	Total Trucks	5+ Axle Trucks	DVMT	LOS
1	6700	690	88	26	9514	C	15	7000	721	92	27	9940	C
2	1700	260	65	25	10132	C	10	1900	291	73	28	11324	C
3	520	110	42	21	12122	B	1	540	114	44	22	12588	B
4	450	80	35	17	16218	B	5	550	98	43	21	19822	B
5	1150	170	344	268	45860	B	10	1350	200	404	315	53835	B
6	2150	220	340	240	21810	B	1	2170	222	343	242	22012	B
7	2400	270	439	311	12103	B	5	2500	281	457	324	12608	B

Legend:
AADT – Annual Average Daily Traffic
PH – Peak Hour Volume
Total Trucks – Total Truck Count
5+ Axle Trucks – Number of trucks with five or more axles
DVMT – Daily Vehicle Miles Travelled. Number of miles travelled daily on segment (AADT x Center Line Miles)
LOS – Level of Service
AADT Growth Rate – The annual projected traffic growth rate expressed as "number of vehicles per year"

See **Appendix H: Capacity Analysis and Level of Service** for further description of the methodology used for LOS determinations.

Concept LOS C/D Threshold

Caltrans District 2 seeks to implement improvements on SR 139 when LOS is projected to fall below LOS C. This improvement standard is commonly referred to as the "C/D" Threshold". When a segment is forecast to fall to LOS D, then improvements should be considered.

Concept LOS
The Concept LOS for SR 139
Within District 2 is the C/D threshold.

Route 139 meets Concept LOS now and in the future.

KEY ROUTE ISSUES

Because SR 139 is a relatively low volume route, the primary issues are not capacity related, but related more to its rural quality, weather, and in some places, the terrain.

Some of the key issues are as follows:

- ***The route is remote*** – There are long distances between services such as fuel and rest areas. Inappropriate and undesirable activities such as using unofficial places as a restroom, littering, camping, installing unpermitted mailboxes and creating unpermitted access points on SR 139 occur as a result of the route's remoteness.
- ***Wildlife*** – A section of SR 139 in Modoc County passes through the winter range for deer. During seasons with above average snowfall, deer tend to congregate on and near SR 139 from Clear Lake Road to County Road 114 (MOD 30.4-40.5). Written comments were received from over 40 individuals, organizations and agencies expressing concern about this issue. There are also some sensitive species within the vicinity of the route, especially where water is present.
- ***Ice and snow*** – sections of the route at higher elevations on north facing slopes or shaded by trees tend to experience winter weather conditions more than other sections.
- ***Limited availability and awareness of traveler information*** – There is limited availability of utilities for operation of new traveler information technology along SR 139. Given this constraint, there is a reasonable amount of coverage along SR 139, but less than what is available for other routes in the District. Public awareness of available traveler information is limited. Traveler information is useful during inclement weather, construction and incidents or for any roadway user who wishes to learn more about current conditions along the route.
- ***Large agricultural vehicles in northern Modoc and Siskiyou Counties*** – There are some slow-moving extra-large agricultural vehicles on the highway that can impede traffic in both directions along SR 139.
- ***Vehicles traveling at varying speeds*** – On any section of SR 139, drivers use the route for different purposes and tend to drive at different speeds. Agricultural vehicles and vehicles pulling in and out of historical marker turnouts tend to be slower than interregional trucks and local residents using the route for intraregional travel. This tendency for variation in

speed is most apparent in northern Modoc and Siskiyou Counties; approximately the northernmost 25 miles of the route.

- ***Trucks north of Termo Grasshopper Road (LAS 43.3)*** – Truck volumes increase north of Termo Grasshopper Road and the truck designation becomes STAA for the remainder of the route to the north. Although truck volumes increase, the lane width between Termo Grasshopper Road and Adin is generally 10 feet with no paved shoulder. The pavement is subject to greater wear from the increased exposure to trucks.
- ***Limited paved shoulders*** – Much of SR 139 has limited paved shoulder width, especially in Lassen County.
- ***Short deceleration lane at SR 161*** – The SR 139 junction with SR 161 is at a skewed angle. The deceleration lanes are short for movements from northbound SR 139 onto State Line Road and from southbound Oregon 39 onto westbound SR 161. Vehicles sometimes use the travel lane to begin decelerating.
- ***Susanville bicycle and pedestrian facilities*** – There are intermittent sidewalks for pedestrians. Bicyclists must ride in the travel lane due to parked cars along the shoulder.

LONG TERM PLANNING CONSIDERATION

Interstate 11

Congress recognized the importance of the US 93 Corridor between Phoenix and Las Vegas and designated it as future Interstate 11 (I-11) in the recent transportation authorization bill, Moving Ahead for Progress in the 21st Century Act (MAP-21).

The Arizona Department of Transportation (ADOT) and Nevada Department of Transportation (NDOT) are working together on the I-11 and Intermountain West Corridor Study. It includes detailed corridor planning of a possible high priority Interstate link between Phoenix, Arizona, and Las Vegas, Nevada, as well as high-level visioning for extending the Corridor north to Canada and south to Mexico (the Intermountain West Corridor). The initial screening process resulted in two alternatives north of Las Vegas for future study. One of the alternatives crosses into Northeastern California and appears to follow the existing US 395 alignment and/or could possibly incorporate northern parts of SR 139. The final report is scheduled to be complete by July 2014.

If there is a need for a Northern Nevada segment, then further studies will be conducted to select the best alignment. If the selected alignment passes through Northeastern California, then traffic along SR 139 could be impacted. SR 139 performance and future concept should be reevaluated taking into consideration the possible new Interstate through that part of the state. At this time, it is unknown when or if development of the Northern Nevada to Canada corridor will occur and funding has not been identified to pursue its development.

ROUTE CONCEPT

Route Concept (also known as Facility Concept) is a general term used to describe the intended number of through travel lanes and degree of access control for the entire route. The Route Concept provides an overall vision for the route to assist Caltrans and other agencies with current and future planning for SR 139.

The existing route is a two-lane conventional highway. The route concept established for 2032 in this TCR is two-lane conventional highway.

SR 139 Route Concept (20-Year)
Two-Lane Conventional Highway

ROUTE CONCEPT RATIONALE

20-Year Route Concept

From LAS 0.0 to MOD 0.2 and from MOD R0.2 to SIS 5.0, the current route concept is 2C, with some access control (MOD R0.2-MOD T10.8). The future concept for this highway is 2C, maintaining existing access control. Future traffic projections indicate that no capacity expansion will be needed as traffic volumes are not expected to increase significantly within the twenty year horizon. Level of service is not expected to fall below the C/D threshold.

In addition to low volumes, the route's connectivity, function, and type of traffic do not justify capacity expansion. SR 139 intersects with SR 36, SR 299 and SR 161. Although SR 36 is a Focus Route, most vehicles on SR 36 remain on that route and do not use SR 139. SR 299 and SR 161 in the vicinity of SR 139 are in a similar rural setting and also have low volumes.

SEGMENT CONCEPT AND RATIONALE

No segment requires additional lanes or a change in facility type to accommodate forecasted traffic conditions and maintain concept LOS. However, some operational improvements are recommended and are discussed in the next section.

ACTIONS AND STRATEGIES

This section includes three subsections: Programmed Projects, Planned Projects and Concepts. Some of the projects are to achieve route concept, some are to improve operations, and some to maintain the structural integrity of the highway.

Programmed Projects

Programmed projects are those for which funding has been approved in a programming document. The two most common programs or sources of funding are the State Transportation Improvement Program (STIP) and State Highway Operations Protection Program (SHOPP).

Table 12: Programmed Projects

Segment	Location	Type	Description	Program
2	LAS 2.5	Safety Improvement	Worker Safety Chain Control Improvement. Widen paved shoulder to 20', lighting	SHOPP
3	LAS VAR	Bridge Maintenance	Various Locations in Lassen County	Maintenance
3/4	LAS 30.0-40.0	Maintenance	Grasshopper Chip Seal	Maintenance
5	MOD 2.0-40.0	Maintenance	Crack Seal	Maintenance
5	MOD 4.5-12.5	Drainage Restoration	Various Locations near Howards Gulch	SHOPP
5	MOD 10.7-28.0	Roadway Rehabilitation	Perez Pavement Rehab 2R	SHOPP

Planned Projects

Projects that appear in the Planned Projects Table below are those that are from a variety of sources such as Regional Transportation Plans (RTPs), ten year constrained SHOPP, DSMP Project List and General Plans. A constrained planned project is one for which funding is anticipated to be available within the time frame covered by the plane (either 10 or 20 years). An unconstrained planned project is one for which a need is identified but is not expected to be fundable within the time frame covered by the plan (either 10 or 20 years).

Table 13: Planned Projects

Segment	Location	Type	Description	Source
1/2	Susanville	Pedestrian Improvements	Add sidewalks where gaps exist	Susanville General Plan (U)
1/2	SR 36 to Spring Ridge Drive	Bicycle Improvements	Develop bicycle facility (type TBD)	Lassen County Bikeway Master Plan, Susanville General Plan (U)
3	LAS 10.0 and LAS 24.0	Roadside	Vista Point Rehabilitation	SHOPP (U)
3	LAS 16.9	Bridge Rail	07-0061 Meadow Channel Rail Type-MBBR	SHOPP (U)
3	LAS 17.0	Bridge Rail	07-0061 Willow Creek Rail Type-MBBR	SHOPP (U)
4/5	North and south junctions with SR 299	Operational	Widening and intersection reconstruction project	Modoc RTP (U)
5	MOD R0.2-10.7	Maintenance	Howard Gulch CAPM	SHOPP (C)
5	MOD 0.40	Management	HAR Flasher in Canby (North of SR 299) – FNBT and FSBT	District 2 ITS Elements List – Possible Element (U)
5	MOD 17.4	Management	CCTV at Lookout Road (Note: Not probable location due to tall trees and no utilities in area)	District 2 ITS Elements List – Possible Element (U)
5	MOD 27.9	Operational	Add left turn lane at Tionesta Road	Modoc RTP (U)
5/6	MOD R0.2-51.0	Drainage Restoration	Drainage Restoration in Modoc County from Canby to the Siskiyou County Line	SHOPP (U)
5/6	MOD 28.0-50.7 Various Locations	Roadway Preservation	0.1 mile south of Perez Road to Siskiyou County Line	Modoc RTP (U)
6	MOD 44.8	Facilities	Newell L5724. Construct covered bins and fueling area canopy	SHOPP (U)

(C) = Constrained
(U) = Unconstrained

Projects and Strategies to Achieve Concept

This section identifies other actions identified during development of the SR 139 TCR to help maintain or improve the route or meet the route concept. Information to support the improvements identified is available in the Segment Fact Sheets.

Table 14: Projects and Strategies to Achieve Concept

Segment	Location	Type	Description	Source
2	LAS 2.3	Chain off areas	Develop chain-off area	TCR analysis
2/3/4	Various locations along route	Operational	Achieve standard lane widths	TCR analysis
2/3/4/5/6/7	Various locations along route	Operational	Achieve standard shoulders	TCR analysis
2/3/4/5/6/7	Various locations	Pavement	TBD Pavement Improvements	TCR analysis
3/4/5/6	Location(s) TBD	Rest Area(s)	Develop rest area(s) where needed	TCR analysis
5	Clear Lake Road to County Road 114 (MOD 30.4-40.5)	Management	Deer winter range	TCR analysis
6/7	County Road 114 to Oregon state line	Operational	Various locations. Turnouts for agriculture vehicles	TCR analysis
7	SR 161 (SIS 5.0)	Operational	TBD Improvements to SR 139 at SR 161	TCR analysis
7/Oregon	Near Oregon state line	Management	TBD traveler information for southbound vehicles	TCR analysis
All	-	ITS/ Management	Improve public awareness of available traveler information resources	TCR analysis

SEGMENT FACT SHEETS

Segment 1

JCT 36 to Lassen Community College

CALIFORNIA 139

Lassen PM 1.420

Lassen Community College

Skyline Rd

LASSEN

Compton Park

Chestnut St

Paul Bunyan Rd

Susanville

Barry Reservoir

Skyline Rd

Memorial Park

Grand Ave

Ash St

Lassen PM 0.000

Main St

Point Rd

Susan River Park

Russell Ave

Lassen County Fairgrounds

N

No Scale

Caltrans

Caltrans District 2

SR 139 Transportation Concept Report

Fact Sheet for Segment Number 1 — State Route 139 TCR

County:	Lassen	**Route:**	139	**Post Mile Limits**	0.000/1.420
Location:	SR 36 to Lassen Community College			**Segment Length in miles**	1.420

CURRENT HIGHWAY INFORMATION			
Number of Lanes:	2	**Percent Trucks:**	1.31
Terrain:	Level to Rolling	**Percent 5-axle Trucks:**	29.35
Lane Width:	12 feet	**Average Treated Shoulder:**	Varying

SYSTEM DESIGNATIONS		BICYCLE STATUS
Functional Classification:	Principal Arterial (LAS 0.0-0.7); Minor Arterial (LAS 0.7-1.4)	Allowed

Other Classifications	State Highway System; Freeway & Expressway System; National Highway System (LAS 0.0-0.7); California Legal Advisory Route

	Route Concept	Segment Concept
Present :	2C	2C
20 - Year :	2C	2C

Concept Level of Service	C/D Threshold

TRAFFIC VOLUMES AND LEVEL OF SERVICE (LOS)

Year	Peak Hour (PH)	Annual Average Daily Traffic (AADT)	Level of Service (LOS)
2012	690	6700	C
2032	721	7000	C

Caltrans District 2, Office of System Planning and Traffic Census

Segment Information

State Route 139	Segment Number 1	PM Limit LAS 0.000-1.420

Segment Description

This segment is in and near the City of Susanville in Lassen County. It begins at the signalized intersection with SR 36 and ends at the entrance to Lassen College. SR 139 is signed as Ash Street within the City. It is a two lane conventional highway with 12 foot lanes and varying treated shoulder widths. Travel on this section of the route is mostly local trips with a few longer intraregional and recreational trips. Daily traffic volumes are highest at SR 36 and decrease to Lassen College (LAS 1.42). Daily truck volumes in this segment are about 88. Volumes are consistent from 6am to 6pm, with no prominent peak hour.

There is a southbound right turn lane at SR 36. There are northbound and southbound right and left turn lanes at Skyline Road. There is a northbound right turn lane into Lassen College.

Skyline Road (LAS 1.2) crosses SR 139 at a signalized intersection. The part of Skyline that is east of the route opened in 2009 and has resulted in less traffic on SR 139 south of the intersection. Future bicycle and pedestrian volumes on SR 139 could change as a result of the potential development of an access road connecting Skyline Road to SR 139 behind the college and hospital. Future traffic volumes could be impacted by possible subdivision development southeast of the college along Skyline Road and by extending Skyline to SR 36 from Johnstonville Road.

From SR 36 (LAS 0.0) to Hall Street (LAS 0.7), there is a mix of land uses including offices, commercial, single and multi family residential. McKinley Elementary School is located two blocks east of the route on Fourth Street and children are present on SR 139 during school start and dismissal times. The Fourth Street intersection has crossing guards. Major trip generators in the vicinity of Segment 1 include Lassen College which has 1,800 students and the Diamond Mountain Casino which is 24,000 sq. ft. and includes a 70 room hotel. Residential and commercial density generally decreases with distance from SR 36.

Segment Issues

- This segment has the highest counts for vehicles, pedestrians and bicycles along the entire route. There are intermittent sidewalks and a number of driveways. Parking is allowed on some blocks in this segment.
- The presence of driveways and vehicles parked on the shoulder causes cyclists to share the travel lane with vehicles.
- The limited number of local roads and road connections in Susanville impacts circulation. Skyline Road has extended to the east side of SR 139, which has resulted in less traffic on SR 139.
- There is a Class I bicycle path along the south side of Skyline Road west of SR 139. The path ends about one hundred yards west of the state highway and there is no dedicated bicycle crossing across SR 139. There is no shoulder along either side of the road for the 100 yards to the signal at SR 139. On the east side of SR 139, there is no shoulder on the north side of Skyline and the south side has a Class I bicycle facility.
- Landscaping on property outside of the state right of way affects sight distance at some intersections.
- There are several development proposals that were approved in the mid 2000s, but were never built. If the developments are built, future traffic volumes could be impacted.

Segment Management
• Consider adding sidewalks within Susanville where gaps currently exist. • Coordinate with Lassen County and the City of Susanville if the development of an access road east of the college and hospital is pursued. It would start at Skyline Road east of SR 139 and connect to SR 139 north of the hospital. • Coordinate with the City of Susanville and Lassen County regarding bicycle access to Lassen College. Possible options include a class II bike lane on SR 139, a class II bike lane on a new road, a class II or III bicycle facility on a potential future access road behind Lassen College or a class I bike path off the state right of way. • Support City of Susanville efforts to provide connectivity for bicycles crossing SR 139 on Skyline Road. • Coordinate with the City of Susanville on access and intersection management along SR 139 within the City. • Manage vegetation within the state right-of-way to maintain sight distance. • Maintain existing HAR Flashers at LAS 1.3. • During any project, consider the potential value of adding ITS elements.

Segment 2

Lassen Community College to Antelope Summit

CALIFORNIA 139

Lassen PM 7.380

Lassen PM 1.420

LASSEN

Lassen Community College

Skyline Rd

No Scale

Caltrans

Caltrans District 2

SR 139 Transportation Concept Report

Fact Sheet for Segment Number 2 — State Route 139 TCR

County:	Lassen	**Route:**	139	**Post Mile Limits**	1.420/7.380
Location:	Lassen Community College to Antelope Summit			**Segment Length in miles**	5.960

CURRENT HIGHWAY INFORMATION			
Number of Lanes:	2	**Percent Trucks:**	6.33
Terrain:	Mountainous	**Percent 5-axle Trucks:**	62
Lane Width:	10 feet	**Average Treated Shoulder:**	< 2-feet

SYSTEM DESIGNATIONS	BICYCLE STATUS
Functional Classification: Minor Arterial	Allowed

Other Classifications	State Highway System; Freeway & Expressway System; CA Legal Advisory Route

	Route Concept	Segment Concept
Present :	2C	2C
20 - Year :	2C	2C

Concept Level of Service	C/D Threshold

TRAFFIC VOLUMES AND LEVEL OF SERVICE (LOS)

Year	Peak Hour (PH)	Annual Average Daily Traffic (AADT)	Level of Service (LOS)
2012	260	1700	C
2032	291	1900	C

Caltrans District 2, Office of System Planning and Traffic Census

Segment Information

State Route 139	Segment Number 2	PM Limit LAS 1.420-7.380

Segment Description

This segment begins at the entrance for Lassen Community College and ends at Antelope Summit (5472 feet). Antelope Grade, approximately LAS 3.6-7.4, is on a curvilinear alignment with no paved shoulders in mountainous terrain with a 6% grade. Most of the trips in this segment are intraregional and consist mainly of recreational and commuter or errand running trips from the rural areas in the northern part of the county and around Eagle Lake. This segment is two lane conventional with 10 foot lanes and mostly zero foot paved shoulders. The highest volume in this segment is found at Lassen College, with volume decreasing to the north. The daily truck volume is around 65 trucks.

Just north of the entrance to Lassen College, there is an auxiliary lane in the northbound direction and there is a left turn lane in the southbound direction into the college. At Spring Ridge Drive, there are left and right turn lanes in the northbound direction and there is a left turn lane in the southbound direction.

To the west of the intersection with Spring Ridge Drive (LAS 1.9) is the Susanville Indian Rancheria and to the east is Banner Lassen Medical Center. The Rancheria has proposed to develop a health facility at Spring Ridge Drive. Hidden Valley Fire Facility, privately managed through contract with the BLM, is located at LAS 2.3. From the fire station to Antelope Summit, land uses are very low density residential, agricultural and open space.

Segment Issues

- Limited lane and shoulder widths.
- This is a steep section with curvilinear alignment, limited sight distance, narrow lanes and no paved shoulders which poses challenges for vehicles, bicycles and trucks.
- Ice and snow impact operations along SR 139 in locations such as Antelope Grade and chain restrictions are common.
- From LAS 0.0 to LAS 15.1, SR 139 is a California Legal Advisory Route with a 30 feet kingpin-to-rear-axle distance restriction.

Segment Management

- Achieve standard lane and shoulder widths to benefit motorists as well as bicyclists.
- There are some Share the Road signs on Antelope Grade to alert drivers of the potential for cyclists on the road.
- Improve curves, where feasible.
- Consider developing a chain-off area at the base of Antelope Grade (near LAS 2.3).
- Vistas and scenic overlooks with interpretive panels could be established along Antelope Grade.
- During any project, consider the potential value of adding ITS elements.

Segment 3

Antelope Summit to Eagle Lake Rd

CALIFORNIA 139

Lassen PM 30.825

Eagle Lake Rd

Eagle Lake

Eagle Lake

LASSEN

Lassen PM 7.380

N

No Scale

Caltrans

Caltrans District 2

SR 139 Transportation Concept Report

Segment Information

State Route 139	Segment Number 3	PM Limit LAS 7.380-30.825

Segment Description

Segment 3 is two-lane conventional, begins at Antelope Summit and continues north to Eagle Lake Road, just north of Eagle Lake. Trips in this segment are intraregional and are for the purposes of recreation and commuting or errand running. The lane width is 10 feet with zero foot shoulders. AADT in this segment is highest along the southern part of the segment and it decreases gradually to the north. This segment is mountainous to rolling with a summit at Willow Creek Hill (LAS 20.5). Land use in this segment is open space and agricultural including ranching and grazing. Willow Creek Valley (approximately LAS 15.0-17.0) experiences seasonal increases in farm vehicles. Within the vicinity of Eagle Lake (approximately LAS 24.0-30.0), the land use is ranching, open space and public lands managed by the BLM.

At postmile 15.1, the route changes from a CA legal advisory route to a CA Legal Network, however, until Termo Grasshopper Road at postmile 43.3, there are few potential truck destinations. Merrillville Road at LAS 15.2 leads to the CSU Chico Eagle Lake Field Office. The Meadow Channel Bridge is at Lassen PM 16.9 and the Willow Creek Wildlife Viewing area and the Willow Creek Bridge are located at LAS 17.0. At LAS 17.3 there is a transition from flat to uphill which can impact travel speeds. There is a stone monument and turnout on the southbound side of the highway marking the Eagle Lake Vista Point at LAS 23.0.

The route is adjacent to Eagle Lake for the last six miles of the segment. In the past when water levels were higher, more people stopped at the side of the road to visit the lake. Since the water level has receded, there have not been many visitors directly off the highway on the east side of the lake. Eagle Lake Road (LAS 30.8) goes past the north and west shores of the lake then proceeds south to join Route 36 just west of Susanville. Spaulding and Stones Bengard are two small community services districts along the north and west sides of the lake.

Segment Issues

- Limited lane and shoulder widths.
- Rural; limited services are available at Eagle Lake.
- The higher elevations have more snow and the road is sometimes icy in the winter.
- The rolling terrain and limited passing opportunities in this segment can cause occasional platooning behind trucks and recreational vehicles.
- There is a vista point at LAS 23.0, but no advanced notification to northbound drivers of the opportunity to pull over. There is no opportunity once beyond the vista point to turn around to visit the vista point.
- Two bridges in Willow Creek Valley are narrow and the guard rail is not up to current standards.
- In the 1980s and 1990s, water from Eagle Lake sometimes got onto the highway and froze. Since that time, the water has receded and the importance of the issue has subsided. See **Appendix I: Eagle Lake: Additional** Information for a full discussion on Eagle Lake.
- Limited availability of utilities poses challenges for implementing new traveler information technologies along the segment.

Segment Management
• Achieve standard lane and shoulder widths to benefit motorists as well as bicyclists. • Consider developing turnouts near Eagle Lake. • Consider a left turn lane at Rice Canyon Road (LAS 9.2). • Consider signage notifying drivers of the opportunity to pull over at the vista point at Eagle Lake (LAS 23.0) • During any project, consider the potential value of adding ITS elements.

Segment 4

Eagle Lake Rd to JCT 299

CALIFORNIA 139

MODOC

LASSEN

299

139

395

Modoc
PM 0.230

Lassen
PM 30.825

N

No Scale

Caltrans

Caltrans District 2

SR 139 Transportation Concept Report

Fact Sheet for Segment Number 4 — State Route 139 TCR

County:	Lassen/Modoc	**Route:**	139	**Post Mile Limits**	30.825/0.230
Location:	Eagle Lake Road to SR 299			**Segment Length in miles**	36.040

CURRENT HIGHWAY INFORMATION			
Number of Lanes:	2	**Percent Trucks:**	7.78
Terrain:	Rolling to Level	**Percent 5-axle Trucks:**	48.57
Lane Width:	10 feet	**Average Treated Shoulder:**	< 2-feet

SYSTEM DESIGNATIONS	BICYCLE STATUS
Functional Classification: Minor Arterial	Allowed

Other Classifications	State Highway System; Freeway & Expressway System; California Legal Network (LAS 30.8-43.3); Terminal Access (STAA) (LAS 43.3-MOD 0.2)

	Route Concept	Segment Concept
Present :	2C	2C
20 - Year :	2C	2C

Concept Level of Service	C/D Threshold

TRAFFIC VOLUMES AND LEVEL OF SERVICE (LOS)

Year	Peak Hour (PH)	Annual Average Daily Traffic (AADT)	Level of Service (LOS)
2012	80	450	B
2032	98	550	B

Caltrans District 2, Office of System Planning and Traffic Census

Segment Information

State Route 139	Segment Number 4	PM Limit LAS 30.825-MOD 0.230

Segment Description

This segment begins at the intersection with Eagle Lake Road and ends at SR 299 in the community of Adin. The segment is two-lane conventional with 10 foot lanes and zero foot paved shoulders. AADT is lower south of Termo Grasshopper Road (LAS 43.3) than north of Termo Grasshopper Road. Travel north of Termo Grasshopper Road is mostly interregional goods movement and recreational travel, with some intraregional travel by people living in rural areas along the route. The primary land uses are timber, agriculture, grazing and recreation on public lands, mostly managed by the BLM and USFS.

There is a CAL Fire station at LAS 33.06. At Termo Grasshopper Road (LAS 43.3), the route designation changes from California Legal to Terminal Access (STAA) for the remainder of the route to the north. Termo Grasshopper Road is used as a short cut for large STAA trucks and cars that travel between Reno and Oregon.

At LAS 61.5 is Susanville Road/ County Road A-2 which turns westbound off route and connects to SR 299 west of the SR 139/ SR 299 junction. From County Road A-2, some vehicles continue straight across SR 299 onto Lookout Cutoff Road.

Parts of this segment run parallel to Willow Creek and Willow Creek Campground (Modoc National Forest) is located at LAS 52.5. Hayden Hill is an inactive gold mine located west of the route from LAS 53.9. There is a cattle underpass at LAS 56.9.

Adin, located at the junction with SR 299, is a census designated place in Modoc County with a population of 272. There is an old saw mill and industrial housing. The community has a post office, motel, gas station and mobile home park.

There is a “Y” intersection at SR 299. SR 139 breaks here and is coterminous with SR 299 in the eastbound direction for about 20 miles. See the SR 299 TCR, Segment 15 for more information for that part of the route:

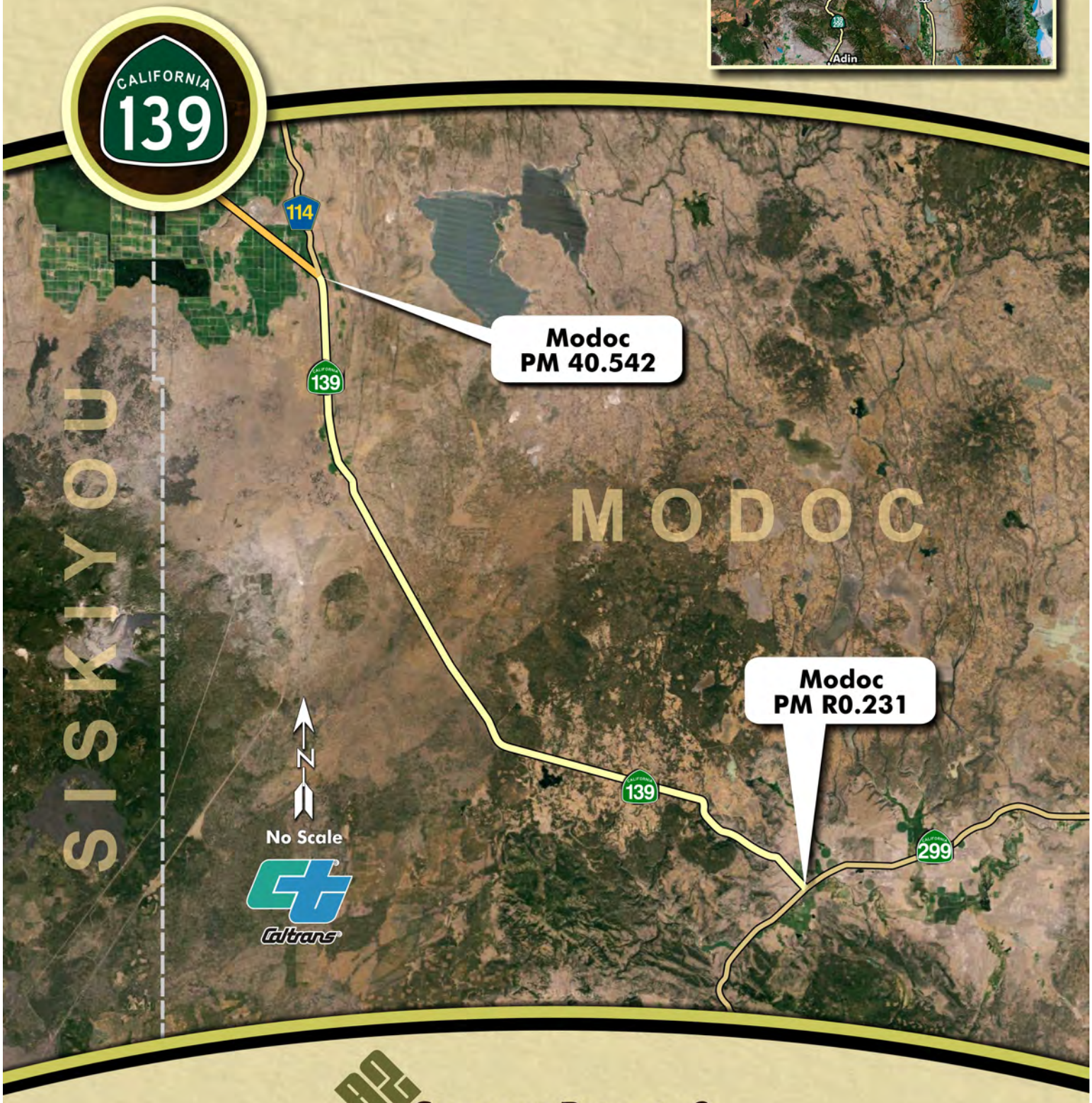
http://www.dot.ca.gov/dist2/planning/conceptrpts.htm

Segment Issues
• Limited lane and shoulder widths. • There are long distances between services like restrooms along SR 139. This segment is partway between origins and destinations of long interregional trips and as a result, travelers sometimes use unofficial places to pull over and use as a restroom. • The route is open to STAA trucks north of Termo Grasshopper Road, however, the lanes are narrow and there are limited paved shoulders. • Deer sometimes wander onto SR 139 and are unable to exit the highway near Said Valley (approximately LAS 48.0) due to wire fencing on property adjacent to the state right of way. • Groundwater affects the structural integrity of the highway just north of Willow Creek Campground. Snow and ice are an issue from November through April due to drifting, low temperatures and shaded canyon areas from approximately LAS 49.0 to LAS 55.0. • There is a rock slide area at LAS 51.7. • Limited availability of utilities poses challenges for implementing new traveler information technologies along the segment.

Segment Management
• Achieve standard lane and shoulder widths to benefit motorists as well as bicyclists. • Since the truck designation is Terminal Access (STAA) north of Termo Grasshopper Road (LAS 43.3) and there is an increase in truck volumes, prioritize achieving standard lane and shoulder widths here. • Consider partnering with USFS to provide year-round restroom facilities for highway users at Willow Creek Campground (USFS - LAS 52.5). It is almost midway between Susanville and Klamath Falls and there could be a truck changing location there too. • Protect structural integrity of the highway just north of Willow Creek Campground. • Maintain existing HAR Flashers at LAS 65.7. • During any project, consider the potential value of adding ITS elements.

Segment 5

JCT 299 to County Road 114



Caltrans District 2

SR 139 Transportation Concept Report

Fact Sheet for Segment Number 5 — State Route 139 TCR

County:	Modoc	**Route:**	139	**Post Mile Limits**	R0.231/40.540
Location:	SR 299 to County Road 114/ Old Alturas Road			**Segment Length in miles**	39.878

CURRENT HIGHWAY INFORMATION			
Number of Lanes:	2	**Percent Trucks:**	29.91
Terrain:	Rolling to Level	**Percent 5-axle Trucks:**	77.91
Lane Width:	12	**Average Treated Shoulder:**	2- to 5- feet

SYSTEM DESIGNATIONS	BICYCLE STATUS
Functional Classification: Principal Arterial	Allowed

Other Classifications	State Highway System; Interregional Road System; High Emphasis Route; Freeway & Expressway System; National Highway System; Terminal Access (STAA)

	Route Concept	Segment Concept
Present :	2C	2C (maintain existing access control)
20 - Year :	2C	2C (maintain existing access control)

Concept Level of Service	C/D Threshold

TRAFFIC VOLUMES AND LEVEL OF SERVICE (LOS)

Year	Peak Hour (PH)	Annual Average Daily Traffic (AADT)	Level of Service (LOS)
2012	170	1150	B
2032	200	1350	B

Caltrans District 2, Office of System Planning and Traffic Census

Segment Information

State Route 139	Segment Number 5	PM Limit MOD R0.231-40.542

Segment Description

Segment 5 begins at the north junction with SR 299 near Canby and ends at County Road 114/ Old Alturas Highway. This segment is two-lane conventional with 12 foot lanes and four foot shoulders. Part of this segment has access control (MOD R0.2-T10.8). The positioning of the right of way fence suggests it is possible to accommodate 4 lanes along these 10 miles. There is a slight increase in AADT north of Lookout-Cutoff Road (MOD 17.4). Daily truck volumes are 344.

Travel on this section of the route is a combination of regional, interregional, goods movement and recreational trips. There are a few commuting/errand running intraregional trips to nearby cities such as Klamath Falls and Alturas. Summer volumes are highest due to increased recreational travel.

At SR 299, there are left and right turn lanes in the southbound direction and there is a dedicated turn lane from westbound SR 299 onto northbound SR 139. Howards Gulch Bridge is at R2.2 and Howards Gulch Campground (Modoc National Forest) is located at R6.3. There is a northbound truck climbing lane from MOD R6.0 to MOD R7.4.

The Perez Agricultural Inspection Station is located at MOD 23.2 and has a short merge lane on the southbound side. Beginning near post mile MOD R2.0, Modoc Northern Railroad tracks run east of the route and meander approximately 250 feet to two miles from the route until the Perez Overhead (MOD 30.6) where the tracks pass under SR 139 and continue parallel along the west side of the highway.

Most of this segment is within the Modoc National Forest. In 1996, the Long-Damon Fire burned 23,000 acres and there is a marker to memorialize the event posted at MOD 22.5. In 1997, seedlings were planted to reforest the area. Within this segment are some county roads to Lava Beds National Monument (MOD 26.5 and MOD 28.2); the visitor center is about 20 miles west of SR 139.

Segment Issues

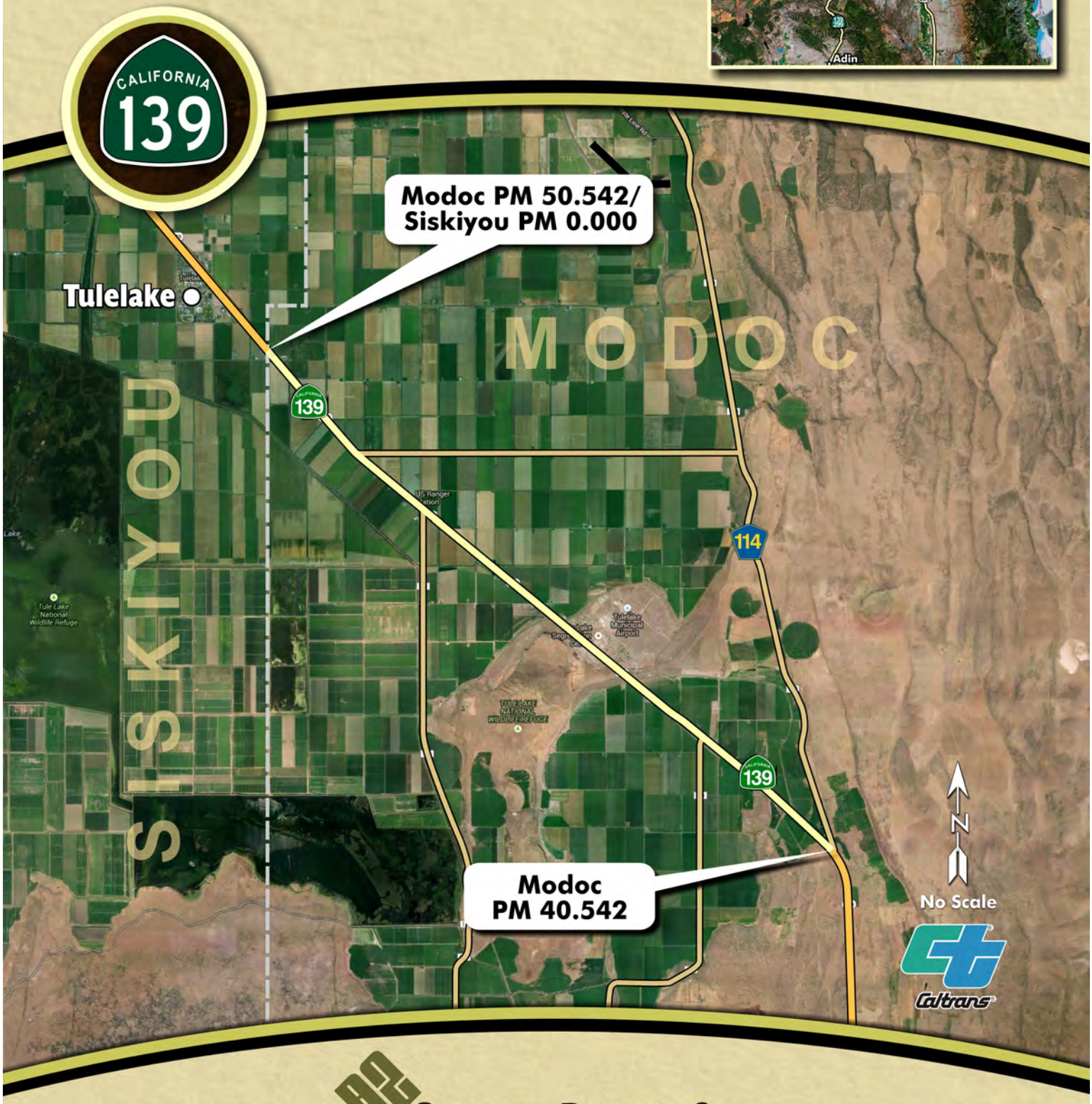
- Limited shoulder widths.
- There are long distances between services like restrooms along SR 139. This segment is partway between origins and destinations of long interregional trips and as a result, travelers sometimes use unofficial places such as inactive scales as a place to pull over and use as a restroom. Trucks switch trailers near MOD 35.0.
- Ice and snow impact operations along SR 139 in locations at higher elevations and along north facing slopes.
- There is potential for deer on the highway especially in winter near MOD 30.0-40.0. Extensive public and outside agency written comments were received regarding this issue (see **Appendix G: Deer and SR 139**).
- Limited availability of utilities poses challenges for implementing new traveler information technologies along the segment.

Segment Management

• Achieve standard shoulder widths to benefit motorists as well as bicyclists.
• Consider developing a rest area at the inactive scales at MOD R0.3 or near MOD 35.0 and make truck parking available.
• Winter Deer Range Management Strategy
  ▪ Near-term - Continue applying existing strategies: seasonal use of portable CMSs and permanently mounted signs with seasonally-installed flashers to inform drivers of the winter deer range. Consider covering the permanently mounted sign when not in use.
  ▪ Long-term - Assist in identifying the magnitude of the issue and work with other agencies and groups to study, select and finance a more permanent solution.
• Consider adding a left turn lane at Tionesta Road (MOD 27.9)
• Consider creating opportunities for passing.
• Maintain existing CCTV and RWIS ITS elements at the Perez Inspection Station (MOD 22.6/22.8).
• Possible ITS elements: a HAR flasher (FNBT and FSBT) at Canby and a CCTV at Lookout Hackamore Road.

Segment 6

County Road 114 to Modoc/Siskiyou County Line



CALTRANS DISTRICT 2

SR 139 TRANSPORTATION CONCEPT REPORT

Fact Sheet for Segment Number 6 — State Route 139 TCR

County:	Modoc	**Route:**	139	**Post Mile Limits**	40.540/50.684
Location:	County Road 114/ Old Alturas Highway to Modoc/Siskiyou County Line			**Segment Length in miles**	10.144

CURRENT HIGHWAY INFORMATION			
Number of Lanes:	2	**Percent Trucks:**	17.91
Terrain:	Level	**Percent 5-axle Trucks:**	70.46
Lane Width:	12 feet	**Average Treated Shoulder:**	2- to 5- feet

SYSTEM DESIGNATIONS	BICYCLE STATUS
Functional Classification: Principal Arterial	Allowed

Other Classifications	State Highway System; Interregional Road System; High Emphasis Route; Freeway & Expressway System; National Highway System; Terminal Access (STAA)

	Route Concept	Segment Concept
Present :	2C	2C
20 - Year :	2C	2C

Concept Level of Service	C/D Threshold

TRAFFIC VOLUMES AND LEVEL OF SERVICE (LOS)

Year	Peak Hour (PH)	Annual Average Daily Traffic (AADT)	Level of Service (LOS)
2012	220	2150	B
2032	222	2170	B

Caltrans District 2, Office of System Planning and Traffic Census

Segment Information

State Route 139	Segment Number 6	PM Limit MOD 40.542-50.684

Segment Description

Segment 6 begins at County Road 114 and ends at the Siskiyou County Line. The highway is two-lane conventional. Lane width is 12 feet and the average treated shoulder is four feet.

Auxiliary and Turn Lanes in Segment 6

Location	Post Mile	Feature	Direction
County Road 114	MOD 40.5	Left Turn Lane	Southbound
County Road 140	MOD 42.5	Left Turn Lane	Northbound and Southbound
County Road 121	MOD 42.8	Left Turn Lane	Northbound
Inactive Railroad Spur to the Potato Cooperative	MOD 44.3	Auxiliary Lanes	Northbound (south of spur); Southbound (north of spur)
Glendale Street to County Road 176	MOD 44.5-MOD 44.8	Center Left Turn Lane	Northbound and Southbound
County Road 176	MOD 44.8	Left Turn Lane	Southbound
County Road 113	MOD 45.2	Left Turn Lane	Southbound
County Road 112	MOD 46.5	Left Turn Lane	Southbound
Railroad Tracks	MOD 47.7	Auxiliary Lanes	Northbound (south of tracks); Southbound (north of tracks)
County Road 103	MOD 50.5	Left Turn Lane	Northbound

AADT increases to the north in this segment. Daily truck volumes are 340. Volumes in the summer are higher due to more recreational travel. In addition to recreational travel, the route is used for intra- and inter-regional goods movement as well as some intraregional trips by rural residents to various locations along the route and in Oregon such as Klamath Falls.

Land use in this segment is mostly agricultural and there is a small community called Newell located near MOD 44.0. Within Newell, there are some residences and a Caltrans Maintenance Station just off route within the community. Newell contains some historical sites including the Tule Lake Segregation Center (part of the WWII Valor in the Pacific National Monument) and historical landmarks marking Captain Jack's Stronghold and Canby's Cross of the Modoc Indian War. The Tule Lake Segregation Center was used to imprison thousands of Japanese Americans after Japan's attack on Pearl Harbor in 1941. There is now an annual pilgrimage by former inmates and their relatives to the site every summer.

Lava Beds National Monument is located west of SR 139 in Siskiyou County. There is a Modoc National Forest Ranger Office at MOD 48.2.

There are two railroad crossings in this segment: one inactive spur to a potato cooperative (MOD 44.3) and one active crossing at MOD 47.7 (BNSF). Modoc Northern Railroad tracks are about 80 feet to the west and parallel to SR 139. This segment passes through an irrigated agricultural area with a network of irrigation channels, part of the Tule Lake Irrigation District.

Segment Issues
• Limited shoulder widths. • Wide, slow moving agriculture vehicles sometimes occupy more than one lane and can impede traffic in both directions. • Inactive railroad spur at the Newell Potato Coop MOD 44.3 might have historical significance. • There is traffic flowing at different speeds: some slow moving vehicles associated with agriculture or recreational users and some faster moving vehicles such as interregional trucks and commuters. • There is a possible issue in the event of high train traffic volumes at the railroad crossing at MOD 47.7 because there is limited storage for vehicles.

Segment Management
• Achieve standard shoulder widths to benefit motorists as well as bicyclists. • Install turnouts wide enough to accommodate extra large agricultural vehicles and enforce their use once installed. • Coordinate with Union Pacific Railroad during future projects in the area to remove the inactive railroad spur at MOD 44.3. • During any project, consider the potential value of adding ITS elements.

Segment 7

Modoc/Siskiyou County Line to JCT 161/Oregon State Line

CALIFORNIA 139

OREGON

Siskiyou 5.043/ Oregon

139

SISKIYOU

MODOC

Tulelake

Modoc PM 40.542

N

No Scale

Hill Rd

Caltrans

Caltrans District 2

SR 139 Transportation Concept Report

Fact Sheet for Segment Number 7 — State Route 139 TCR

County:	Siskiyou	**Route:**	139	**Post Mile Limits**	0.000/5.043
Location:	Modoc/ Siskiyou County Line to SR 161/ Oregon State Line			**Segment Length in miles**	5.043

CURRENT HIGHWAY INFORMATION			
Number of Lanes:	2	**Percent Trucks:**	18.29
Terrain:	Level	**Percent 5-axle Trucks:**	70.92
Lane Width:	12	**Average Treated Shoulder:**	8/0

SYSTEM DESIGNATIONS	BICYCLE STATUS
Functional Classification: Principal Arterial	Allowed

Other Classifications	State Highway System; Interregional Road System; High Emphasis Route; Freeway & Expressway System; National Highway System; Terminal Access (STAA); Volcanic Scenic Byway (SIS 1.5-5.0)

	Route Concept	Segment Concept
Present :	2C	2C
20 - Year :	2C	2C

Concept Level of Service	C/D Threshold

TRAFFIC VOLUMES AND LEVEL OF SERVICE (LOS)

Year	Peak Hour (PH)	Annual Average Daily Traffic (AADT)	Level of Service (LOS)
2012	270	2400	B
2032	281	2500	B

Caltrans District 2, Office of System Planning and Traffic Census

Segment Information

State Route 139	Segment Number 7	PM Limit SIS 0.000-5.043

Segment Description

This segment encompasses the length of SR 139 within Siskiyou County. It begins at the Modoc County line, crosses the northeast corner of Siskiyou County and ends at the SR 161 junction/ Oregon State Line. Beyond the state line, the route becomes Oregon State Route 39 which terminates 25 miles to the north at the junction with US 97 in Klamath Falls, Oregon. In this segment, lane width is 12 feet and the treated shoulder width is eight feet, except at the railroad spur, where it is zero feet for 0.3 mile. This segment is two-lane conventional and the last 0.3 mile has auxiliary lanes in both directions due to the presence of the railroad spur. There are north- and south-bound left turn lanes at East West Road/ Osborne Road, Main Street/ Havlina Road, Akins Road/ Yost Road and at SR 161/ Stateline Road. AADT increases to the north in this segment. The daily truck volume is 439. Travel on this section of the route is a combination of local, regional, interregional, recreational and goods movement trips.

The surrounding land use is mostly agricultural and the railroad tracks continue on the west side parallel to the route. The City of Tulelake is located west of the railroad tracks near SIS 1.0 and can be accessed from SR 139 via Ray Oehlerich Way, East West Road and Main Street, which can be followed to the Lava Beds National Monument 24.0 miles away. Main Street (SIS 1.5) to SR 161 (SIS 5.0) is designated as part of the Volcanic Legacy Scenic Byway which continues west on SR 161 to US 97. East of the highway at SIS 1.5 is the UC Intermountain Research and Extension Center.

Segment Issues

- Limited shoulders for 0.3 mile near railroad spur (SIS 5.0).
- Wide, slow moving agricultural vehicles sometimes take up more than one lane and can impede traffic in both directions.
- Traffic flows at different speeds: some slow moving vehicles associated with agriculture or recreational users and some faster moving vehicles such as interregional trucks and commuters.
- Inactive Union Pacific Railroad (UPRR) spur at SIS 5.0. Use of the spur has recently ended and is not expected to be used in the future.
- The SR 161/SR 139 junction has a lot of trucks. Turns from northbound SR 139 onto Stateline Road are sharp with very short deceleration lanes. Most deceleration occurs in the travel lane on SR 139. A similar issue occurs along southbound Oregon 39 onto westbound SR 161.
- There is limited availability of traveler information for southbound travelers on SR 139 from Oregon.
- Interest has been expressed in improving Ray Oehlerich Way (SIS 0.8) which provides access to the fire station. The City of Tulelake and/or Siskiyou County would be responsible for any improvements.

Segment Management
• Achieve standard shoulder widths to benefit motorists as well as bicyclists. • Consider turnouts wide enough to accommodate extra large agricultural vehicles and enforce their use once installed. • Continue maintenance and management coordination with Oregon DOT. Collaborate on an appropriate ITS strategy for southbound traffic along SR 139 near the Oregon border. • Interest was expressed in painting a right turn lane in the southbound direction along SR 139 to Main Street (SIS 1.5) in Tulelake. This should be evaluated during future projects in the area. • At the inactive railroad spur at SIS 5.0, consider installing a sign package appropriate for inactive railroad crossings. For example, the “Tracks Out of Service,” “Exempt,” “Skewed Railroad Crossing,” and/or other signs notifying travelers of the presence of tracks, but no need to stop. • Coordinate with UPRR to remove the inactive railroad spur at SIS 5.0. During future projects in the area, consider striping a northbound deceleration lane at SR 161 when/if the railroad spur is removed and/or striping a shoulder to accommodate bicyclists.

APPENDIX A: COUNTY INFORMATION

Lassen County

Lassen County is located in the northeastern region of California. It is bordered by four northern California counties and the Nevada State Line on the east side of the county. Lassen County is the fourth largest of California's 58 counties. In this county the Sierra Nevada and Cascade mountains, meet the desert of the Great Basin, its lower valleys generally above 4,000 feet and Susanville peak rising over 6,500 ft. above sea level. This county has the Eagle Lake, Caribou Wilderness and the Mountain Meadows Reservoir. To the west is Lassen Volcanic National Park and Lassen National Forest.

The Climate of Lassen County is characterized by cold winters with substantial snowfall and an average daily temperature of approximately 33°F, and cool dry summers with the maximum daily temperature average of approximately 68°F. Winter and summer extremes of -23°F and 106°F, respectively, have been recorded at the Susanville Airport. Normal annual precipitation in the study area varies from approximately five inches along the Nevada border to 35 inches in the headwaters region of the Susan River. Almost two-thirds of the normal-annual precipitation occurs from November through February. Precipitation during winter occurs as both snow and rain and a light snowpack accumulates for periods up to several days. Summer precipitation occurs mainly as cloudbursts that rarely last more than a few hours.

The U.S. Census Bureau county population is 34,895*. The only incorporated city in the county is Susanville, which is also the County Seat. Lassen County has total area of 4720.4 square miles. Water area is 163.1 square miles and land area is 4,557.3 square miles, of which approximately 63% is publically owned.

Lassen County has five major Highways, State Routes 44, 36 and 299 running east west, and US 395 and SR 139 run north south. State Highways are 17% of maintained public roads mileage in the County, but account for 49% of Daily Vehicle Miles Travelled (DVMT).

*2010 Census - United States Census Bureau

Modoc County

Modoc County is located in the extreme northeast corner of California. Modoc County is located in the far northeast corner of the U.S. state of California, bounded by the state of Oregon to the north and the state of Nevada to the east. A large portion of Modoc County is federal land. Several federal agencies, including the United States Forest Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and the United States Fish and Wildlife Service have employees assigned to the area, and their operations are a significant part of the economy and services in this rural area.

The climate in the area is characterized as high desert, with cold, wet winters and warm, dry summers. The average high and low temperatures for January are 40°F and 16°F, respectively, while for July they are 88°F and 45°F, respectively. Regional precipitation varies from approximately eight inches in the low valley areas to approximately 35 inches in the higher mountain areas. Flooding in the area can occur any time from fall to spring as a result of the occurrence of general rainstorms. General rain floods result from prolonged, heavy rainfall over tributary areas and are characterized by high peak flows and moderate duration and a large volume of runoff. Flooding is more severe when antecedent rainfall has resulted in saturated ground conditions, when the ground is frozen and infiltration is minimal, or when rain on snow in the higher elevations adds snowmelt to rain flood runoff.

The U.S. Census Bureau county population is 9,686* and the County Seat is Alturas. Modoc County has a total area of approximately 4,203.4 square miles. Water area is 259.3 square miles and land area is 3,944.1 square miles.

The County has 3 major highways. SR 299 traverses in a northerly direction from the Lassen County line in the southwest portion of the county, and continues eastward through the middle of the county to the Nevada State line. SR 139 extends from the northwest corner of the county and connects to the eastern portion of SR 299. US 395 extends north south from Lassen County line to the Oregon State line. State Highways are 11% of maintained public roads mileage in the County, but account for 39% of DVMT.

*2010 Census - United States Census Bureau

Siskiyou County

Siskiyou County is located in northern California, adjacent to Oregon. Surrounding counties include: Del Norte, Humboldt, and Trinity to the west and southwest, Shasta to the south, and Modoc to the east. Among the western canyons and peaks and the eastern lava plateaus and mountain ranges, the county is also home to Mount Shasta, the southernmost volcano in the Cascade Range, ascending to over 14,000 feet. The county's rich natural resources support recreation and tourism.

The climate of the county varies according to elevation and location. Valley areas have hot summers (over 100°F) and relatively mild winter, while the summers become cooler and winters colder at higher elevations. Generally, precipitation in the county decreases from west to east and also from higher to lower elevations. The total seasonal precipitation received within the county varies from approximately 10 inches in the northeastern corner to 100 inches or more along the northern part of the western border. The western one-quarter of the county normally receives from 40 to 60 inches of precipitation per year annually at higher elevations. The central one-half of the county receives from 12 to 20 inches of precipitation below 4,000 feet, and up to 60 inches in the mountains and along the extreme southern border. The southeastern one-quarter of the county receives 40 to 50 inches of precipitation over some of the mountains, and even more on Mt. Shasta, while stations on the 4,500-foot plateau receive only 10 to 20 inches of precipitation per year.

The U.S. Census Bureau county population is 44,900* and the County Seat is Yreka. Siskiyou's 6,347.5 square miles encompass a wide variety of landscapes. Water area is 60.7 and land area is 6,286.8 square miles. The federal and state government manages more than 60% of Siskiyou County's land.

Siskiyou County has US 97, I-5 and six State Highways: SR 3, SR 89, SR 96, SR 161, SR 263 and SR 265. State highways are 11% of the maintained public roads mileage in the County, but account for 66% of DVMT.

*2010 Census - United States Census Bureau

APPENDIX B: PUBLIC OUTREACH ACTIVITIES & PUBLIC INVOLVEMENT

Date	Contact	Action/Progress
December 2013	Lassen, Modoc and Siskiyou Local Transportation Commissions	Kick-off announcement for SR 139 TCR
January/ February 2014	City of Tulelake, Oregon DOT, City of Susanville	Kick-off announcement for SR 139 TCR
February/ March 2014	See below*	Email announcement regarding public workshops
March 2014	Media release	Press release announcing public workshops
March 2014	Website	Added SR 139 TCR is in progress to the Caltrans website, which includes an email link to the TCR lead person
3/12/14	Public Workshop – Tulelake**	See Summary of Comments – Tulelake Public Workshop on page 79
3/13/14	Public Workshop – Susanville	See Summary of Comments – Susanville Public Workshop on page 83
5/12/14	Lassen County Transportation Commission	Presented information on public outreach efforts and provided a progress update of the TCR.
5/19/14	Tulelake City Council	Presented information on public outreach efforts and provided a progress update of the TCR.
6/3/14	Siskiyou County Transportation Commission	Presented information and sought comments regarding the SR 139 TCR. Presentation included information about what a TCR is, the public outreach process, some key route issues and the schedule for completion.

*Recipients of announcement included: Susanville Indian Rancheria, Modoc Tribe, Modoc Tribe of Oklahoma, Klamath Tribes, Lassen LTC, Lassen County, Lassen Rural Bus, City of Susanville, Spaulding Community Services District, Stones-Bengard Community Services District, Modoc LTC, Modoc County, Siskiyou LTC, Siskiyou County, City of Tulelake, California Highway Patrol, Cal Fire, Lassen College, Tulelake Border Station, Bureau of Land Management, Modoc National Forest, Lava Beds National Monument, Tule Lake Segregation Center, Tule Lake National Wildlife Refuge, Oregon DOT, Nevada DOT, Klamath County, California Trucking Association, California Construction Trucking Association, Trails West, Emigrant Trail Conservancy, Shasta Cascade Wonderland Association, Bicycle Bananas, ORE-CAL Recreation and Development Area Council, Susanville AAA, Susanville Area Bicycle Association, Juniper Junction, Klamath Lake Modoc Siskiyou Outdoor Recreation Strategy Working Group, Susanville First Southern Baptist Church, Senior Citizens Center, Tulelake/ Newell Family Center, Tulelake Migrant Education, Lassen Chamber of Commerce, Tulelake Chamber of Commerce, Banner Lassen Hospital, California Deer Association, California Fish and Wildlife, Adin Community Services District, BNSF Railroad.

**A Spanish interpreter was available at the workshop.

State of California • Department of Transportation

CALTRANS NEWS RELEASE

Date: Tuesday, March 4th, 2014
District: District 2 - Redding
Contact: Trina Blanchette
Phone: (530) 225-3478

FOR IMMEDIATE RELEASE

PUBLIC WORKSHOP TO DISCUSS STATE ROUTE 139 IN TULELAKE

The California Department of Transportation (Caltrans) will host a public workshop in Tulelake on **Wednesday, March 12, 2014,** to discuss the future of State Route 139. Public input will assist Caltrans in developing a long-range planning document, called a Transportation Concept Report, which will be used for the next 20 years.

The workshop will be held at Tulelake City Hall, 591 Main Street, Tulelake, CA 96134 from **6:30 p.m.-7:30 p.m.** Caltrans welcomes any suggestions or comments the public may have regarding the future plan for State Route 139. A Caltrans representative will be available to take comments and answer questions. There will be a short presentation followed by an opportunity to discuss your ideas.

Your input is important and will help guide future development of State Route 139. Comments or questions may be submitted at these meetings, by telephone, email or by mail. Please contact Trina Blanchette by phone at (530) 225-3478, e-mail (trina_blanchette@dot.ca.gov) or mail to Caltrans District 2, Attention: Trina Blanchette, Office of System Planning, 1657 Riverside Drive, MS 3, Redding, CA 96001.

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***NOTE: An electronic version of this news release is available on the Internet at the following web address*:**
http://www.dot.ca.gov/dist2/news.htm

State of California • Department of Transportation

CALTRANS NEWS RELEASE

Date: Tuesday, March 4th, 2014
District: District 2 - Redding
Contact: Trina Blanchette
Phone: (530) 225-3478

FOR IMMEDIATE RELEASE

PUBLIC WORKSHOP TO DISCUSS STATE ROUTE 139 IN SUSANVILLE

The California Department of Transportation (Caltrans) will host a public workshop in Susanville on **Thursday, March 13, 2014,** to discuss the future of State Route 139. Public input will assist Caltrans in developing a long-range planning document, called a Transportation Concept Report, which will be used for the next 20 years.

The workshop will be held in the **Susanville City Council Chambers, 66 N. Lassen St., Susanville, from 6:00 p.m.-7:00 p.m.** Caltrans welcomes any suggestions or comments the public may have regarding the future plan for State Route 139. A Caltrans representative will be available to take comments and answer questions. There will be a short presentation followed by an opportunity to discuss your ideas.

Your input is important and will help guide future development of State Route 139. Comments or questions may be submitted at these meetings, by telephone, email or by mail. Please contact Trina Blanchette by phone at (530) 225-3478, e-mail (trina_blanchette@dot.ca.gov) or mail to Caltrans District 2, Attention: Trina Blanchette, Office of System Planning, 1657 Riverside Drive, MS 3, Redding, CA 96001.

####

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http://www.dot.ca.gov/dist2/news.htm

Public Workshop

STATE ROUTE 139 TRANSPORTATION CONCEPT REPORT

CALIFORNIA 139

Wednesday, March 12, 2014 • 6:30-7:30 PM
Tulelake City Hall
591 Main Street • Tulelake, CA
(at the corner of Main and E Street)

The purpose of the event is to provide the public the opportunity to discuss the future of State Route 139. There will be a brief presentation followed by an opportunity to talk about your interests. Please attend this workshop and share your views with us.

FOR MORE INFORMATION:

Caltrans Public InformationOffice
530.225.3426

Project Manager
Trina Blanchette
530.225.3478

FHWA

CALTRANS IS AN EQUAL OPPORTUNITY AGENCY • FEDERAL LAW PROHIBITS DISCRIMINATION

CALTRANS DISTRICT 2

For individuals with disabilities, we will provide assistive services such as assistive listening devices, sign-language interpreting, real-time captioning, note-takers reading or writing assistance, or training/meeting materials in Braille, large print, on audiocassette, or on computer disk. To obtain such services or copies in one of these alternate formats, please call or write, a minimum of 10 working days prior to the event, to request these needed reasonable modifications: **Department of Transportation Attn: Equal Employment Opportunity Officer, 1657 Riverside Drive, Redding, CA 96001 (530) 225-3055 Voice, 711 Statewide TTY**

Junta Pública

INFORME DEL CONCEPTO DEL TRANSPORTE DE LA RUTA ESTATAL 139

Caltrans

CALIFORNIA 139

Miercoles 12 de Marzo 2014 • 6:30-7:30 PM
Tulelake City Hall
591 Main Street • Tulelake, CA
(en la esquina de Main y la calle E)

El propósito de la junta es para darle al público la oportunidad de discutir el futuro de la Ruta Estatal 139. Habrá una presentación formal seguida por una oportunidad de hablar de sus intereses. Atienda por favor a esta junta pública y comparta sus opiniones con nosotros. Un interprete estará disponible en la junta.

PARA INFORMACIÓN LLAME:

Sal Prieto
530.225.3368

Trina Blanchette
530.225.3478

FHWA

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CALTRANS DISTRICT 2

Para individuos con discapacidades habrá servicios de asistencia como:

- *Aparatos de asistencia auditiva*
- *Interpretes para sordos*
- *Subtítulos en vivo*
- *Personas para tomar notas*
- *Asistencia para leer y escribir*
- *Información sobre esta junta escritos en Braille, letras grandes, en audiocassettes ó en CD.*

Para obtener estos servicios ó copias en uno de los formatos antes mencionados, por favor llame ó escriba por lo menos 10 dias antes del evento a:

Department of Transportation
Attn: Equal Employment Opportunity Officer
1657 Riverside Drive
Redding, CA 96001
Telefono (530) 225-3425 Voz;
711 TTY

Public Workshop

STATE ROUTE 139 TRANSPORTATION CONCEPT REPORT

CALIFORNIA 139

Thursday, March 13, 2014 • 6:00-7:00 PM
Susanville City Council Chambers
66 North Lassen Street • Susanville
(between Main street and Nevada Street)

The purpose of the event is to provide the public the opportunity to discuss the future of State Route 139. There will be a brief presentation followed by an opportunity to talk about your interests. Please attend this workshop and share your views with us.

FOR MORE INFORMATION:

Caltrans Public InformationOffice
530.225.3426

Project Manager
Trina Blanchette
530.225.3478

FHWA

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CALTRANS DISTRICT 2

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Tulelake Workshop

Presented by:

Caltrans District 2

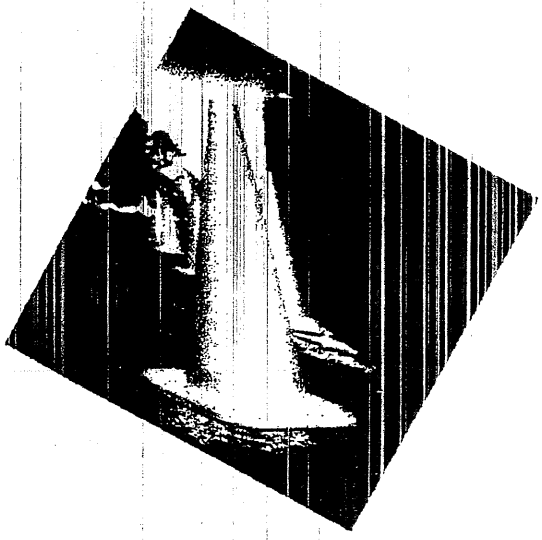
When

Wednesday
March 12, 2014
6:30 to 7:30pm

Where

TULELAKE CITY HALL
591 Main Street
(at the corner of Main
and E Street)

This event will provide information regarding the future of State Highway Route 139



Tulelake Talks

Presentado Por:

Caltrans Distrito 2

Cuando

Miercoles

12 de marzo 2014

6:30 to 7:30pm

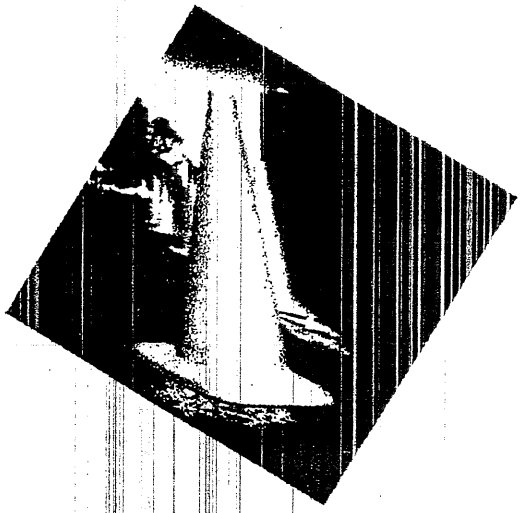
Donde

TULELAKE CITY HALL

591 Main Street

(en la esquina de main y la calle E)

Este evento ofrecera informacion sobre el futuro de la carretera State Route 139



BROUGHT TO YOU BY THE LASSEN COUNTY ARTS COUNCIL

CALENDAR of EVENTS

SusanvilleStuff

Today March 2014 Agenda

Sun	Mon	Tue	Wed	Thu	Fri	Sat
23 9am Lassen Ale Works Su 1pm Lassen Volcanic Nat 2pm Susanville Symphon	24 5:30pm Diamond Mountai 6pm Diamond Mountain (7pm Diamond Mountain (	25 7pm Diamond Mountain (	26 5:30pm Monsig 6:30pm Wedne	27	28	Mar 1 Volcanic Nat le Elks Lodg Mountain (
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Events shown in time zone: Pacific Time

Google Calendar

PUBLIC WORKSHOP TO DISCUSS STATE ROUTE 139 IN SUSANVILLE

When Thu, March 13, 6pm – 7pm

Where The workshop will be held in the Susanville City Council Chambers, 66 N. Lassen St., Susanville (map)

Description The California Department of Transportation (Caltrans) will host a public workshop in Susanville on Thursday, March 13, 2014, to discuss the future of State Route 139. Public input will assist Caltrans in developing a long-range planning document, called a Transportation Concept Report, which will be used for the next 20 years.

The workshop will be held in the Susanville City Council Chambers, 66 N. Lassen St., Susanville, from 6:00 p.m.-7:00 p.m. Caltrans welcomes any suggestions or comments the public may have regarding the future plan for State Route 139. A Caltrans representative will be available to take comments and answer questions. There will be a short presentation followed by an opportunity to discuss your ideas.

Your input is important and will help guide future development of State Route 139. Comments or questions may be submitted at these meetings, by telephone, email or by mail. Please contact Trina Blanchette by phone at (530) 225-3478, e-mail (trina_blanchette@dot.ca.gov) or mail to Caltrans District 2, Attention: Trina Blanchette, Office of System Planning, 1657 Riverside Drive, MS 3, Redding, CA 96001.

more details» copy to my calendar»

SUMMARY OF COMMENTS – TULELAKE PUBLIC WORKSHOP
Wednesday, March 12, 2014

State Route 139 Transportation Concept Report

The following is a summary of meeting notes and comments submitted by mail, email and phone.

Traffic Patterns & Volumes

- The highway is busy.
- There have been increases in the number of trucks, buses and traffic to Reno and the Burning Man event in Nevada that occurs around Labor Day. There has been an increase in traffic at Termo Grasshopper Road (LAS 43.3).
- There are high volumes near Eagle Lake (LAS 25.0-30.0).
- There are statewide and local planning efforts for opening the Tule Lake Segregation Center National Monument in Newell (MOD 44.8). When it opens traffic could increase.
- People who live in the area use Klamath Falls as their service/commercial center.
- Route 39 in Oregon primarily serves local and intra-regional transport.
- SR 139 is used to travel between Reno and the Pacific Northwest.
- People frequently drive the following alternative route because it is faster than SR 139. When traveling southbound on SR 139 from Newell (MOD 44.8), turn south on Lookout Cutoff Road (MOD 17.4) to SR 299 (LAS 15.1) and continue across SR 299 onto County Road A2 to SR 139 (LAS 61.5). Travel south on SR 139 to Termo Grasshopper Road (LAS 43.3) which connects to US 395 (LAS 115.3). This routing is also common in the northbound direction.

Recreation and Rest Areas

- There are no rest areas on SR 139. People find unofficial places along the route to use as a bathroom.
- Semi trucks switch trailers along SR 139 near the Perez Overhead (MOD 30.6). This occurs at least twice each day. One truck arrives from Yreka, meets another driver, the trailer is switched and the drivers return to their original regions. If there is a site designated to accommodate this process, a rest room could be provided.
- Willow Creek Campground (USFS) at LAS 52.5 would be a good location for a rest area. It is almost midway between Susanville and Klamath Falls and there could be a truck changing location there too.
- A location near MOD 35.0 could be used for truck parking.
- People pull over to read the historic landmarks in Newell.

Agriculture

- Locally grown farm products include potatoes, big onions, hay, horse radish, strawberries, mint, livestock and garlic.
- Agricultural products are shipped north and south, but now more go south.
- There isn't much local shipping by rail anymore and trains are infrequent. They transport grain, pumice and perlite, but much less than in the past. There are about 6-10 trains per day, but no consistency in size or time of day.
- There are some very large and slow moving agricultural vehicles on SR 139 that are wider than a single lane. They cause traffic to back up. There is also a problem when other highway users are not expecting to encounter them. The size of the equipment has increased and it affects traffic in both directions. Due to their extra large size there is no place for the agriculture vehicles to pull over to allow passing. Turnouts are needed and they should be big enough to accommodate their size.
- Use signs to warn of slow farm equipment and enforce the use of the turnouts once built.

Highway Condition

- High speed trucks and vehicles from out of town are common from Canby to Oregon.
- Can there be slower speeds through Tulelake? It is currently posted 50 mph.
- Consider adding turn lanes in Tulelake.
- Widen shoulders and add turnouts if passing lanes are not an option.
- Caltrans has done a good job with safety improvements in Modoc County. Continue improving the route by providing more road and shoulder width.
- Facility will be in good shape when the Perez Rehab Project (MOD 10.7-28.0) is finished.
- Will the Perez project add shoulders? If not, they should be added.
- Although Caltrans does a good job removing snow and ice in the winter, sometimes the roadway is icy.
- Install cameras between Canby and Newell so drivers can see road conditions before making a trip.
- Removing the mechanical crossing guards at the Newell Potato Cooperative (MOD 44.3) and at the Stateline (SIS 5.0) was a good improvement. Consider removing the rail siding (spurs) leading to the Cooperative and at the Stateline also.
- The SR 161/SR 139 junction has a lot of trucks. Turns from SR 139 onto SR 161 are sharp with very short deceleration lanes. Most deceleration occurs in the travel lane on SR 139.

- Burn weeds from Newell to the Oregon state line to improve visibility. The area should be sprayed for weeds year round.

- Near Eagle Lake, there are no passing opportunities and drivers sometimes pass where there is a double yellow line.

Bicycles

- There are bicycle commuters to and from Newell.

- There are long distance cyclists who ride for recreational or other purposes.

SR 161

- Look at improvements for the SR 139 and SR 161 junction.

- The roadway is icy in the winter and really rough.

- SR 161 needs shoulders and wider lanes.

Deer

- Received comments from over 40 individuals and agencies by mail, email and phone about deer along SR 139 in Modoc County. Photocopies of letters received from agencies and organizations can be found on page 88.

- Safety for the public and wildlife on SR 139 should be the highest possible priority.

- It is possible to see deer anywhere on SR 139, but the main focus area is from Clear Lake Road (MOD 30.4) to County Road 114 (MOD 40.5). Five miles of this stretch are critical.

- Deer are present on the roadway in the winter, especially when there is a season with a lot of snow. There is less snow along the highway than surrounding areas because of the rain shadow from Mount Shasta.

- Deer are also attracted to salt and vegetation on the shoulder.

- There are sometimes 1000+ deer for weeks at a time. They wander back and forth across the road.

- 2008 was the worst year. Last year and this year were good.

- Some drivers might be unaware of the potential for deer on the highway.

- After a deer is hit, subsequent drivers might not be aware of a deer carcass on road. Maintenance and law enforcement need to clean up, exposing them to traffic. Other animals such as eagles, ravens and magpies are drawn to the carcasses.

- Caltrans should work with other agencies such as the Highway 139 Stewardship Team, California Deer Association, County agencies, California Department of Fish and Wildlife and specialists in the field of Transportation Ecology.

- Possible ideas include:

    - Fencing along the highway with cattle guards at property access points.

    - Electro Mats – electrically charged mats that are embedded in the road surface. They are installed across roadways and at access points.

    - Animal warning systems.

    - Wildlife crossings- Over/underpasses.

    - CMS when deer concentration is high (California Deer Association has some money to pay for rental). CMSs are only a partial solution.

    - Jumpout ramps – dirt ramps from the highway that deer can use to jump over the fence to the non-highway side (useful for deer that somehow get into the state right of way)

    - Clearing vegetation and sign installation is good, but a long-term solution is needed.

- The Deer Association has worked with District 3 on SR 89 to find a way to keep deer off the highway. Association members are currently working with North Region Environmental staff on SR 139.

- Some workshop attendees referred to a 2008 letter from the District Director (see page 86).

SUMMARY OF COMMENTS – SUSANVILLE PUBLIC WORKSHOP
Thursday, March 13, 2014

State Route 139 Transportation Concept Report

The following is a summary of meeting notes and comments submitted by mail, email and phone.

Traffic Patterns & Volumes

- SR 139 is an important north to south conduit for the county. The choices are US 395 or SR 139.
- SR 139 is a vital connection for communities and a nice alternative to US 395.
- Honey Lake Power is fueled by woodchips delivered by trucks from SR 139.
- There is a lot of truck traffic on SR 139 south of SR 299 to Termo Grasshopper Road at LAS 43.3, east to US 395 at LAS 115.3 and in the other direction too.
- People frequently drive the following alternative route because it is faster than SR 139. When traveling southbound on SR 139 from Newell (MOD 44.8), turn south on Lookout Cutoff Road (MOD 17.4) to SR 299 (LAS 15.1) and continue across SR 299 onto County Road A2 to SR 139 (LAS 61.5). Travel south on SR 139 to Termo Grasshopper Road (LAS 43.3) which connects to US 395 (LAS 115.3). This routing is also common in the northbound direction.
- An access road is needed in Susanville east of the college and hospital. It would start at Skyline Road east of SR 139 and connect to SR 139 north of the hospital.
- Limited number of local roads and road connections in Susanville impacts circulation.
- Future Development- the Rancheria is planning to open a regional health clinic on SR 139 near the hospital on Spring Ridge Drive (LAS 1.9).
- The Tahoe-Reno Industrial Center, east of Reno, is a major upcoming development that could affect volumes on SR 139.

Recreation and Rest Areas

- Scenic Highway.
- Establish the historic wagon road in the vicinity of SR 139 as a trail.
- Develop trailheads, viewing areas and restrooms along the route in various locations.
- Establish vistas and scenic overlooks with interpretive panels along Antelope Grade (LAS 3.6- 7.2).
- BLM is considering a program for enhanced signage and interpretive pulloffs with wildlife viewing south of Eagle Lake.

Agriculture

- Agricultural landscape in Willow Creek Valley (LAS 14.0-18.0).

Highway Condition

- Continue maintaining and cleaning the shoulders.
- There is a school near SR 139 & 4th Streets (LAS 0.3) with children present during arrival and dismissal times. This intersection has crossing guards.
- Bunyan Road serves numerous residential areas to the north and west of the SR 139 intersection (LAS 0.4). Sight distance is affected by plantings in the yards of residences.
- Install cameras between Susanville and Adin so drivers can view road conditions before making a trip.
- Improve chain-on area and develop chain-off area at the base of Antelope Grade (near LAS 2.3).
- Appreciate the resurfacing of SR 139 to the fire station two years ago.
- Consider a left turn lane at Rice Canyon Road (LAS 9.2).
- The highway is narrow between Susanville and Adin. Add width to the highway.
- Groundwater affects the structural integrity of the highway just north of Willow Creek.
- Comments about Eagle Lake, about 25 miles north of Susanville:
    - Eagle Lake is scenic, has an undeveloped shoreline and offers wildlife viewing.
    - In the 1980s and 1990s when SR 139 was exposed to high water levels at Eagle Lake, the County drafted plans to realign County Road A-1 (see note below).
    - If SR 139 was realigned, then more space for camping could be provided along the shoreline (see note below).
    - People used to camp on the shoreline, but there were some issues with parking, right of way and management (see note below).

[*Note: In the 1980s and 1990s, the water level of Eagle Lake was higher than it is now. A section of SR 139 adjacent to Eagle Lake was subject to wave-wash damage from the lake and ice being pushed across the road in the spring. The lake level has since receded and the importance of the issue has subsided.*

A 1992 study evaluated six alternatives including a "High [Water] Line Alternative" alignment and four Low Line Alternatives (including raising the highway along its existing alignment). The study team also evaluated a no-build alternative that would include the use of detours in the event of roadway closure: 1) County Road A-1/SR 36 and 2) Termo-Grasshopper Road/US 395.

The value engineering team for the study preferred raising the existing alignment with no-build being the second most preferred alternative. It was recommended that a lake elevation of 5108' be used as the "trigger point" at which funding should be sought to finalize the environmental documentation; select the preferred alternative; and continue into design and construction, if appropriate.

There were two community meetings to discuss the alternatives. Attendees at the June 1991 meeting were interested in visual impacts, the project's effect on recreation at Eagle Lake, wildlife, need for project, project financing and cost and the future of existing Route 139. At the July 1992 meeting, attendees agreed that both the High Line and the Original Low Line were both too costly, and that the only "build" alternative that should be considered was the Low Line alternative having a minimum elevation of 5,114'. Comments submitted at the June 1991 community meeting indicate that developing a campground between Eagle Lake and SR 139 is controversial.]

Bicycles

- Bicycling is not easy northbound on Antelope Grade because there is no shoulder.
- A lot of people in Susanville ride their bikes on the shoulder to Lassen College. Consider an alternate route with a Class II bike lane or Class I bike path and/or a Class I bike path along SR 139 to the college (LAS 0.0 to LAS 1.4).
- Connect the local trail at Skyline (LAS 1.2) across SR 139. It is mostly a local route but it crosses SR 139.

Deer

- Sometimes deer get stuck on the road north of Termo/Grasshopper Road (LAS 43.3) near Said Valley (approximately LAS 48.0) due to wire fencing on property adjacent to the state right of way.

Other

- For TCR outreach, special effort should be put into reaching the County's rural populations. It is important to make these special efforts to obtain participation in these areas.

DEPARTMENT OF TRANSPORTATION
DISTRICT 2
OFFICE OF THE DISTRICT DIRECTOR
1657 RIVERSIDE DRIVE (96001)
P. O. BOX 496073
REDDING, CA, 96049-6073
PHONE (530) 225-3477
FAX (530) 225-2459
TTY (530) 225-2019

Flex your power!
Be energy efficient!

November 4, 2008

Mr. Andy Wood
California Deer Association
820 Park Row, PMB 671
Salinas, CA 93901-2406

Deer Kill Issue on Highway 139, in Modoc County

Dear Mr. Wood:

This is in response to your October 6, 2008 letter and subsequent follow-up conversation you and our Caltrans biologist, Dan Whitley, had regarding the high degree of deer kill during the winter months in the subject area.

In speaking with Caltrans field maintenance personnel, we have found that this issue is not necessarily new to this particular location. Historically, this area has moderate levels of deer kill for some winter conditions and high for others. This has been an ongoing issue for many years, and the main concentration of deer kill occurs between Tionesta Road, postmile (P.M.) 28.0 and PM 38.0, near Klamath Basin. Currently, we have two over-sized permanently mounted signs in the area (PM 20.3 northbound and PM 38.4 southbound), warning of the winter deer migration. Last year, we put flashers on these signs during the winter months. In addition, a portable Changeable Message Sign (CMS) was placed for southbound traffic at PM 38.0, in response to a request from the Department of Fish and Game (DFG) and your organization.

As a short-term solution to this issue, Caltrans can participate by storing, placing and maintaining portable CMS' that are provided by your organization and DFG. Caltrans will continue to maintain the existing oversized warning signs, and install the flashers during the winter. Caltrans does not anticipate that these measures will be necessary for most winters. Caltrans will coordinate closely with you, to quickly identify conditions which lead to extraordinary deer kill, and get the appropriate measures in place.

Given the terrain and the span of the deer kill area, long-term solutions could prove difficult; however, Caltrans is willing to assist in identifying the magnitude of the issue. As deer are killed, Caltrans maintenance staff will record the date, location and any other pertinent information on deer kill in the area. Bob Degarmo is our Maintenance Supervisor in Newell. Please coordinate with Bob on any specific information that you wish to be collected. Bob will also coordinate with your team on the placement of the CMS signs. Bob's telephone number is (530) 664-2371.

If you have any questions, or would like to discuss this issue further, please contact Ed Lamkin, Deputy District Director of Maintenance and Operations at (530) 225-3545, or myself at (530) 225-3477. If you desire, Ed and his staff are available to meet with you and discuss coordination in more detail.

Sincerely,

JOHN BULINSKI
District Director

c: Pat Fitzmorris, California Deer Association
Ed Lamkin, Deputy District Director of Maintenance and Operations
Dan Whitley, North Region Environmental Planning

MCTC
MODOC COUNTY
TRANSPORTATION COMMISSION

108 S. Main Street
Alturas, CA 96101

(530) 233-6410 Phone
233-3744 Fax

Meets First Tuesday of Even Numbered Months at 1:30 p.m.

March 29, 2014

Department of Transportation
District 2 System Planning
1657 Riverside Drive
Redding CA 96001

Re: SR 139 Transportation Concept Report

Dear Ms. Blanchette;

Thank you for the opportunity to provide input to the State Route 139 Transportation Concept Report that is currently being prepared. The Modoc County Transportation Commission (MCTC) has the following comments regarding SR 139:

State Route 139 from Perez Overpass to County Road 114 - Over the past 15 to 20 years MCTC has received testimony at many meetings from the California Fish and Wildlife Service, the California Deer Association, and the Modoc County Game Commission. They have expressed concern with high deer mortality rate on SR 139 at the above location from vehicle animal collisions. Deer kill counts exceed 100 in a 20 to 30 day period during winter storm events. The roadway safety becomes an issue for motorists coming upon the carcasses in the roadway, and also for maintenance workers and law enforcement that are called upon to keep the roadway clear of the deer remains.

Safety is further compromised by other wildlife, including bald eagles, golden eagles, vultures, coyotes, etc., feeding on the deer carcasses adjacent to and within the highway. The engorged eagles are unable to gain enough height during takeoff to avoid colliding with vehicles.

State Route 139 from Adin south – Caltrans has improved some of the road by adding shoulders along this segment. MCTC requests Caltrans to continue this effort to improve safety and provide adequate road and shoulder width.

Please contact me if you have any questions.

Sincerely,

Debbie Pedersen
Executive Director

California Department of Transportation
Trina Blanchette
Office of System Planning
1657 Riverside Drive, MS3
Redding, California 96001

March 28, 2014

Dear Ms. Blanchette:

I was out of town when the Caltrans meeting on Highway 139 took place in TuleLake and hope I can add some input now.

1. The railroad crossing near Newell that once served Newell Potato Coop (NPC). This siding is no longer being used. The railroad has removed the rail switching devise and NPC has removed some of their rail to their docks. This siding will not be used again. NPC has not shipped potatoes by rail for the past 10 years.
   Therefore it is unpractical to have buses and big rigs hauling chemicals and such to stop at this former rail siding. *This will make a safer driving surface on Highway 139*. The rails crossing Highway 139 need to be removed this spring.

2. The weed filled strip of land between Highway 139 and the railroad needs to be burned from Stateline to Newell. There have been many deer/vehicle contacts this past year because of the cover provided by the weeds.
   The weeds are dry and will burn and the Caltrans workers here have the time and means to burn the weeds before new weeds grown in. <u>This is a matter of public safety.</u> Contact should be made with the railroad to keep this weedy area sprayed for weeds year round.

3. The railroad removed the railroad mechanical crossing guards at the Oregon/California state line and that was a major improvement. Now the rails that cross Highway 139 need to be removed to *make a safer driving surface*.

I hope you will be able to incorporate the TuleLake Chamber of Commerce's suggestions in your study. Thank you for your time.

David Porter Misso
President TuleLake Chamber of Commerce.
missonation@cot.net

Tulelake Chambers Of Commerce
PO Box 1152
Tulelake, California 96134

MODOC COUNTY
FISH, GAME & RECREATION COMMISSION
202 W 4TH STREET
ALTURAS, CA 96101

March 17, 2014

California Department of Transportation
District 2
Office of System Planning
1657 Riverside Drive, MS3
Redding, CA 96001

Dear Ms. Blanchette:

The Modoc County Board of Supervisors has been informed that Caltrans is early in the process of updating the Transportation Concept Report (TCR) for State Route (SR) 139 running through Modoc County from the Siskiyou County border in the north to the Lassen County border in the south. It is our understanding that Caltrans is seeking input from Regional Transportation Planning Agencies (RTPAs), counties, cities, Tribal Governments, private businesses, community-based organizations, and the general public.

The Modoc County Fish, Game and Recreation Commission is concurrence with the Modoc County Board of Supervisors would like to see Caltrans mitigate a major long standing problem of deer/vehicle collisions that occur during years of above normal snowfall between County Road 114 and the Perez overpass. Deer are killed on this stretch of SR 139 throughout the year, however during heavy snowfall winters the problem is significantly exacerbated. This section of SR 139 runs through the wintering grounds for the interstate mule deer herd as well as the non-migratory herd. The combination of many deer crossing the highway, the high speed limit (65 mph), poor visibility in several sections of the highway and the icy road conditions that exist during the winter months provide the real possibility of a lethal interaction for the public as well as the wildlife.

We would like to see Caltrans work with the Highway 139 Stewardship Team and find a solution that will reduce this vehicle/wildlife interactions and put this section of highway on a high priority project list in order to protect the wellbeing of Modoc County citizens, the general public traveling this hazardous section of highway and its' wildlife.

Thank you for your attention to this matter.

Sincerely,

Chris Ratliff, Chairman
Modoc County Fish, Game & Recreation Commission

James S. Wills, Chairman
Modoc County Board of Supervisors

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Region 1 – Northern
601 Locust Street
Redding, CA 96001
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

March 28, 2014

Trina Blanchette, Transportation Planner
Office of System Planning
Caltrans District 2
1657 Riverside Drive
Redding, CA 96001

Subject: Wildlife Loss and Transportation Planning for State Route 139

Dear Ms. Blanchette:

This is in response to the California Department of Transportation's (Caltrans) recent request for input on transportation planning for State Route (SR) 139.

As you may be aware, for many years the loss of deer due to collisions with vehicles along portions of SR 139 has been substantial. Most losses occur in winter, particularly during high snowfall events when deer are forced to lower elevations. In some winters, more than 100 deer have been killed on a stretch of this highway roughly from the Perez overcrossing, to the "jump scales", southeast of Newell.

Recently, my staff met with representatives of the California Deer Association, U.S. Forest Service, Caltrans, and the Highway 89 Stewardship Team to discuss ways to reduce deer/vehicle collisions on SR 139. Based, in part, on those discussions we believe that fencing, including vegetated overpasses and/or underpasses to facilitate animal movement, should be considered to minimize vehicle accidents involving deer. We look forward to working with Caltrans and other partners to further develop and implement feasible and effective measures to increase public safety and reduce wildlife losses on SR 139.

If you have questions regarding our comments, please contact Mr. Richard Callas, Senior Environmental Scientist at (530) 340-5977 or Richard.Callas@wildlife.ca.gov or Environmental Scientist Mr. Richard Shinn at (530) 233-3581 or Richard.Shinn@wildlife.ca.gov.

Sincerely,

NEIL MANJI, Regional Manager
Region 1 -Northern

ec: Karen Kovacs, Richard Callas, Richard Shinn, Craig Stowers, Stuart Itoga, Bob Schaefer, and Aaron Freitas
California Department of Fish and Wildlife
Karen.Kovacs@wildlife.ca.gov, Richard.Callas@wildlife.ca.gov,
Richard.Shinn@wildlilfe.ca.gov, Craig.Stowers@wildlife.ca.gov
Stuart.Itoga@wildlife.ca.gov, Robert.Schaefer@wildlife.ca.gov
Aaron.Freitas@wildlife.ca.gov

March 17, 2014

Cal- Trans
C/o Trina Blanchette
Office of System Planning
Cal- Trans District 2
Re: State Route 139 Transportation Concept Report

Over the last 40 years State Route (SR) 139 has experienced a high level of deer mortality due to vehicle collisions. During the past 8 years, as the local Game Warden, I have witnessed this first hand. The winter of 2008 I saw as high as 100 (confirmed) deer lost to vehicle collisions in the month of January alone. While all of Highway 139 experiences deer loss due to vehicle collisions we feel the section of SR 139 that is most affected is from County Rd. 136 north to the intersection of County Rd. 114, approximately mile posts 30-40. As a result of this activity, citizens of Modoc County, California Deer Association and myself have formed the Highway 139 Stewardship Team to help solve this problem. Working with California Dept. of Fish and Wildlife, USFS, Cal Trans, Modoc County Fish and Game Commission, CDF, Modoc County Transportation Commission, and The Highway 89 Stewardship Team we hope to find a solution to this issue.

Included in this letter are ideas and requests that our team be included in the SR 139 TCR. First our goals are to reduce loss of deer and to increase the safety of drivers. Second we realize that this will be a long term project with high costs but based on similar projects elsewhere believe there will be a net benefit to tax payers that will offset costs. Third we are asking for a strategy to be developed with the help of experts in the field of transportation ecology to help determine a plan to mitigate the loss of deer to vehicle collisions; ideally this strategy would include the entire length of SR 139 as well as the high priority section mentioned above.

Our request is that Cal Trans look at the following as options for the stretch from Mileposts 30-40. These options could be implemented in phases over a period of up to 20 years to accomplish our goals.

- Fencing with, incorporated cattle guards at areas with needed public access, with an active warning system at the end zones and use of electro mats. These could be temporary fixes while en route to a long term solution.
- Overpass or similar wildlife crossing structure (whatever deemed appropriate for area and species)
- Seasonal use of Changeable Message Signs when deer concentration along highway is high.

With this letter we request to be included in the SR 139 TCR and look forward to working with you and your department in helping with the loss of our deer and other wildlife along SR 139.

Sincerely,

Aaron Freitas
Coordinator, Highway 139 Stewardship Team
541 274 1950

Public Involvement Website Links

Public involvement is an important part of the transportation planning process in California. The number and type of public involvement opportunities depend on the needs of a given transportation plan, program, or project. Through public workshops, hearings, open houses, task forces, citizen committees, commission meetings, and the media, the public is informed of transportation planning issues and given opportunities to comment on such plans or programs. These occur at the local, regional, or state agency levels.

The following websites provide more information on how Caltrans develops projects and links that can be used to get involved in the process.

Caltrans Website Links:

District 2
Public Affairs: http://www.dot.ca.gov/dist2/ or call **(530) 229-0511**
Caltrans projects: http://www.dot.ca.gov/dist2/projects.htm
Caltrans Program/Project Management: http://www.dot.ca.gov/dist2/ppm.htm
Caltrans News Releases: http://www.dot.ca.gov/dist2/roadinfo.htm#newsrelease

Information for How Caltrans Builds Projects:
http://www.dot.ca.gov/hq/oppd/proj_book/overview.pdf
http://www.dot.ca.gov/hq/oppd/proj_book/

Other Websites:
Environmental document summaries that have been prepared and posted during the project development stage can be found on the State Clearinghouse website (http://www.ceqanet.ca.gov/QueryForm.asp). The site includes environmental documents submitted to meet the California Environmental Quality Act (CEQA) requirements and some federal National Environmental Policy Act (NEPA) documents. The information can be searched for by county or city, and will include project title, project location, lead agency name, contact information and project description.

How Speed Limits are set. The process for setting speed limits is in the California Legislative Code-Vehicle Code (Sections 22348-22366). The California Department of Transportation and Tehama County must follow the applicable government code when setting speed limits and cannot arbitrarily set speed limits. For additional information the following websites:
http://www.motorists.org/speedlimits/home/do-speed-limits-matter/
http://www.motorists.org/speedlimits/home/state-speed-zoning-standards/

Emergency Roadwork for information on **scheduled roadwork**, please contact the California Highway Information Network (CHIN) at **1-800-GAS-ROAD (1-800-427-7623)** or look on the following website to **check current highway conditions**:
http://www.dot.ca.gov/dist2/roadinfo.htm#newsrelease

Planned Lane Closures
Real-time statewide route information is available for online users to search for planned lane closures statewide, by region, county or route number, on specific dates, during certain times, and by type of closure. www.lcswebreports.dot.ca.gov/lcswebreports/

For **additional road information**, visit Caltrans QuickMap at http://quickmap.dot.ca.gov

APPENDIX C: TRIBAL FACT SHEETS

In Progress

APPENDIX D: NON-FEDERALLY RECOGNIZED TRIBES FACT SHEETS

In Progress

APPENDIX E: ROUTE DESIGNATIONS

FEDERAL DESIGNATIONS

National Highway System (NHS)

Added: 1995
Legislation: National Highway System Designation Act
The purpose of the NHS is to provide an integrated national highway system that serves both urban and rural America; to connect major population centers, international border crossings, ports, airports, public transportation facilities, and other major travel destinations; to meet national defense requirements; and to serve interstate and interregional travel.

Strategic Highway Network (STRAHNET)

Added: 1990
Legislation: Federal Defense Act
The purpose of STRAHNET is to provide a network of highways that are important to the United States strategic defense policy and provide defense access, continuity, and emergency capabilities for defense purposes.

Surface Transportation Assistance Act (STAA) Network

Added: 1982
Legislation: Surface Transportation Assistance Act (STAA)
The STAA Act requires states to allow certain longer trucks on a network of Federal highways, referred to as the National Network (NN). The NN is comprised of the Interstate System plus the non-Interstate Federal-aid Primary System. "Larger trucks" includes (1) doubles with 28.5-foot trailers, (2) singles with 48-foot semi-trailers and unlimited kingpin-to-rear axle (KPRA) distance, (3) unlimited length for both vehicle combinations, and (4) widths up to 102 inches. STAA trucks are limited to the NN, Terminal Access Routes, and Service Access routes (STAA Network). For further information, regarding truck classifications, please see State Classifications-California Truck Route Classifications.

National Network (Federal): The National Network (NN) is primarily comprised of the National System of Interstate and Defense Highways, for example I-5. STAA trucks are allowed on the NN.

Terminal Access (State, Local): Terminal Access (TA) routes are portions of State Routes, or local roads, that can accommodate STAA trucks. TA allows STAA trucks to (1) travel between NN routes, (2) reach a truck's operating facility, or (3) reach a facility where freight originates, terminates, or is handled in the transportation process.

Service Access (State, Local): STAA trucks may exit the NN to access those highways that provide reasonable access to terminals and facilities for purposes limited to fuel, food, lodging, and repair, when that access is consistent with safe operation. The facility must be within one road mile of an exit from the NN and that exit must be identified by signage.

STATE CLASSFICATIONS

State Highway System

Added: 1964
Legislation: California Streets and Highways Code-Sections 300-635
The intent of the legislature was to identify a set of routes in the State Highway System that serve the state's heavily traveled rural and urban corridors, connect the communities and regions of the state, and support the state's economy by connecting centers of commerce, industry, agriculture, mineral wealth, and recreation.

The Interregional Road System is a subset of the State Highway System.

Interregional Road System (IRRS):

Added: 1989
Legislation: California Streets and Highways Code-Sections 163-164.2 (Transportation Blueprint for the Twenty-first Century)
The IRRS was conceived as part of a larger effort to address the critical transportation funding and development needs of the state. The legislation required the California Department of Transportation to define IRRS routes and create an interregional road system plan. IRRS is a series of interregional state and highway routes, outside the urbanized areas, that provide access to, and links between, the state's economic centers, major recreation

areas, and urban and rural regions. In 1989 the IRRS plan identified 81 state highway routes, or portions of routes, that serve the interregional movement of people and goods. Most interstates were included in the system, and all major interregional routes (conventional, expressway and freeway). Six additional routes have been added to the system since that time by locally sponsored legislation, so there are currently 87 IRRS routes in statute.

High Emphasis Routes are a subset of the IRRS.

High Emphasis Route:

Added: 1990 IRRS Plan; 1998 Interregional Transportation Strategic Plan (ITSP)
Legislation: Not in Statute

Due to the large number of routes and capacity improvements needed on the IRRS, the 1990 IRRS Plan identified a subset of the 87 routes as being the most critical routes and identified them by the term "High Emphasis Routes." High Emphasis Routes are a priority for programming and construction. Originally, there were 13 routes listed as High Emphasis Routes in the 1990 IRRS Plan. The 1998 ITSP kept the original 13 High Emphasis routes and added an additional 21 routes to the category for a total of 34. In some cases, the High Emphasis routes in the ITSP are a series of joined portions of routes that constitute a major logical transportation corridor. An example of a High Emphasis Route corridor that is comprised of major portions of a primary route but also includes sub-portions of other routes is SR 36/SR 44/SR 299.

Focus Routes are a subset of the High Emphasis Routes.

Focus Routes-Interregional Transportation Strategic Plan:

Added: 1998 Interregional Transportation Strategic Plan (ITSP)
Legislation: Not in Statute

The term "Focus Route" is a phrase specific to the ITSP and represents a subset of the 34 High Emphasis Routes. The routes represent the 10 IRRS corridors that should be of the highest priority for completion to minimum facility standards by 2020. Focus routes serve as a system of high volume primary arteries to which lower volume and facility-standard state highway routes can connect for purposes of longer interregional trips and access into statewide Gateways. All Focus Routes are on the NHS, Freeway and Expressway System (F & E), and are STAA Truck or Truck Terminal Routes. As an example the SR 36/SR 44/SR 299 corridor is also designated as a Focus Route.

Intermodal Corridor of Economic Significance (ICES)

Added: Statues of 1994
Legislation: California Streets and Highways Code-Sections 2190-2191

The ICES is a subset of the National Highway System corridors that links intermodal facilities most directly, conveniently, and efficiently to intrastate, interstate, and international markets. To be included in the ICES system, a route should provide access between major freight intermodal facilities and serve freight traffic with the NAFTA countries of Canada and Mexico, as well as the Pacific Rim and other U.S. trade markets.

Life Line Routes

Added: *California Department of Transportation Strategic Plan-1994*.
Legislation: Not in Statute

A Lifeline Route is a route of the State Highway System that is deemed critical to emergency/life safety activities of a region or the state. The route must remain open immediately following a major earthquake, or can be reopened fairly quickly by following a predetermined disaster response plan. The focus is on highly critical routes that allow for immediate movement of emergency equipment and supplies into a region or through a region.

Freeway and Expressway System (F & E)

Added: Statues of 1959
Legislation: California Streets and Highways Code-Sections 253.1-253.8

The Statewide system of highways declared by the Legislature to be essential to the future development of California.

California Truck Route Classifications

Added: AB 66 (1983) and SB 2322 (1986)
Legislation: California Vehicle Code-Sections 35400-35414

"California Legal" trucks can use the STAA Network and California Legal routes. The route classifications are listed below and see additional STAA designations under "Federal Designations".

California Legal (State): California Legal routes are State routes that allow California Legal-size trucks. STAA trucks are not allowed on these routes because of limiting geometrics, such as sharp curves and/or lack of turn-around space.

California Legal-Advisory (State): California law allows regulatory prohibition of a 38-foot KPRA or greater where posted in black-on-white. However, many California legal routes cannot safely accommodate California Legal-size trucks with a KPRA less than 38 feet, due to limiting geometrics such as sharp turns and limited highway width. Although California Legal trucks may travel on these segments, the driver is legally responsible for unsafe offtracking (crossing the centerline or driving on shoulders and sidewalks).

Restricted (Federal, State, Local): Some route segments have restrictions on certain truck or loads, such as gross weight, number of axles or hauling of flammable materials or explosives. Restrictions on federal or State routes are listed on the Caltrans Truck Route List.

APPENDIX F: TRUCK INFORMATION

California Legal Truck Tractor – Semitrailer

Semitrailer length	No limit
KPRA*	40 feet maximum for two or more axles, 38 feet maximum for single-axle trailers
Overall length	65 feet maximum

**KPRA = kingpin-to-rear-axle*

California Legal Truck Tractor – Semitrailer – Trailer (Doubles)

Option A

Trailer length	28 feet 6 inches maximum (each trailer)
Overall length	75 feet maximum

Option B

Trailer length	One trailer 28 feet 6 inches maximum Other trailer may be longer than 28 feet 6 inches
Overall length	65 feet maximum

Interstate "STAA" Truck Tractor - Semitrailer

Semitrailer length	48 feet maximum
KPRA*	No limit
Overall length	No limit

Semitrailer length	Over 48 feet up to 53 feet maximum
KPRA*	40 feet maximum for two or more axles, 38 feet maximum for single-axle trailers
Overall length	No limit

**KPRA = kingpin-to-rear-axle*

Interstate "STAA" Truck Tractor – Semitrailer – Trailer (Doubles)

Trailer length	28 feet 6 inches maximum (each trailer)
Overall length	No limit

TRUCK NETWORKS on California State Highways

DISTRICT 2

Map 2 of 12

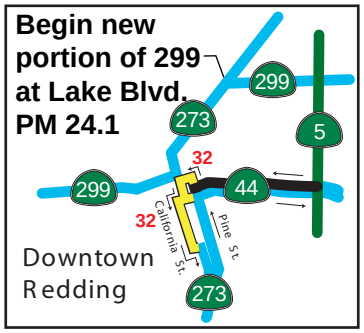
Not to scale

Last revised March 15, 2011

LEGEND

(CLICK HERE FOR MORE DETAILED LEGEND)

- National Network (STAA)
- Terminal Access (STAA)
- California Legal Network
- Ca Legal Advisory Route
- KPRA* Advisory
- Airport
- Rest Area



*KPRA = kingpin-to-rear-axle distance

~30' wide turn-around at PM 36.88, 2.5 miles north of Oak Flat Creek Bridge

Main St. at Indian Creek Rd. in Happy Camp PM 41.1

NOTE: Eastbound STAA trucks on Rte 96 prohibited from turning southbound on Rte 263.

LOW CLEARANCE: EB & WB Rte 151 Railroad Overcrossing 13'-9", PM 5.5

Cecilville Rd. at Callahan PM 8.9

Trinity Dam Blvd./ New Lewiston Rd. 5 miles west of county line PM 67.4

Iron Mountain Rd. PM 20.3

Lake Blvd. in City of Shasta Lake, PM 3.8

County Rd. to Termo PM 43.3

273 in Redding: NB Advisory 32' from Shasta St. to Eureka Way PM 16.7 to 16.8

SB Advisory 32' Gold St. to Eureka Way, PM 16.3 to 16.8

Millville Plains Rd., PM 10.8

5 Dot Rd. 15 miles north of Jct 36 PM 15.1

Exit to French Gulch (Trinity Mtn Rd. at Whiskeytown Rec. Area) 8.6 miles east of county line, PM 8.6

*For Redding, see map at top and note at bottom right corner.

Paynes Creek Rd. PM 64.0

Railroad crossing on Beegum Rd. just west of Main St./Business 5, PM 41.2 to Main St. at Antelope Blvd./ Oak St. in Red Bluff, PM 41.3

Little Giant Mill Rd. 11.2 miles east of Paynes Creek Rd. PM 75.2

West Jct Rte 172 at Mineral PM 83.1

NOTE: Rte 44 thru Redding is Advisory 32' from Market St. at Eureka Way (PM 0.00) WB to Pine St. at Shasta (PM 0.16) or EB to Pine St. at Tehama (PM 0.24). From Pine St. to I-5, 44 EB is green, 44 WB is black.

OREGON

NEVADA

SISKIYOU

MODOC

LASSEN

SHASTA

TRINITY

PLUMAS

TEHAMA

DORRIS

TULE-LAKE

YREKA

MONTAGUE

FORT JONES

ETNA

WEED

MOUNT SHASTA

DUNSMUIR

ALTURAS

WEAVERVILLE

REDDING

SUSANVILLE

RED BLUFF

QUINCY

PORTOLA

Lava Beds National Monument

Lassen National Park

District 1

District 3

Caltrans

California Department of Transportation, Truck Size Unit

APPENDIX G: DEER AND SR 139

There is a recordation of high concentrations of mule deer kills following heavy snow events in the Tule Lake Basin (2008-2009:100 deer) and also problems in areas where woody vegetation is dense adjacent to roadways. There is potential for vehicle collisions of elk and pronghorn antelope along portions of this route too. The focus area is from Clear Lake Road (MOD 30.4) to County Road 114 (MOD 40.5).

After a deer is hit, subsequent drivers might not be aware of a deer carcass on road. Maintenance and law enforcement personnel need to clear the highway of the carcass, exposing them to traffic. Other animals such as eagles, ravens and magpies are drawn to the carcasses. People who are unfamiliar with SR 139 might not expect to see a deer, maintenance workers, law enforcement or animals that are drawn to the carcasses. In Lassen County, fencing on private property adjacent to the state right of way can strand deer on the highway, preventing them from escaping.

Caltrans received over 40 written comments regarding the deer issue from agencies, organizations and members of the public (written comments received can be found on page 88). Additionally, members of the public and representatives from organizations appeared at the public workshops to express concern over the deer issue. Groups and agencies besides Caltrans that are involved with this issue include: Highway 139 Stewardship Team, California Deer Association, Modoc County agencies and California Department of Fish and Wildlife. Ideas suggested for consideration include fencing, electro mats, animal warning systems, wildlife crossings and jumpout ramps. It was suggested to coordinate with all stakeholders and experts in the field of transportation ecology to find a solution to the issue. A team approach, similar to the approach taken on SR 89 in the Tahoe National Forest[4], was recommended, and coordination regarding SR 139 is underway with District 2 environmental staff. Many stakeholders suggested that a permanent solution that goes beyond the efforts made so far (vegetation clearing and portable CMSs) is needed.

Ongoing efforts to control and monitor the deer issue include signage and vegetation clearing. Currently, there are two over-sized permanently mounted signs warning of the winter deer migration, with flashers added during the winter months. There are two portable CMSs belonging to the Modoc Health Service that are used during years when deer are likely to be present. In the past, Caltrans has offered to store, place and maintain the PCMSs. Location and date of incident data is collected by both Caltrans and the California Department of Fish and

[4] "Just north of Lake Tahoe in the Sierra Nevada Mountains of California is a stretch of highway that has attracted the attention of a group of people who have a desire to make a difference far beyond their 25-mile stretch of state highway through the Tahoe National Forest.

The Highway 89 Stewardship Team is an interagency grassroots group dedicated to reducing animal-vehicle collisions and facilitating animal movement across highways through mitigation, research, and education. The Highway 89 Stewardship Team has taken a proactive approach and developed a long term strategic plan to rigorously test new mitigation measures for wildlife. The Highway 89 Stewardship Team's Goals include: (1) reducing animal/vehicle collisions, (2) maintaining habitat connectivity, and (3) developing and testing innovative solutions to transportation ecology challenges. They selected a section of California Highway 89 as an 'Experimental Highway' to explore environmental issues and conduct applied research. The Stewardship Team distributes the results of its research through educational programs for local youth, the public at large, and professionals." (*United States Forest Service 2014*)

Wildlife. Commitments made are detailed in a 2008 letter from the Director of District 2 to the California Deer Association (see page 86)

Some topics requiring further study include:

- There are potential vehicle/animal collision concentration areas
- Known problems: Mule Deer Fatalities-Tule Lake Basin Winter Range during high snow events.
- Large game species that could negatively interact with traveling public
- Rocky Mountain Mule Deer resident populations along all of SR139.
- Elk year-round resident populations in the Tule Lake Basin
- Pronghorn Antelope resident populations along all of SR139. Found in rolling hill areas with a combination of grasslands and high desert scrub.
- These large game species tend to use their range in small groups (two-five) during the summer and form larger herds in the winter (20-30). These larger herds present greater risk for vehicle collisions for a number of reasons including herd dynamics.

Any proposed solution to the deer issue would require partnership for implementation and financing.

APPENDIX H: CAPACITY ANALYSIS AND LEVEL OF SERVICE

Methodology:
The standard reference in highway capacity analysis is the **Highway Capacity Manual** prepared by the Transportation Research Board (National Research Council, Washington, D.C.). The Highway Capacity Manual is a collection of the state-of-the-art techniques for estimating the capacity and determining the level of service for transportation facilities. It represents a systematic and consistent basis for evaluating transportation facilities with procedures that are applicable nation-wide.

Capacity Analysis:
The set of procedures and methodologies used for estimating the traffic-carrying ability of various transportation facilities is broadly referred to as capacity analysis. ***A principal objective of capacity analysis is to estimate the number of vehicles that a facility can accommodate during a specified period of time. Capacity analysis is also used to estimate the maximum amount of traffic that a facility can accommodate while maintaining a prescribed level of operation.*** Common outputs of capacity analysis are estimates of the quality of operation (level of service) for a given facility.

Capacity:
The capacity of a facility is the maximum hourly rate at which persons or vehicles reasonably can be expected to traverse a point or uniform section of lane or roadway during a given time period under prevailing roadway, traffic and control conditions. It represents the flow rate that can be achieved during peak periods of demand. Capacity is affected by a number of factors such as lane and shoulder widths, density of access points, interchange spacing, grade, and types of vehicles in the traffic stream. Capacity values are determined differently by mode (auto, bus, pedestrian, bicycle) and by facility (freeway, highway, urban street, intersection, etc.).

Level of Service:
Level of Service (LOS) is a qualitative measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six LOS are defined for each type of facility analyzed. Letters designate each level, from "A" to "F", with LOS "A" representing the best operating conditions and LOS "F" the worst.

Methodologies:
The HCM contains analytical methodologies for the following situations: urban streets, signalized intersections, unsignalized intersections, pedestrians, bicycles, two-lane highways, multilane highways, freeway facilities, basic freeway segments, freeway weaving, ramps, interchanges and transit. *Capacity and level of service is determined differently for each facility type, so direct comparisons across facility types should not be made*.

Two-Lane Highway Methodology – Chapter 15, HCM 2010:
A two-lane highway is an undivided roadway with two lanes, one for use by traffic in each direction. On a two-lane undivided highway, traffic flow is affected by a number of factors, including geometric conditions (curvature, lane widths, shoulder widths, etc.), sight distance and grade. Traffic flow in one direction is also influenced by traffic flow in the other direction. Travel

speeds fall and time spent following other vehicles rises as volumes increase and traffic in the opposing direction reduces opportunities to pass.

The performance measures used to determine level of service for two-lane highways are percent time spent following, average travel speed and percent of free-flow speed. Percent time spent following is the average percentage of travel time that vehicles must travel in platoons behind slower vehicles due to the inability to pass. Average travel speed is the average of the travel time of all vehicles over a designated interval. Percent of free-flow speed is the ratio of average travel speed to free flow speed (approximately equal to posted speed) over a designated interval.

For purposes of analysis, two-lane highways are divided into three classes based on the primary type of use and driver expectations:

Class I –
These are two-lane highways on which motorists expect to travel at relatively high speeds. Two-lane highways that are major inter-city routes, primary arterials connecting major traffic generators, or primary links in state or national highway networks generally are assigned to Class I.

Class II –
These are two-lane highways on which maintaining high travel speeds are not necessarily the most important objective of motorists. Two-lane highways that serve as scenic or recreational routes, are not primary arterials, or pass through rugged terrain generally are assigned to Class II.

Class III –
Class III is applicable in situations where a two-lane highway passes through a small town, recreational area or other location with posted speed limits less than 55 mph. In these situations motorists primarily want to proceed at a reasonable speed and generally do not expect to have an opportunity to pass.

The level of service (LOS) for Class I highways is defined in terms of both percent time spent following and average travel speed. For Class II facilities, the LOS is defined only in terms of percent time spent following. The LOS on Class III segments is defined in terms of percent of free-flow speed. The tables below provide the criteria (break-points) for level of service for each facility type.

Table 15: Level of Service Criteria for Two-Lane Highways in Class I

LOS	Percent Time Spent Following	Average Travel Speed (mi/h)
A	< 35	> 55
B	> 35-50	> 50-55
C	> 50-65	> 45 –50
D	> 65-80	> 40-45
E	> 80	< 40
F	Vehicle flow rate exceeds capacity	

Table 16: Level of Service Criteria for Two-Lane Highways in Class II	
LOS	**Percent Time Spent Following**
A	< 40
B	> 40-55
C	> 55-70
D	> 70-85
E	> 85
F	Vehicle flow rate exceeds capacity

Table 17: Level of Service Criteria for Two-Lane Highways in Class III	
LOS	**Percent of Free-Flow Speed**
A	> .92
B	> .83-.92
C	> .75-.83
D	> .67-.75
E	< .67
F	Vehicle flow rate exceeds capacity

Source: Highway Capacity Manual 2010.

APPENDIX I: EAGLE LAKE: ADDITIONAL INFORMATION

Eagle Lake is the 2nd largest natural lake located entirely within California. It is at an elevation of about 5100 feet above sea level and is about 14 miles north to south and three miles east to west along the lake's longest axes. The natural fluctuation of the lake elevations is between 5091 feet and 5124 feet; within the last few years, the lake level has been receding. It offers recreational opportunities such as camping, wildlife viewing, fishing and boating. Other land uses in the surrounding area include timber harvesting and livestock grazing.

The ownership of the land near Eagle Lake is about 50% US Forest Service, 35% Bureau of Land Management and 15% private. Chico State University operates a Biological Field Office at Eagle Lake and the Eagle Lake Recreation Area is managed by the Lassen College Foundation under a special use permit from the US Forest Service, Lassen National Forest. There are residences along the western and northern shores of the lake. Spaulding and Stones-Bengard Community Services Districts provide mailbox services, a wastewater system, fire department, EMS and Marina services to these two communities on the lake.

Eagle Lake and nearby land provides habitat for many animals such as Eagle Lake Trout, eagles, pelicans, herons, ducks, quail, geese, mule deer, pronghorn antelope and several small mammal species. Management of Eagle Lake Trout is made difficult by the decreasing water level of the lake. Pine Creek is a spawning habitat for Eagle Lake Trout and is a tributary to the lake. The Pine Creek Coordinated Resources Management Planning Group (CRMP) formed in 1987 to improve hydrologic conditions of the creek through restoration projects.

There has been a long and controversial history of the tunnel at Eagle Lake, beginning with an unsuccessful attempt in 1875 to drill a tunnel to use as a log flume. Later, in 1915, Leon Bly created a 7300 feet long tunnel diverting water from the lake to Willow Creek for use in the Honey Lake Valley. From 1923 to 1935, the tunnel was used intermittently and the water level dropped 27 feet. In 1955, an unknown citizens group made a sand dike in the tunnel intake channel. The tunnel entrance was filled by the BLM in 1974, but a permanent concrete plug with a valve allowing the flow of five cubic feet of water per second was added in 1986, consistent with 1977 water rights opinions by the State of California. The State Water Resources Control Board reversed the 1977 decision and the valve was closed in 2011 after receiving numerous complaints about the water level.

In the 1980s and 1990s, Eagle Lake occasionally flooded and created icy conditions on SR 139. A study was conducted in 1992 to evaluate feasibility of alternatives including route relocation, raising the route or detouring in the event of road closure. The study team recommended detouring traffic, unless permanent flooding was imminent, at which case, the recommendation was to raise three miles of the roadway 2.3 feet. A water level of 5114 feet was to be the trigger point to initiate the funding, environmental and design processes. No relocation or raising of the highway occurred since the report was conducted and a detour was only necessary a few times. Since that time, the water level has significantly receded and the issue has diminished in importance. It is unlikely to cause flooding issues again unless there are multiple consecutive years producing heavy precipitation.

APPENDIX J: ROUTE INVENTORY

Table 18: Passing and Truck Climbing Lanes			
Beginning Post Mile	**End Post Mile**	**Location Description**	**Direction**
MOD R5.969	MOD R7.362	South of Loveness Road	NB
MOD 23.200	MOD 22.374	Perez Inspection Station	SB
SIS 4.781	SIS 5.043	Just south of Oregon State Line	NB & SB

Table 19: Bridges									
Post Mile	**Bridge Number**	**Structure Name**	**Structure Type**	**Bridge Length**	**Width**	**Num Spans**	**Min VC over Rdway**	**Year Built**	**Year Wid/ Ext**
LAS 16.92	07 0061	Meadow Channel	201	12.8	9.9	2	0	1966	
LAS 17.02	07 0062	Willow Creek	201	17.1	9.9	2	0	1966	
MOD R2.23	03 0011	Howards Gulch	201	22.3	10.4	3	0	1966	
MOD 30.63	03 0033	Perez OH	302 101	28.7	10.7	3	6.96	1934	1994

Table 20: Traffic Control		
Post Mile	**Location**	**Description of Device**
LAS 0.00 (but listed in the signal inventory as SR 36)	SR 36	Traffic Signal
LAS 1.15	Skyline Road	Traffic Signal
SIS 1.45	Havlina/Main Street	Overhead red flasher at two-way stop for traffic approaching SR 139 from Havlina/Main Street.

Table 21: Agricultural Inspection Stations	
Location	**Name**
MOD 23.2	Perez Inspection Station

Table 22: Chain Control			
County & Route	**Chain Sign #**	**P.M.**	**Location**
LAS-139	1-N	2.3	2 miles north of Susanville
LAS-139	*	7.4	ANTELOPE GRADE (5,434 ft.)
LAS-139	2-S	55.2	13 miles south of Adin (Watch Sign Only)
MOD-139	3-N	4.8	5 miles north of Canby
MOD-139	4-S	20.2	20 miles north of Canby
MOD-139	5-S	39.7	4 miles south of Newell (Watch Sign Only)

Table 23: Maintenance Stations					
Number	**Name**	**County**	**Route**	**PM**	**Facility**
668	Adin	LAS	299	25.6	Mtce Station
151	Susanville	LAS	36	26.0	Mtce Station/Supt
267	Alturas	MOD	395	23.0	Mtce Station
264	Newell	MOD	139	44.9	Mtce Station

Table 24: Sand and Salt Storage	
Route	**Post Mile**
139	LAS 32.32
299	LAS 25.6

Table 25: ITS Elements						
Location	**Type**	**County**	**Route**	**Post Mile**	**Status**	**Notes**
Skyline Drive	HAR FLASHER	LAS	139	1.27	Existing	Flasher FNBT and FSBT BBS Installed
South of SR299	HAR FLASHER	LAS	139	65.67	Existing	Flasher FNBT and FSBT BBS installed
Canby (North of SR299)	HAR FLASHER	MOD	139	0.40	Possible	Flasher FNBT and FSBT Addition Flashers for Alturas HAR
Lookout Road (County Rd. 91)	CCTV	MOD	139	17.35	Possible	Not probable location due to tall trees and no utilities in area
Perez Inspection Station	RWIS	MOD	139	22.65	Existing	N/A
Perez Inspection Station	CCTV	MOD	139	22.70	Existing	N/A
Between Susanville and Adin	TBD	LAS	139	TBD	Conceptual	To be considered at the time of other projects
Between Canby and Newell	TBD	MOD	139	TBD	Conceptual	To be considered at the time of other projects

Table 26: Vista Points			
County	**Route**	**Post Mile**	**Location**
Lassen	139	23.0	Eagle Lake

APPENDIX K: HISTORICAL MARKERS NEAR SR 139

California Historical Landmarks

Modoc County

NO. 6 FRÉMONT'S CAMP - John C. Frémont's expedition from Fort Sutter to Upper Klamath Lake, which included Kit Carson and other scouts, camped here May 1-4, 1846. They were the first non-Indians ever to pass this way.
Location: 0.7 mi N of old Alturas Hwy (Co Rd 114) and Hwy 139 junction, 12 mi SE of Tule Lake

NO. 8 BLOODY POINT - In 1850 one of the bloodiest massacres of emigrants ever known on the Oregon Trail occurred here when Modoc Indians killed over 90 men, women, and children in a surprise attack. The following year another large party narrowly escaped the same fate, and the Indians succeeded in killing several smaller parties here.
Location: 3.0 mi S of Oregon border, then 1.0 mi SW on Co Rd 104, 8.3 mi NW of State Hwy 139, E of Tule Lake

NO. 108 BATTLE OF LAND'S RANCH-1872 - One of the engagements of the Modoc War took place on December 21, 1872, on what was then known as the Land's Ranch. Army supply wagons, escorted by cavalrymen, had reached camp in safety, but several of the soldiers who had dropped behind were suddenly attacked by Indians hiding among the rocks above the road. Two men were killed and several wounded.
Location: 0.1 mi S of intersection of State Hwy 139 (P.M. 40.4) and Co Rd 114, 12.1 mi SE of Tule Lake

NO. 111 OLD EMIGRANT TRAIL - Near the present Pit River-Happy Camp Road this old pioneer trail, part of one of the earliest roads in northeastern California, is yet easily traced. Trees eight to ten inches in diameter are growing in the old road bed.
Location: 5.0 mi NW of Co Rd 84, 9.3 mi NW of Canby

NO. 850-2 TULE LAKE RELOCATION CENTER - Tule Lake was one of ten American concentration camps established during World War II to incarcerate 110,000 persons of Japanese ancestry, of whom the majority were American citizens, behind barbed wire and guard towers without charge, trial, or establishment of guilt. These camps are reminders of how racism, economic and political exploitation, and expediency can undermine the constitutional guarantees of United States citizens and aliens alike. May the injustices and humiliation suffered here never recur.
Location: NE corner of State Hwy 139 and Co Rd 176, 75 mi S of Tule Lake

Siskiyou County

NO. 9 CAPTAIN JACK'S STRONGHOLD - From this fortress, Captain Jack and his Indian forces successfully resisted capture by U.S. Army troops from December 1, 1872 to April 18, 1873.
Location: Site in Lava Beds National Monument, 8.3 mi S of Tule Lake. Plaque on Hwy 139 and County Rd 120

NO. 13 GUILLEM'S GRAVEYARD - Almost 100 soldiers killed in action during the Modoc Indian War of 1872-73 were buried here. The bodies were moved to the National Cemetery in Washington, D.C. in the early 1890s.
Location: In Lava Beds National Monument, 7.5 mi W of NE entrance, 4 mi S of Tule Lake

NO. 110 CANBY'S CROSS-1873 - General E. R. S. Canby was murdered here in April 1873 while holding a peace parley with Captain Jack and Indian chiefs under a flag of truce. Eleazer Thomas, peace commissioner, was likewise slain.
Location: In Lava Beds National Monument, about 0.5 mi E of park's N entrance, 8.3 mi S of Tule Lake

National Historic Landmarks

Lower Klamath National Wildlife Refuge Established in 1908, this was the first large area of public land to be set aside as a wildlife refuge. Superimposed on an existing federal reclamation project, the marshes and lakes of the wildlife reservation were drained for agricultural purposes until intensive water management measures were initiated in 1940 to bring the refuge back to productivity. The refuge is an outstanding illustration of the 20th-century conflict between utilitarian (or reclamation) interests and conservation interests in the use of public lands and of the introduction of scientific management principles into wildlife conservation.

Tule Lake Segregation Center Newell, California Tule Lake was the largest and longest-lived of the ten camps built by the civilian War Relocation Authority (WRA) to house Japanese Americans relocated from the west coast of the United States under the terms of Executive Order 9066. In 1943, Tule Lake was converted to a maximum security segregation center for evacuees from all the relocation centers whom the WRA had identified as "disloyal." Consequently, it had the most guard towers, the largest number of military police, eight tanks, and its own jail and stockade. In spite of the high security, the center continued to be plagued by conflict; in November 1943, Tule Lake was taken over by the army and continued under martial law until January 1944. Protests from the Japanese government and from the California Chapter of the American Civil Liberties Union eventually led to the release of all prisoners held in the stockade.

Table 27: National Register of Historic Places on or Near SR 139				
Resource Name	**Address**	**County**	**City**	**Primary Certdate**
Bruff's Rock Petroglyph Site	Address Restricted	Lassen	Susanville	20040102
Lassen County Court House	Courthouse Square	Lassen	Susanville	19980123
Roop's Fort	N. Weatherlow St.	Lassen	Susanville	19740502
Susanville Railroad Depot	461 Richmond Rd.	Lassen	Susanville	20010405
Adin Supply Company	W side of Main St. between Center and McDowell Sts.	Modoc	Adin	19970207
Anklin Village Archeological Site	Address Restricted	Modoc	Canby	19760603
Black Cow Spring	Address Restricted	Modoc	Canby	19740709
Core Site	Address Restricted	Modoc	Canby	19740408
Cuppy Cave	Address Restricted	Modoc	Canby	19740712
Mildred Ann Archeological Site	Address Restricted	Modoc	Canby	19760603
Skull Ridge	Address Restricted	Modoc	Canby	19740709
Skull Spring	Address Restricted	Modoc	Canby	19740709
Tule Lake Segregation Center	NE side CA 139	Modoc	Newell	20060217
Fern Cave Archeological Site	Address Restricted	Modoc	Tule Lake	19750529
Lava Beds National Monument Archeological District	Address Restricted	Modoc	Tulelake	19910321
Petroglyph Point Archeological Site	Address Restricted	Modoc	Tulelake	19750529
Captain Jack's Stronghold	S of Tulelake, Lava Beds National Monument	Siskiyou	Tulelake	19730920
Hospital Rock Army Camp Site	S of Tulelake, Lava Beds National Monument	Siskiyou	Tulelake	19731002
Thomas-Wright Battle Site	S of Tulelake in Lava Beds National Monument	Siskiyou	Tulelake	19781115

Historical point of interest near LAS 10.0

Jacks Valley- named for John "Coyote Jack" Wright who left here in 1869. By 1880, five wagon roads converged here which resulted in various establishments over the years including a stage station, saloon, sawmill, dancehall, logging camp, and agricultural inspection station. **This water trough, built in 1913 for the benefit of travelers, is the only one of its kind in Northeastern California.**

Dedicated July 9, 1983 by E Clampus Vitus Never Sweats Chapter 1863
California Registered Point of Historic Interest no. Las-002.

APPENDIX L: ROUTE HISTORY

Added to State Highway System:

- In 1939: Former Route 210 – Route 299 to Oregon State Line
- In 1959: Former Route 216 – Route 36 to Route 299

Added to Freeway and Expressway System – 1959

The portion of SR 139 from Susanville to Horse Lake Road (LAS 13.7) was an extension of LRN 20 (present day SR 36) - 1957

Route 139 begins in Lassen County, runs through Modoc and Siskiyou Counties, and then continues on into the State of Oregon. District records indicate that the first improvement of this 121.8 mile route was a grading project from Tulelake to the Oregon State Line in northern Siskiyou County during January of 1936.

The longest continuous Federal-Aid secondary road construction project in the State of California was completed on a 67-mile portion of Route 139 from Susanville to Adin in 1956. Known as Joint Highway #14, the construction was started in 1929 and completed 26 years later. Sixteen agencies, both public and private, were involved in the project; this included the California Conservation Corps (CCC) and the Works Progress Administration (WPA).

There were two projects in 1957: the first was surfacing the five miles between Tulelake and the Oregon State Line; and, the second involved a major resurfacing and reconstruction of the Perez Overhead, 21 miles southeast of Tulelake.

Bridges were replaced at Newell in Modoc County and at Hatfield, near Tulelake – Siskiyou County, in 1982.

About six miles of Route 139 parallel the shore of Eagle Lake north of Susanville. The Lake elevation is over 5000 feet. During the 1960s, the traveled way was periodically blocked by ice flows caused by wave action and the severe cold. A portion of the route was raised about three feet and rock slope protection added in the summer of 1970.

The highway along the northeast edge of Eagle Lake was almost flooded in 1985 because of a series of wet winters and the sealing of an irrigation diversion tunnel. As a temporary solution, approximately three miles of the highway were raised at three locations during the summer of 1986. A study was conducted to determine an appropriate course of action to solve the problem. Since the early 1990s, the water level in the lake has receded and importance of the issue has subsided. See **Appendix I: Eagle Lake: Additional Information** for more information about Eagle Lake.

There are two roads in Modoc County which connect Route 139 and the Lava Beds National Monument. The Monument is noted for its spectacular lava flows and offers interpretive trails informing visitors about battles of the Modoc Indian War.

APPENDIX M: GLOSSARY OF TERMS AND ACRONYMS

Aa

Access Control: The condition where the right of owners or occupants of abutting land or other persons to access in connection with a highway is fully or partially controlled by public authority.

Access Management: Involves managing where vehicles enter the highway to improve highway operations and reduce accidents.

Access Point: Location where vehicles can enter or exit a highway.

Agricultural Inspection Stations: These stations conduct agricultural inspections on all private and commercial vehicles near major borders.

Air Basin: An area or territory that contains similar meteorological and geographical conditions. In California, the Air Resources Board (ARB) has established nine air basins.

Air Quality: A general term used to describe various aspects of the air that plants and human populations are exposed to in their daily lives.

All-Way Stop Control: Traffic control at an intersection where all approaches are controlled by stop signs.

Americans with Disabilities (ADA): In 1990, the act was enacted, which prohibits discriminations against persons because of their disabilities.

Ancestral boundaries: The boundaries represent the areas that were once inhabited by Indian Tribes to camp, hunt, fish, and gather vegetation for food consumption and basketry material, or had sacred ceremonial and burial sites.

Annual Average Daily Traffic (AADT): Daily traffic that is averaged over a calendar year or fiscal year.

At-grade Crossings: A junction at which two or more intersections cross at the same grade

Attainment: Air quality status indicates that the area has never been designated non-attainment for that particular standard.

Arterial: A class of street that primarily serves through-traffic and major traffic movements.

Auxiliary Lane: The portion of the roadway for weaving, truck climbing, speed change, or other purposes supplementary to through traffic movement.

Average Daily Traffic (ADT): The average number of vehicles passing a specified point during a 24-hour period. Frequently used in relation to the “peak-month” average daily traffic.

Bb

Bicycle Status: The ability to ride the bike on the freeway or provide an alternate facility for bicycle travel.

Bike Route Class: Classification of a bicycle facility. There are three classes:

Class I - (bicycle facility separate from roadway) provides completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flow minimized.

Class II - (designated bicycle facility adjacent to roadway) provides a striped lane for one-way bike travel on a street or highway.

Class III - (non-designated but open to bicycles) provides for shared use with pedestrians or motor vehicle traffic.

Bridges: Structures of more than 20 feet in length that span a body of water.

Cc

California Environmental Quality Act (CEQA): 1970 state legislation which requires state agencies to regulate activities with major consideration for environmental protection.

California Transportation Commission: A body appointed by the governor responsible for the STIP, the development of the RTP guidelines, and the statewide transportation policy.

Caltrans or Department: California Department of Transportation.

Capacity: The number of vehicles that a facility can accommodate during a specified period of time. It represents the flow rate that can be achieved during peak periods of demand. Capacity is also used to estimate the maximum amount of traffic that a facility can accommodate while maintaining a prescribed level of operation (Level of Service).

Capacity-Increasing Projects: Projects that allow for more capacity on the roadway such as adding a lane.

Chain Locations: These are the signed locations that drivers are allowed to stop and pit on chains.

Changeable Message Signs (CMS): Electronic signs that can change the message it displays. Often used on highways to warn and redirect traffic. Also referred to as variable or electronic message signs.

Channelization: The separation or regulation of conflicting traffic movements into definite paths of travel by the use of pavement markings, raised islands, or other suitable means to facilitate the safe and orderly movement of both vehicles and pedestrians.

Clean Air Act: A 1990 environmental policy act relating to the reduction of smog and air pollution.

Clear Recovery Zone: An area clear of fixed objects adjacent to the roadway to provide a recovery zone for vehicles that have left the traveled way. A minimum clear recovery area of 20 feet on conventional highways and 30 feet on freeways and high-speed expressways is desirable.

Climbing lane: A lane added on an uphill grade for use by trucks, recreational vehicles, and other heavy vehicles with speeds significantly reduced by grade.

Closed Circuit Television (CCTV): This ITS technology allows a camera to display remote verification of road and weather conditions, traffic conditions, and incidents. This television can have compatibility with other communications technologies, such as cable TV, kiosks, and the internet.

Collector Road: A collector road or distributor road is a low-to-moderate-capacity road which serves to move traffic from local streets to arterial roads.

Commercial Airports: Publicly owned airports that have at least 2,500 passenger boarding's each calendar year and receive scheduled passenger service.

Concept: A strategy for future improvements that will reduce congestion or maintain the existing level of service on a specific route.

Concept LOS: Used to describe the target operational condition for a facility during the twenty-year planning horizon of the Transportation Concept Report. Planning studies for projects to improve highway capacity should begin at the time when a highway segment is projected to reach the concept LOS.

Conformity: Process to assess the compliance of any Federally funded or approved transportation plan, program, or project with air quality implementation plans. The conformity process is defined by the Clean Air Act.

Congestion: Defined as reduced speeds of less than 35 miles per hour for longer than 15 minutes.

Context Sensitive Solutions: Caltrans utilizes this process to ensure that transportation projects are in harmony with communities, and that intrinsic qualities such as historic, aesthetic, and scenic resources are enhanced and preserved.

Conventional Highway: A highway without control of access, which may or may not be divided. Grade separations at intersections or access control may be used when justified at spot locations.

Corridor: A set of essentially parallel transportation facilities for moving people and goods between two points.

Corridor Preservation: Identify and discuss the locations targeted for corridor preservation, and address existing and future rail and highway corridor, and seaport and airport facility land reservation needs.

Cultural Resources: Encompass archaeological traditional and built resources including but not necessarily limited to buildings, structures, objects, districts, and sites.

Dd

Daily Vehicle Miles of Travel: An estimate of Annual Vehicle Miles of Travel is the product of AADT x Segment Length x 365 days.

Delay: The time lost while traffic is impeded by some element over which the driver has no control.

Demographics: refers to selected population characteristics.

Density: The number of vehicles per mile (or per lane per mile) on the traveled way at a given instant.

Design Speed: A speed selected to establish specific minimum geometric (horizontal, vertical, site distance) design elements for a particular section of highway.

Directional Split: During the peak period, the directional distribution of traffic.

District: Department of Transportation Districts.

Divided Highway: A highway with separated roadbeds for traffic in opposing directions.

Ee

Easement: A right to use or control the property of another for designated purposes.

Elevation: A location's height above a fixed reference point, often measured from mean sea level.

Encroachment: Occupancy of project right-of-way by non-project structures or objects of any kind or character.

Exit Number: This is a unique numbering system for freeways across California. The numbering system runs from south to north and from west to east.

Ff

Facility Concept (Route Concept): General term used to describe the number of lanes and degree of access control on a State Route or Freeway. The term can be used to describe the existing facility or the future facility that will be required to handle projected traffic volumes within adopted level of service standards.

Present Facility Concept: Defines the current built facility.

Twenty-Year Facility Concept: Defines the desired facility during the next twenty years.

Long-Range (Post Twenty-Year): Defines the facility that may ultimately be needed sometime beyond the twenty year planning horizon.

Federal Highway Administration (FHWA): An agency of the US Department of Transportation that funds highway-planning programs.

Federal Highway Administration (FHWA): An agency of the US Department of Transportation that funds highway planning programs.

Federal Transit Administration (FTA): An agency of the US Department of Transportation that funds transit planning and deployment programs.

Federally Recognized Tribes: Those Native American Tribes recognized by the US Bureau of Indian Affairs for certain federal government purposes.

Fee Title: This is the highest possible form of ownership in real property. It entitles the owner to use the property in any manner consistent with federal, state, and local laws and ordinances.

Free Flow Speed: The average speed of vehicles on a given facility, measured under low-volume conditions, when drivers tend to drive at their desired speed and are not constrained by delay from traffic control devices.

Freeway: A divided arterial highway with full control of access and with grade separations at intersections. A freeway, as defined by statute, is also a highway in respect to which: (1) the owners of abutting lands have no right or easement of access to or from their abutting lands; or (2) such owners have only limited or restricted right or easement of access.

Functional Classification: Guided by federal legislation, refers to a process by which streets and highways are grouped into classes or systems according to the character of the service that is provided (i.e., Principal Arterials, Minor Arterials and Major Collectors).

Gg

General Aviation: General aviation refers to all flights other than military and scheduled airline flights, both private and commercial.

General Plans: A policy plan of acceptable land uses in each jurisdiction. Each city and county adopts and updates their General Plan to guide the growth and land development of their community, for both the current and long term.

Geometric Design: Geometric design is the arrangement of the visible elements of a road such as alignment, grades, sight distances, widths, slopes, etc.

Goods Movement: The general term referring to the goods or produce transported by ship, plane, train, or truck.

Grade: As used in capacity analysis, grade refers to the average change in elevation on the segment under study, expressed as a percentage.

Hh

Highway: Term applies to roads, streets, and parkways, and also includes right-of-way, bridges, railroad crossings, tunnels, drainage structures, signs, guard rails, and protective structures in connection with highways.

Highway Advisory Radio (HAR): An ITS technology that provides valuable information to travelers through prerecorded messages that contain traffic information, road conditions, chain requirements and road closures, etc. Transmission is generally accomplished through low-powered AM broadcast.

Highway Advisory Radio (HAR) Flasher: An ITS technology that signals the traveling public that information is available for a specific route via a nearby transmitting HAR.

Highway Capacity Manual (HCM): Updated in 2000 by the Transportation Research Board of the National Research Council, the HCM presents various methodologies for analyzing the operation (Level of Service) of transportation systems.

Highway Classification: For purposes of capacity analysis, separation of two-lane highways into Class I, II or III. Class I includes major interregional routes, Class II includes smaller links in the system and Class III includes segments of two-lane highway in smaller developed areas or communities.

Ii

Improved LOS: This represents the LOS that will be achieved if identified capacity improvements are completed.

Incident: Any occurrence on a roadway that impedes the normal flow of traffic.

Incident Management: the activities of an organization to identify, analyze, and correct hazards.

Intelligent Transportation Systems (ITS): Use of advanced sensor, computer, and electronic systems to increase the safety and efficiency of the transportation system.

Interchange: A system of interconnecting roadways in conjunction with one or more grade separations providing for the interchange of traffic between two or more roadways on different levels.

Intermodal: The ability to connect, and make connections between modes of transportation.

Interregional Transportation Strategic Plan (ITSP): The ITSP identifies six key objectives for implementing the Interregional Improvement Program and strategies and actions to focus improvements and investments. This document also addresses development of the interregional road system and intercity rail in California, and defines a strategy that extends beyond the 1998 State Transportation Improvement Program (STIP).

Intersection: The general area where two or more roadways join or cross, which include roadside facilities for traffic movements in that area.

Interstate Highway System: The system of highways that connects the principal metropolitan areas, cities, and industrial centers of the United States. The Interstate System also connects the US to internationally significant routes in Mexico and Canada.

Jj

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Land Use: The human modification of natural environment or wilderness into built environment, such as fields, pastures, and settlements.

Lane Width: The arithmetic mean of the lane widths of a roadway in one direction expressed in feet.

Left-Turn Lane: A storage area designated to only accommodate left turning vehicles.

Level-of-Service (LOS): A rating using qualitative measures that characterize operational conditions within a traffic stream.

Local Street or Local Road: A street or road primarily used for access to residences, businesses, or other abutting property.

Mm

Maintained Miles: The length of a facility that is preserved and kept in the safe and usable condition, to which it has been improved.

Maintenance Service Level (MSL): For maintenance purposes, routes within the state highway system are assigned a Maintenance Service Level classification of either Class 1, 2, or 3.

Median: The portion of a divided highway separating the traveled ways for traffic in opposite directions.
Median may be a solid barrier, an unpaved surface, or designated by markings on the highway.

Metropolitan Planning Organization (MPO): By federal provision, the Governor designates this organization by principal elected officials of general-purpose local governments. MPOs are established to create a forum for cooperative decision making. Each MPO represents an urbanized area with a population of over 50,000 people.

Mixed Flow: Traffic movement having automobiles, trucks, buses, and motorcycles sharing traffic lanes.

Mode Choice: Type of transportation: auto, bicycle, bus, pedestrian, rail, etc.

Multimodal: The availability of transportation options using different modes within a system or route.

Nn

National Environmental Policy Act (NEPA): 1969 legislation requiring all federal agencies to prepare an environmental impact statement evaluating proposed federal actions which may significantly affect the environment.

National Scenic Byway (NSB): To be designated as a NSB, a road must possess at least one of the following six intrinsic qualities: archaeological, cultural, historic, natural, recreational, or scenic. The significance of the feature(s) contributing to the distinctive characteristics of the corridor's intrinsic qualities must be recognized throughout the multi-state region.

Non-attainment: Areas with air quality levels that exceed the standard for specific pollutants.

Non-federally Recognized: Native American Tribes not recognized by the US Bureau of Indian Affairs for certain federal government purposes.

Nonmotorized Transportation: Transportation that includes bicycle and pedestrian travel to permit the transport of people.

Oo

Operational Improvements: Improvements addressing deficiencies related to the flow and movement of traffic without expanding design capacity. Some examples include adding auxiliary and truck climbing lanes, ramp metering, and intelligent transportation systems.

Pp

Passing Lane: A lane added to improve passing opportunities in one direction of travel on a two-lane highway.

Peak Hour: The period during which the maximum amount of travel occurs. It may be specified as the morning (a.m.) or afternoon or evening (p.m.) peak.

Peak Hour Factor: The hourly volume during the maximum-volume hour of the day divided by the peak 15-minute flow rate within the peak hour; a measure of traffic demand fluctuation within the peak hour.

Posted Speed: A road speed limit is the maximum speed as allowed by law for road vehicles.

Post Mile (PM): Using miles and counties, the PM system identifies specific and unique locations in the California highway system.

Post Mile Prefix: The post miles are prefixed with an alpha code whenever the location on the route is not an original post mile. Examples of prefixes. R (first realignment, when a section of the road is relocated), L (overlap post mile) and E (post mile equation).

Prescriptive: Type of easement that comes into existence without formal action because of long-term historical use in a route. A prescriptive right cannot be established over land owned by a governmental entity.

Programming: Process of scheduling high-priority projects for development and implementation.

Project Initiation Documents (PIDs): Documents that identify in detail the cost, scope, and schedule of a project and provide the basic information necessary for better understanding the nature of the project. A PID must be completed for any project to be programmed.

Project Report: Report summarizing the feasibility of needs, alternatives, costs, etc., of a proposed transportation project affecting state transportation facilities. Often project reports consist of a Transmittal Letter and a draft environmental document.

Public Participation: The active and meaningful involvement of the public in the development of transportation plans and programs.

Public Transportation: Transportation service to the public on a regular basis using vehicles that transport more than one person for compensation, usually but not exclusively over a set route or routes from one fixed point to another. Routes and schedules may be determined through a cooperative arrangement.

Qq

Queues: A line of vehicles, bicycles, or persons waiting to be served by the system in which the flow rate of the front of the queue determines the average speed within the queue.

Rr

Ramp: A connecting roadway between a freeway or expressway and another highway, road, or roadside area.

Regional Transportation Plan (RTP): State-mandated documents to be developed biennially by all Regional Transportation Planning Agencies (RTPAs). They consist of policy, action, and financial elements.

Regional Transportation Planning Agency (RTPA): Created by AB 69 to prepare regional transportation plans and designated by the Business, Transportation and Housing (BT&H) secretary to receive and allocate transportation funds. RTPAs can be Councils of Government (COGs), Local Transportation Commissions (LTCs), Metropolitan Planning Organizations (MPOs), or statutorily-created agencies.

Rehabilitation: Activities which preserve the quality and structural integrity of a roadway by supplementing normal maintenance activities.

Relinquishment: A transfer of the state's right, title, and interest in and to a highway, or portion thereof, to a city or county.

Resurfacing: A supplemental surface or replacement placed on an existing pavement to restore its riding qualities or increase its strength.

Right-of-Way: Real estate acquired for transportation purposes, which includes the facility itself (highway, fixed guideway, etc.) as well as associated uses (maintenance structures, drainage systems, roadside landscaping, etc.).

Roadbed: That portion of the roadway extending from curb line to curb line or shoulder line to shoulder line. Divided highways are considered to have two roadbeds.

Roadside: A general term denoting the area adjoining the outer edge of the roadbed. Areas between the roadbeds of a divided highway may also be considered roadside.

Roadway: That portion of the highway included between the outside lines of the sidewalks, or curbs and gutters, or side ditches including also the appertaining structures, and all slopes, ditches, channels, waterways, and other features necessary for proper drainage and protection.

Road Weather Information Systems (RWIS): This ITS system collects pavement temperature, visibility, wind speed and direction, and precipitation data and presents the data in a useable format to transportation system operators, potentially for the travelling public.

Roundabouts: A road junction at which traffic streams circularly around a central island.

Route Concept (Facility Concept): General term used to describe the number of lanes and degree of access control on a State Route or Freeway. The term can be used to describe the existing facility or the future facility that will be required to handle projected traffic volumes within adopted level of service standards.

Rural: An area with widely scattered development and a low density of housing and employment.

Ss

Sales Tax Measures: In the California State Constitution and authorizes cities and counties to impose up to one percent additional local sales taxes for transportation if approved by the voters in the local jurisdiction.

Sandhouses: Storage facilities for abrasives and deicers.

Safety Roadside Rest: A roadside area provided for motorists to stop and rest for short periods. It includes paved parking areas, drinking water, toilets, tables, benches, telephones, information panels, and may include other facilities for motorists.

Segment: A portion of highway identified for analysis that is homogenous in nature.

Segment Concept (Existing): This term is applied to specific segments of a facility and describes the existing number of through travel lanes and any special features that may currently exist in the segment (such as auxiliary travel lanes, carpool lanes, access control, etc.). [see also Facility Concept and Segment Concept (20-year)]

Segment Concept (20-Year): This term is applied to specific segments of a facility and describes the number of though travel lanes and any special features that may be needed twenty years in the future in order to maintain the Concept LOS in the segment. [see also Facility Concept and Segment Concept (Existing)]

Separate Turning Lane: An auxiliary lane for traffic in one direction, which has been physically separated from the intersection area by a traffic island.

Shoulder: The portion of the roadway contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

Signalized Intersection: A place where two roadways cross and have a signal controlling traffic movements.

Stakeholder: Individuals and organizations that are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or project completion. They may also exert influence over the project and its results. In transportation, stakeholders include FHWA, CTC, RTPAs, transportation departments, transportation commissions, cities and counties, Native American Tribal Governments, economic development and business interests, resource agencies, transportation interest groups, the public and the Legislature.

State Highway Account (SHA): The State Highway Account is used for the deposit of all money from any source for expenditure for highway purposes including major and minor construction, maintenance, right-of-way acquisition, improvements and equipment, services, investigations, surveys, experiments and reports.

State Implementation Plan (SIP): Plan required by the Federal Clean Air Act of 1970 to attain and maintain national ambient air quality standards.

State Routes: State highways within the State, other than Interstate and US routes, which serve intrastate and interstate travel. These highways can be freeways, expressways or conventional highways.

State Highway Operation and Protection Program (SHOPP): A four-year program limited to projects related to state highway safety and rehabilitation.

State Routes: State highways within the state, other than Interstate and US routes, which serve intrastate and interstate travel. These highways can be freeways, expressways or conventional highways.

State Transportation Improvement Program (STIP): Biennial document, adopted by the California Transportation Commission (CTC), which provides the schedule of projects for development over the upcoming five years.

Tt

TBD: To-be-determined.

Terrain: The surface features of an area of land; topography. In capacity analysis, classification falls into one of three categories: level, rolling, or mountainous. The terms "terrain" and "grade" are not interchangeable (see "Grade").

Level: The land surrounding the highway is level or nearly level. The most typical example of level terrain is a valley.

Rolling: Land in the vicinity of the highway is composed of low hills, dips and rolls, or other types of undulations. Rolling terrain is found in many locations, including the foothills surrounding the Central Valley of California.

Mountainous: Terrain with extensive, steep slopes (often in excess of 6 percent) that may rise sharply on one side of the highway while dropping away rapidly on the other.

Three C Process (3C): "Continuing, cooperative and comprehensive" planning process. Required of metropolitan planning organizations (MPOs) as a condition for receiving federal capital or operation assistance.

Topography: The surface features of the land that a highway passes through (i.e. the topographic features of the surrounding land).

Traffic Conditions: Any characteristics of the traffic stream that may affect capacity or operation, including the percentage composition of the traffic stream by vehicle type and driver characteristics (such as the differences between weekday commutes and recreational drivers).

Traffic Conflicts: Exist wherever two vehicles have the potential of occupying the same space.

Traffic Count Stations: There are three types of traffic count stations on the highway:
Control stations: Counted in one-hour intervals by direction.

Profile counts: Obtained on conventional highways and expressways got one to seven days in order to determine the number of vehicles at points of significant change.

Classification counts: Generally collected at control station sites or at locations or significant truck traffic.

Traffic Lane: The portion of the traveled way for the movement of a single line of vehicles.

Traffic Markings: All lines, words, or symbols (except signs) officially placed within the roadway to regulate, warn, or guide traffic.

Traffic Projections: Estimates of future traffic growth.

Traffic Sign: A device mounted on a fixed or portable support, conveying a message or symbol to regulate, warn, or guide traffic.

Traffic Signal: A power-operated control device by which traffic (including vehicles, pedestrians, and bicycles) is alternately directed to stop and permitted to proceed. A traffic signal assigns the right-of-way to the various traffic movements.

Transit: Generally refers to passenger service provided to the general public along established routes with fixed or variable schedules at published fares. Related terms include: public transit, mass transit, public transportation, urban transit and paratransit.

Transportation Concept Report (TCR): Planning document that identifies current operating conditions, future deficiencies, route concept, concept level of service (LOS) and conceptual improvements for a route or route.

Transportation Demand Management (TDM): "Demand-based" techniques for reducing traffic congestion, such as ridesharing programs and flexible work schedules enabling employees to commute to and from work outside of the peak hours.

Transportation Improvement Program (TIP): Federally required annual schedule of projects for transportation development for the upcoming five years. A project must be in the appropriate regional-Federal TIP to receive Federal or CTC funding.

Transportation Management Center (TMC): A focal point that can monitor traffic and road conditions, as well as train and transit schedules, and airports and shipping advisories. From here, information about accidents, road closures and emergency notification is relayed to travelers.

Transportation Permits: The Department of Transportation has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, weight and loading of vehicles contained in Division 15 of the California Vehicle Code. Requests for such special permits require the completion of an application for a Transportation Permit from the office of Traffic Operations-Transportation Permits. Route Classes for length are labeled yellow, green, blue, brown and red. Route Classes for weight are labeled purple, orange and green. See http://www.dot.ca.gov/hq/traffops/permits/ for more information.

Transportation System Management (TSM): TSM is (1) a process oriented approach to solving transportation issues considering both short and long-term implications, and (2) a services and operations process in which low-cost, environmentally-responsive, and efficiency-maximizing improvements are implemented on existing facilities.

Travel Demand Model: A software tool used to predict future demand for transportation demand and services.

Travel Way: The portion of the roadway for the movement of vehicles, exclusive of shoulders.

Tribal Lands: Lands within a reservation, lands held in trust by BIA, or lands otherwise under the direct ownership of a tribe. Most tribal lands are in trust status and within a reservation, but these lands can also be outside of a reservation.

Truck Climbing Lane: Additional lanes added to improve traffic movement around slow moving vehicles on a grade.

Truck Escape Ramp: A long, gravel filled lane adjacent to the highway that enables vehicles that are having braking problems to safely stop.

Truck Scales: Weigh stations (also called "weigh stations") are where commercial trucks stop to get weighed and inspected.

Two-Way Stop Control: Traffic control at an intersection where the minor approaches are controlled by stop signs but the major street is not.

Typical Section: Depiction of the basic (or typical) design elements/features for an existing or planned facility. Typical sections can be prepared for a variety of facilities, including: highway sections, lane transition areas, medians, interchanges, pavement structural sections, bike paths and drainage systems.

Uu

Unimproved LOS: This represents the unimproved LOS if not capacity projects were undertaken.

Urban: An area typified by high densities of development or concentrations of population, drawing people from several areas of the region.

U.S. Department of Transportation: The principal direct Federal funding agency for transportation facilities and programs. Includes the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Federal Railroad Administration (FRA), and others.

U.S. Route: A network of highways of statewide and national importance. These highways can be freeways, expressways or conventional highways.

Vv

Vehicle Miles Traveled (VMT): Used in trend analysis and forecasts. (1) On highways, a measurement of the total miles traveled in all vehicles in the area for a specific time period. It is calculated by the number of vehicles multiplied by the miles traveled in a given area or on a given highway during the time period. (2) In transit, the number of vehicle miles operated on a given router or line or network during a specific time period.

Vista Point: A paved area beyond the shoulder, which permits travelers to safely exit the highway to stop and view a scenic area. In addition to parking areas, trash receptacles, interpretive displays, and in some cases rest rooms, drinking water and telephones may be provided.

Volume: The number of vehicles passing a given point during a specified period of time.

Ww

Weaving: The crossing of traffic streams, moving in the same general direction, accomplished by merging and diverging.

Weigh Stations: Weigh stations (also called "truck scales") are where commercial trucks stop to get weighed and inspected.

Xx

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Yy

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Zz

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APPENDIX N: RESOURCES

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