

SR-207

JULY 2014



CALTRANS DISTRICT 10

State Route 207

TRANSPORTATION CONCEPT REPORT

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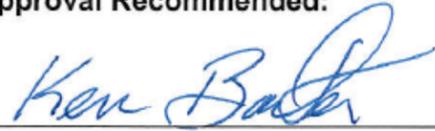
ALPINE COUNTY

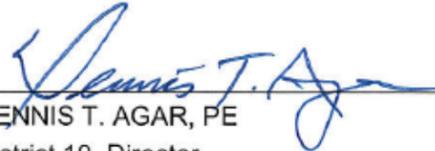
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INTRODUCTION TO THE TRANSPORTATION CONCEPT REPORT

What is a Transportation Concept Report?

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

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

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

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

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

State highways within each local jurisdiction should be recognized and included in the circulation element of the general plan. The jurisdiction should also adopt the concept LOS standard (the minimum level or quality of operations that is appropriate for each route segment and is considered to be reasonably attainable within the 20-year planning period) indicated in the TCR, along with the concept improvements described in the TCR as

necessary to meet the concept LOS. The jurisdiction has the option of adopting a higher LOS standard and acknowledging the inconsistency with the TCR and the associated funding participation limitations by the State for State highway improvements. Typical concept LOS standards in District 10 are LOS 'C' in rural areas and LOS 'D' in urban areas.

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

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

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

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

In the back of the TCR is a glossary of terms and acronyms used for this report.

Concept Improvements

The range of improvements available to achieve a route concept is heavily influenced by environmental, political, and fiscal conditions. In many areas, planned projects are subject to meeting air quality conformity standards.

Unanticipated safety projects and routine roadway maintenance are not included in route concept improvements, although both will occur throughout the corridor as needed.

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

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

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

EXECUTIVE SUMMARY

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

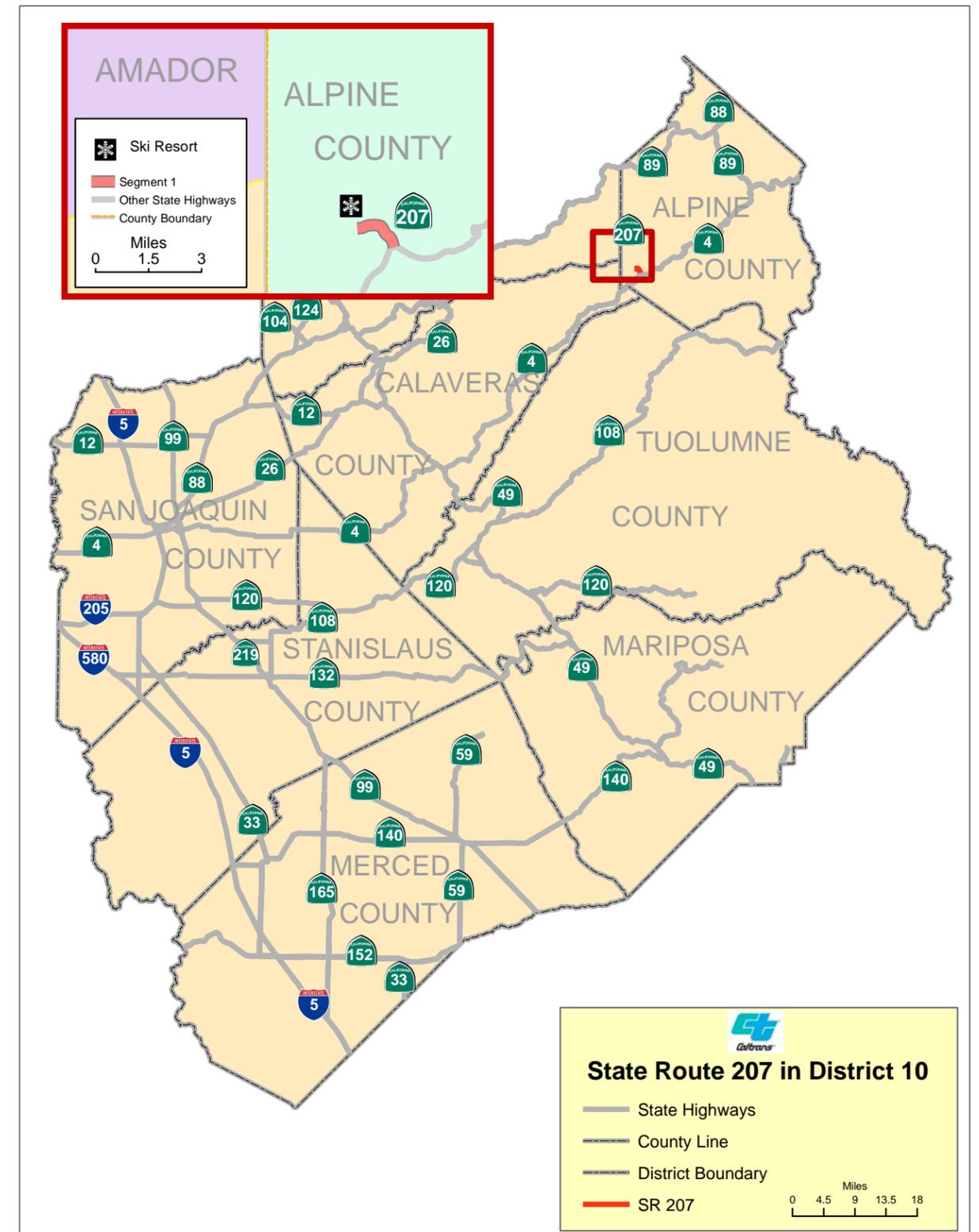
State Route (SR) 207 is on the Interregional Road System (IRRS), but is not a High Emphasis or Focus Route, and the Concept Level of Service standard for facilities with this designation is 'C' for rural and 'D' for urban. SR-207 is included in the freeway and expressway system, requiring the minimum ultimate facility to be expressway.

The Federal Highways Administration (FHWA) has functionally classified SR-207 as a Major Collector that is not on the Federal Highway System and is not a component of Strategic Highway Network (STRAHNET).

SR-207 is a terminal access route consistent with the Surface Transportation Assistance Act's (STAA) provisions from Post Mile (PM) 0.000 to PM 1.360, and is part of a California Legal Truck Network from PM 0.000 to PM 1.360. SR-207 is bicycle and pedestrian accessible, and is not designated or eligible for State or federal scenic highway status.

Current LOS for SR-207 is found to meet District LOS "C" and is expected to remain at a LOS "C" over the next 20 years. Therefore, no improvements to the facility are necessary within the 20-year planning period. This is due to primarily recreational seasonal winter traffic to Bear Valley Ski Area at Mount Reba, as well as the short length of the route that terminates at the ski area parking lot.

Initial planning documents do not consider costs, design, or prioritization, and are subject to refinement and revision as better information or methods become available. The information provided reflects best practices and do not necessarily constitute standards, specifications, or regulations. Every effort has been made by the District 10 Planning Division to ensure the accuracy and precision of the data presented.



ALPINE COUNTY SUMMARY

Of the eight counties that comprise District 10, Alpine County is home to a total of 65 mountain summits and peaks. Alpine County's northern region is a land of contrast, from alpine peaks of the Sierra crest to the sage-covered ranges of the Great Basin. For California, this translates to a place where the landscape is dominated by primary resources controlled by federal or State resource management agencies (96% of the County,) with little private land upon which development can occur.

Alpine County, which has the smallest population in the State, along with its landscape described as high alpine meadows, rugged snow-covered peaks, clear mountain streams, and beautiful forest, presents several challenges in assessing current and future interregional transportation needs. The population, since it is interspersed between Markleeville (County seat) and two ski resorts-Kirkwood and Bear Valley, caters to tourist trade and offers a multitude of summer and winter sports. With little private land to develop, local traffic is low yet recreational opportunities create, at times, heavy seasonal traffic.

SR-207 is a north/south corridor that begins at SR-4 as a two-lane road and heads north to its northern terminus at Mount Reba. The corridor is 1.36 miles long and lies entirely within District 10. It traverses the mountainous entrance to the Bear Valley Ski Resort and ends where it expands in to the Bear Valley parking lot. SR-207 is a 2-lane conventional highway, feeding into several parking lots along the length of the route. Due to its short length, major improvements are not expected at this time. Caltrans' primary expense on SR-207 is for snow removal.

To characterize LOS, two software applications were employed - Highway Capacity Software (HCS 5.4) and the Florida Department of Transportation (FDOT 2010) software (both are packaged together under the McTrans HCS trademark). Typically, the two softwares provide equivalent results and serve as a useful means to assess modeling errors. In the contexts where traffic volumes are low, the LOS results may diverge greatly, but the volume to capacity ratio will remain equivalent. In these contexts, the HCS result was preferred throughout SR-207 in Alpine County because the traffic counts did not meet the threshold for the HIGHPLAN software.

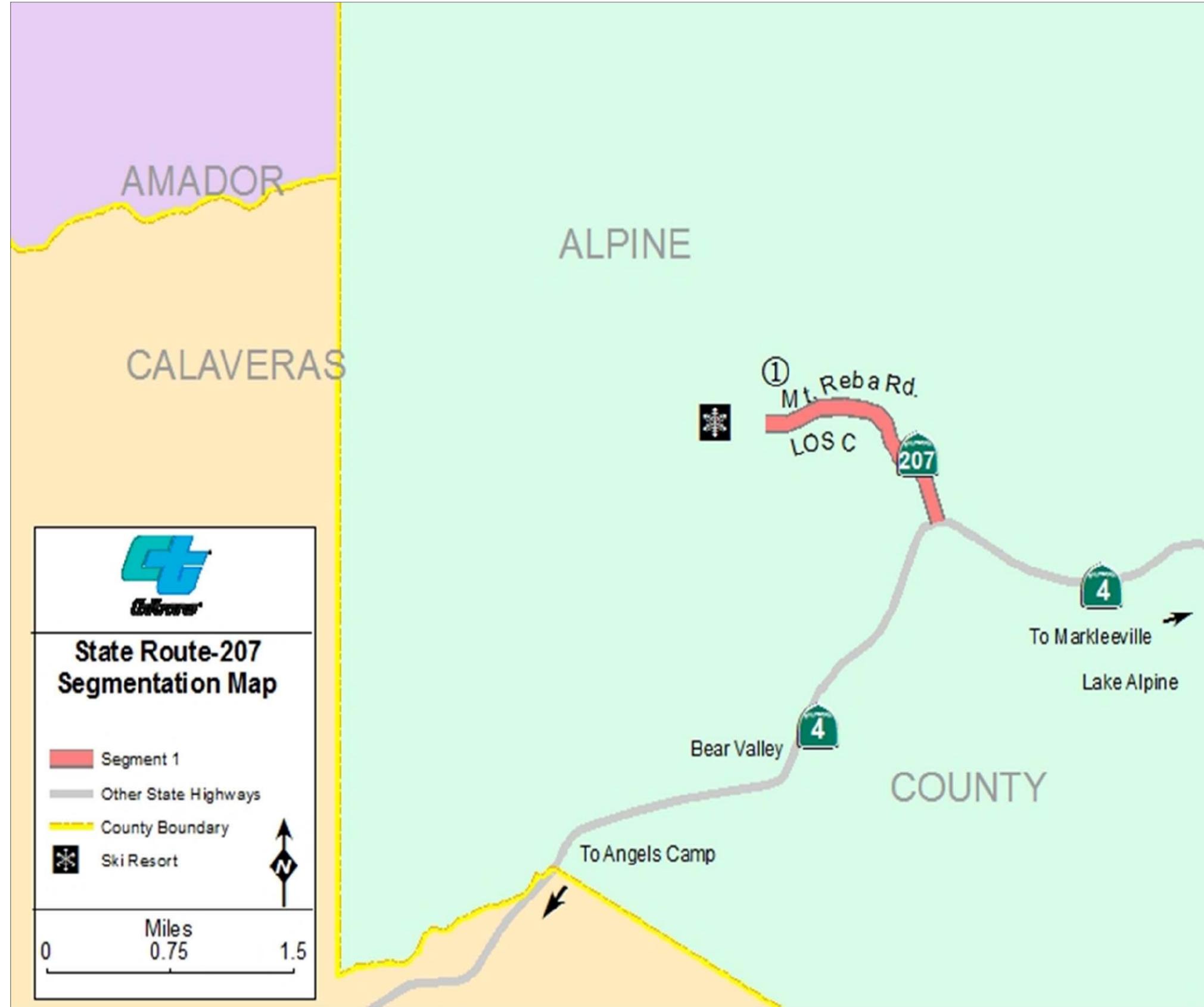
Future forecast volumes were obtained through two linear projections: from past traffic volumes the previous twenty years to present, and extended

twenty years later, and from the Department of Finance's twenty-year population growth projection for Alpine County. The two projections are then compared for consistency, and may result in one projection being dropped, usually because it overestimates or underestimates future growth.

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

Bear Valley Ski Resort provides limited private bus service on SR-207. The purpose of this system is to move customers and employees between the ski lodge, resort cabins, and the ski resort itself.

The Alpine County Local Transportation Commission (ACLTC) Regional Transportation Plan (RTP, 2010) indicates that no financially constrained or programmed projects exist at the time of the final draft of the document. The document embraces a "maintenance emphasis alternative," to, in part, avoid expenditure for capacity increasing highway projects, given current funding uncertainties and a declining population base. The RTP, currently recognizes that systems needs within Alpine may be better addressed on highways in adjoining Calaveras and Amador Counties (as well as with Mono and El Dorado), and indicates future capacity increases within Alpine County would be incompatible with local planning.

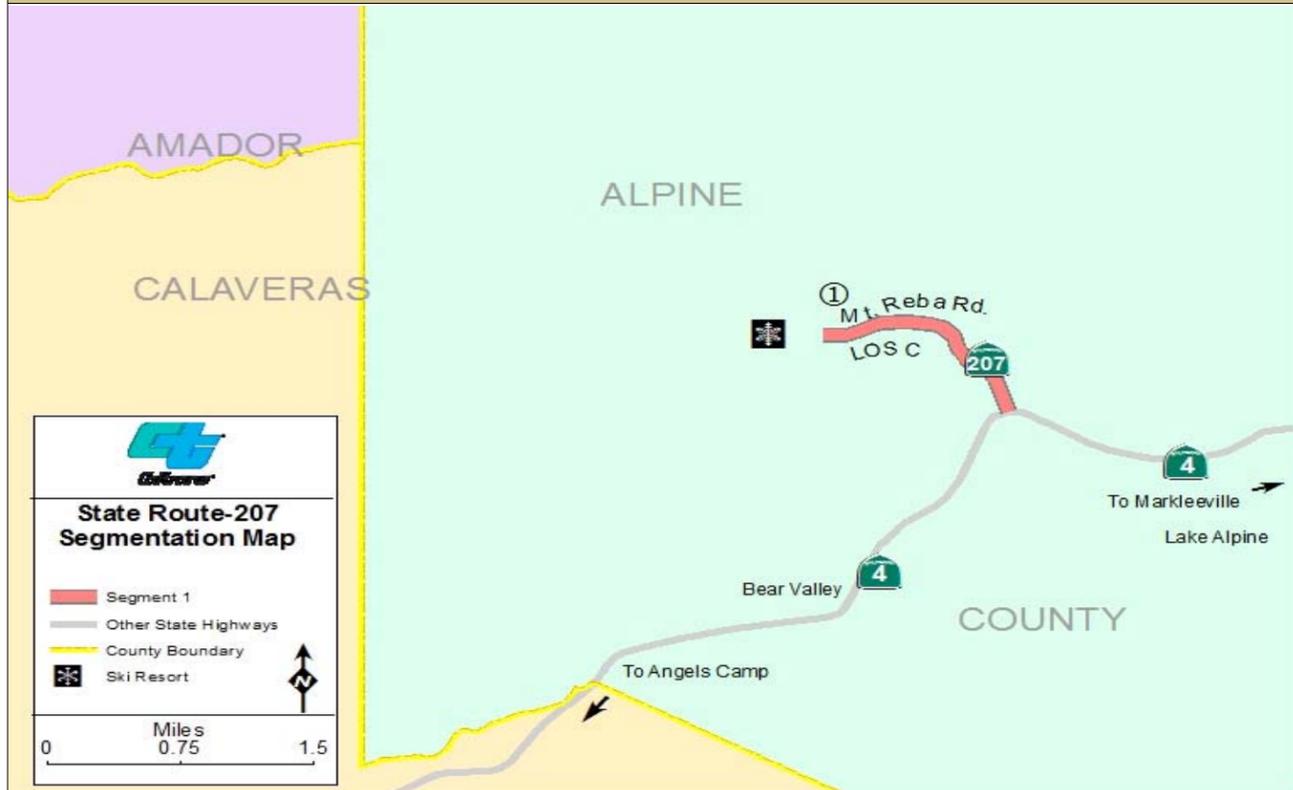


ALPINE COUNTY FACT SHEET-SEGMENT 1

STATE ROUTE 207- TRANSPORTATION CONCEPT REPORT

ALPINE COUNTY

SEGMENT 1



Segment Location:			
Description:	SR4-to Bear Valley Ski Resort		
Post Mile:	0.000-1.360	Rural/Urban/Urbanized:	Rural
Length:	1.360	Within City Limits:	No
Functional Classification:	Major Collector	Local Planning Jurisdiction:	Alpine Cty Local Transportation Commission
		Other Agency/Entity:	Alpine Cty Planning Department
Roadbed Information (approximate)			
Number of Lanes:	Two	Lane Width (ft.):	12 Feet
Terrain:	Mountainous	Right of Way Width (ft.):	160 feet
Grade %:	6+%	Shoulder Width (ft.):	4 feet
Accessible to Bicycles:	Yes	Median Width (ft.):	None
Bridge Needs		Distressed Lane Miles:	000.000
Postmile:	N/A	Present Serviceability Rating:	3
Bridge#:	N/A		
Bridge Name:	N/A		
Route Designations			
Functional Classification:	Major Collector	Scenic Highway (Designated):	No
Facility Type:	Expressway	Scenic Highway (Eligible):	No
Interregional Road System:	Yes	Trucking Network	
High Emphasis Route:	No	National Network, Terminal Access:	Yes
Focus Route/Gateway Route:	No	Surface Transportation Assistance Act (STAA):	Yes
National Highway System:	No	California Legal:	Yes
Freeway Expressway System:	No	Advisory :	No
Strategic Highway Network:	No	Additional Restrictions:	No
Freeway Agreement:	No	Access to Intermodal Freight Facility:	No
Environmental Status			
Degree of Impact		Degree of Impact	
Flood Plains:	Low	Cultural Resources:	Low - Moderate
Wetlands:	Low-Moderate	Leaking Underground Tanks:	Low
Special Status Species:	Low-Moderate	Possible Hazardous Waste:	Low
Air Quality			
Ozone	Particulate Matter 10 m	Particulate Matter 2.5 m	Carbon Monoxide
Unclassified	Attainment	Attainment	Attainment

Travel Forecast Data						
Posted Speed (MPH): 45 MPH Existing Facility: 2-lane Conventional Level of Service: C Volume/Capacity: 0.19 Peak Hour Volume: 300 Average Daily Traffic: 750 Peak Hour Directional Split: 70/30 Truck Volume % of Total ADT: 4.9 Peak Hour % of Trucks: 3.9	2012		2020		2030	
	HCS	LOSPLAN	HCS	LOSPLAN	HCS	LOSPLAN
	C	N/A	C	N/A	C	N/A
	0.19	N/A	0.20	N/A	0.22	N/A
	300		330		360	
750		810		890		
70/30		70/30		70/30		
4.9		4.9		4.9		
3.9		3.9		3.9		

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

Existing Transportation Network							
Bicycle Facility		Airports		Intermodal Commuter Facilities		Intermodal Freight Facilities	
Yes/No	Yes	Yes/No	No	Yes/No	No	Yes/No	No
PM	0.000/1.360	PM		PM		PM	
Location	Route	Location		Location		Location	
Class	III						
LOS	Not assessed						
Pedestrian Facility		Park and Rides		Freight Distribution		Transit Bus	
Yes/No	No	Yes/No	No	Yes/No	No	Yes/No	Yes
PM		PM		PM		PM	0.000/1.360
Location		Location		Location		Location	Route
LOS							

Segment Route Concept	
Concept Level of Service:	C
Concept Facility:	2030 2-lane expressway
Ultimate Transportation Corridor:	2-lane expressway
Comments:	

Planned			Programmed Projects		
Post Mile	Location	Description	Post Mile	Location	Description
001.360	Mt. Reba Ski Resort	TMS			
	There are currently no programmed projects in this segment				

Intelligent Transportation System (ITS) Elements & Detection			
Postmile	ITS Element	Status	Direction
000.000	TMS	Existing	Both

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

Comments

APPENDIX A: GLOSSARY

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

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

Concept Level of Service: see *Level of Service*.

Conventional Highway: Highway which permits direct access by both road intersections and driveways.

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

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

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

Highway Capacity Software (HCS): see Highway Capacity Manual.

High Emphasis Route: see *Highway Capacity Manual*.

Level: see *Terrain*.

Level of Service (LOS): A qualitative performance measure that describes the perception of the commuter (driver, bicyclist, pedestrian, transit) of the operational conditions within a traffic stream on a highway segment. Generally scaled in a range from A through F, and historically as a performance measure for automobiles, the LOS targets optimal utility expressed as the *concept LOS* (C for rural highways on the IRRS, D for urban highways on the IRRS and all routes not on the IRRS). Although the current version of the Highway Capacity Manual includes LOS calculations for users other than drivers, standards have yet to be established by the State.

LOSPLAN: FDOT's LOS software developed as a quality/LOS application. The application employs the 2000 HCM methodologies for automobiles and other leading methodologies for the bicycle, pedestrian, and bus modes to compute quality/LOS for planning and preliminary engineering. The software includes ARTPLAN, FREEPLAN, and HIGHPLAN options for multi-model analysis of arterials, freeways and two-lane highways.

Mountainous: see *Terrain*.

Rolling: see *Terrain*.

Rural: see *Census Designation*.

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

Terrain: Refers to topography specific to its affect on trucks and other heavy vehicle operation (see HCM). Level terrain contains any combination of grades or horizontal or vertical alignments that permit heavy vehicles to maintain the same speed as passenger cars; rolling terrain contains any combination of grades or horizontal or vertical alignments that causes heavy vehicles to reduce their speed substantially below that of passenger car speeds, but not to where they crawl for a significant length of time; mountainous terrain is any combination of grades or horizontal or vertical alignment that causes heavy vehicles to operate at crawl speed for significant distances or at frequent intervals. HCM methodologies address highway segments with level or rolling terrain with a set of constant values. Mountainous terrain requires separate upgrade or downgrade analysis, and recommends that any segment with grades between 2% and 3% with a length of more than half a mile be considered a separate segment.

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

APPENDIX B: ACRONYMS

AADT	Annual Average Daily Traffic			PG&E	Pacific Gas and Electric Company
ACLTC	Alpine County Local Transportation Commission	HAR	Highway Advisory Radio	PHV	Peak Hour Volume
ADT	Average Daily Traffic	HCM	Highway Capacity Manual	PM-2.5	2.5 Micron Diameter Particulate Matter (diesel exhaust)
		HCS	Highway Capacity Software	PM	Post Mile
CAWS	Caltrans Automated Warning System			PM-10	10 Micron Diameter Particulate Matter (dust)
CCTV	Closed Circuit Television	I/C	Interchange	PR	Project Report
CEQA	California Environmental Quality Act	IIP	Interregional Improvement Program	PSR	Project Study Report
CFR	Code of Federal Regulations	IRRS	Interregional Road System		
CHIN	California Highway Information Network	ISTEA	Intermodal Surface Transportation Efficiency Act	RAS	Regional Arterial System
CHP	California Highway Patrol	IT	Information Technology	RIP	Regional Improvement Plan
CIP	Congestion Improvement Program	ITMS	Intermodal Transportation Management System	ROW	Right-of-Way
CMAQ	Congestion Mitigation and Air Quality	ITS	Intelligent Transportation Systems	RT	Regional Transit
CMIA	Corridor Mobility Improvement Account	ITSP	Interregional Transportation Strategic Plan	RTE	Route
CMP	Congestion Management Plan			RTIP	Regional Transportation Improvement Plan
CMS	Changeable Message Sign	JCT	Junction	RTIF	Regional Transportation Impact Fee
CO	Carbon Monoxide			RTP	Regional Transportation Plan
CSMP	Corridor System Management Plan	LOS	Level of Service	RTPA	Regional Transportation Planning Agency
CSS	Context Sensitive Solutions			R/W	Right of Way
CTC	California Transportation Commission	MIS	Major Investment Study	RWIS	Roadside Weather Information System
		MOU	Memorandum of Understanding		
DSMP	District System Management Plan	MSL	Maintenance Service Level	SAFETEA-LU	Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users
				SB	Southbound
EB	Eastbound	NAAQS	National Ambient Air Quality Standards	SHOPP	State Highway Operations Protection Program
E/O	East Of	NB	Northbound	SIP	State Implementation Plan
EPA	Environmental Protection Agency	NEPA	National Environmental Policy Act	S/O	South of
ESA	Environmental Sensitive Area	NHS	National Highway System	SOP	Status of Projects
EXPW	Expressway	N/O	North Of	SOV	Single Occupancy Vehicle
		NTN	National Truck Network	SR	State Route
F&E	Freeway and Expressway System			STAA	Surface Transportation Assistance Act
FAT	Fatalities	OWP	Overall Work Program	STIP	State Transportation Improvement Program
FDOT	Florida Department of Transportation			STRAHNET	Strategic Highway Network
FEMA	Federal Emergency Management Administration	PA&ED	Project Approval and Environmental Document (phase)		
FHS	Federal Highway System	PCS	Pavement Condition Survey		
FHWA	Federal Highway Administration	PeMS	Performance Measurement System (Detection)		
FY	Fiscal Year				

APPENDIX B: ACRONYMS [CONTINUED]

TA	Terminal Access
TASAS	Traffic Accident Surveillance and Analysis System
TBD	To Be Determined
TCM	Transportation Control Measure
TCR	Transportation Concept Report
TDM	Travel Demand Model
TEA-21	Transportation Equity Act of the 21st Century
TOS	Traffic Operations System
TPA	Transportation Planning Agency
TSDP	Transportation System Development Plan
TSM	Transportation System Management
UAPCD	Unified Air Pollution Control Districts
UTC	Ultimate Transportation Corridor
V/C	Volume to Capacity
VMT	Vehicle Miles Traveled
WB	Westbound

