



# COMMUNITY DEVELOPMENT AGENCY

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## EXECUTIVE SUMMARY

### DRAFT TRAVEL DEMAND MODEL RESULTS for use in the FIVE-YEAR UPDATE OF THE CAPITAL IMPROVEMENT PROGRAM

The **draft** results of the initial run using the new Travel Demand Model (TDM) are included as Attachment A of this Executive Summary. The 2010 Baseline used for the model was generated by using land use information from the County GIS database and traffic count data collected by the Community Development Agency's Transportation Division. Future growth was forecasted through 2035, based on an approximately one (1) percent annual growth rate that follows historical trends for growth and where the growth occurs. These projections and resulting analysis can change depending on the Board of Supervisors (Board) direction regarding the forecast projections in growth and where it occurs throughout the County's West Slope.

The draft TDM comparison spreadsheet, Attachment A, lists the roadways that were analyzed for the Traffic Impact Mitigation (TIM) Fee Update in 2005. Refer to the [El Dorado County Traffic Impact Mitigation Fee Update 2005](#), Dowling Associates, Inc., February 14, 2006.

The roads are described using the following characteristics:

- Functional Classification: The Functional Classification refers to the type of roadway, as defined in Table 1.
- Level of Service (LOS): The maximum LOS in El Dorado County is defined by General Plan Policy TC-Xd. The Year 2025 is included to provide an "apples to apples" comparison to the old traffic model.

LOS was calculated based on the *Highway Capacity Manual 2000*, but will be also analyzed using the *Highway Capacity Manual 2010*, in compliance with General Plan Policy TC-Xd.

Per General Plan Policy TC-Xa, LOS is calculated for the weekday, PM peak hour. Weekend tourism or weekend agricultural land use traffic is not analyzed or considered in the Capital Improvement Program (CIP) or TIM Fee program.

***These draft volumes are dynamic and are subject to change.***

## **Purpose**

El Dorado County's goal is to have a travel demand model that will help guide the County through the next twenty years of development. Having an up to date model is essential for updating the TIM Fee Program, the County's General Plan, Zoning Code and Housing Element, as well as assisting the planning of new roadways for the CIP. This model is also important for Caltrans in studying traffic impacts of new development projects on State highways. The new traffic model will be used not only by the County but also by private companies and public agencies. The County intends to keep the model current, updating it as needed to incorporate new information.

## **Background**

On December 19, 2011, County staff presented a TDM Needs Assessment to the Board. This assessment highlighted areas where the existing model could be improved. On January 24, 2012, the Board authorized the update of the TDM through a contract with Kimley-Horn and Associates, Inc. (KHA).

The Board, public, and other stakeholders were encouraged to participate in the TDM update through various workshops, presentations, meetings and communications throughout 2012 and early 2013, including but not limited to:

- [April 16, 2012](#): KHA presentation to the Board on the Draft Land Use Assumptions for the TDM, as the first component of the TDM update.
- [May 1, 2012](#): The Board approved the assumptions for determining the projections for a new 2035 planning horizon.
- [June 26, 2012](#): The Board was presented with Technical Memorandum #3: Revised Roadway Network and Technical Memorandum #4: TAZ (Traffic Analysis Zone) Development and Considerations for review and comment.
- June 27, 2012: A workshop was held for the TIM Fee Working Group (TFWG) and the Engineering Subcommittee of the Economic Development and Advisory Committee (EDAC). They were supplied with Technical Memorandums #3 and #4 for review and comment on June 14, 2012.
- June 28, 2012: A public informational workshop on the TDM was held in the Planning Commission hearing room. The [Power Point presentations](#) from the workshops are posted on the Land Use Policy Programmatic Update (LUPPU) website.
- July 5, 2012: Technical Memorandums #3 and #4 were provided to the El Dorado County Transportation Commission (EDCTC), Caltrans, and the Sacramento Area Council of Governments (SACOG) for review and comment.
- [July 24, 2012](#): A presentation was provided to the Board on the progress of the TDM update.
- August 29, 2012: A TDM meeting was held with Caltrans modeling staff and EDCTC staff.
- [September 25, 2012](#): The Board received a presentation regarding the roadway parameters for the TDM.

- December 17, 2012: A TDM update meeting was held with SACOG modeling staff, Caltrans modeling staff, and EDCTC Executive Director.
- [March 25, 2013](#): the Board received a presentation on the status of the TDM.
- May 9, 2013: the Planning Commission received a presentation on the status of the TDM.
- June 5, 2013: KHA provided a presentation on the TDM validation/calibration to SACOG modeling staff, Caltrans modeling staff and EDCTC staff.
- [July 30, 2013](#): The Board gave staff direction to use the historical growth land use forecast scenario prepared [by BAE Urban Economics, Inc. \(BAE\)](#) as a first scenario.
- [Throughout 2012 and 2013](#), staff provided monthly Land Use Policy Programmatic Update (LUPPU) updates to the Board and public that provided details about progress made on the TDM.

As a result of this outreach and coordination, the draft baseline TDM is now complete, and staff can begin providing draft results for public review. Staff can also begin the initial process for the Five-Year CIP update. Analysis of the Five-Year CIP may change if the Board directs staff to modify the 20-Year forecast.

#### **DRAFT TDM Results:**

The initial draft model results are provided as Attachment A. This spreadsheet contains the following information:

- PM peak hour counts for the baseline 2010 year
- Year 2025 projections from the old traffic model
- Year 2025 projections from the new TDM
- Year 2035 projections from the new TDM

The Year 2025 projections from the new TDM are included as a comparison to the Year 2025 projections from the old model. ***NOTE: All draft projections contained in Attachment A are dynamic and will likely change as the model is further refined and/or different growth forecast scenarios are assumed.***

In order to evaluate the draft results, the following steps have to be completed and are described below:

1. Gather further traffic count information
2. Determine roadway classification
3. Calculate LOS
4. Analyze results using the required iterative process

## **1. Traffic Count Information Gathering**

El Dorado County began collecting average daily traffic on County roadways in the 1980's. The count information for the last ten years can be found on the County website, Department of Transportation page, ["Traffic Counts"](#) tab. Count information is available in three formats: Hourly Traffic Count Reports, Annual Traffic Count Summary, and Five Year Traffic Count Summary. The baseline 2010 TDM results are compared to the actual 2010 counts that are collected by County staff for County roads, to ensure the model is close to replicating what's on the ground. U.S. 50, State Route 49 and State Route 193 counts were obtained from the Caltrans website and Caltrans staff.

Please note that the 2010 weekday PM peak hour counts listed in Attachment A are the sum of the directional counts for the same hour. For example: Bass Lake Road, 400 yards north of Country Club Drive, has a northbound count and a southbound count. The 2010 northbound PM peak hour, 5:00 to 6:00 PM volume of 585 cars, must be added to the 2010 southbound PM peak hour, 5:00 to 6:00 PM volume of 290 cars, to obtain the 875 count reflected in the spreadsheet for Bass Lake Road from Country Club Drive to Bass Lake. The count location is within the limits of the segment listed.

Note: The schedule of the count locations will soon be added to the [TDM website](#).

## **2. Determine Roadway Classification**

Each major roadway or highway can be described with a functional classification. The functional classification describes how the road is used to accommodate travel, i.e. commuter traffic routes, intercommunity connections, access to state routes, etc. The functional classifications noted in the spreadsheet are as defined in the [El Dorado County Traffic Impact Mitigation Fee Update 2005, Dowling Associates, Inc.](#), February 14, 2006 (Table 1).

Table 1: Functional Classifications

CODE	DESCRIPTION
2R	Minor 2-lane Highway (24' wide pavement)
2U	Major 2-lane Highway
4M	4-lane, Multilane Highway
2A	2-lane Arterial Highway (Right of way width of 60', 2 - 12' lanes, 8' shoulders)
4AU	4-lane Arterial, Undivided (Right of way width of 80', 4 - 12' lanes, 8' shoulders)
4AD	4-lane Arterial, Divided (Right of way width of 100', 2 - 14' lanes, 2 - 12' lanes, 16' median, 8' shoulders)

6A	6-lane Arterial, Divided (Right of way width of 130', 4 - 12' lanes, 2 - 14' lanes, 16' median, 8' shoulders)
2F	2-lane Freeway (one direction)
2FA	2-lane Freeway + Auxiliary lane (one direction)
3F	3-lane Freeway (one direction)
3FA	3-lane Freeway + Auxiliary lane (one direction)
4F	4-lane Freeway (one direction)
W22	Minor 2-lane Roadway (22' wide pavement)
W20	Minor 2-lane Roadway (20' wide pavement)
W18	Minor 2-lane Roadway (18' wide pavement)

### **3. Level of Service (LOS)**

***Level of Service is a general measure of traffic operating conditions of a roadway where a letter, from A (best) to F (over capacity) is calculated and assigned.***

General Plan Policy TC-Xa (1) measures LOS for the weekday peak hour (Monday through Friday). The General Plan emphasizes the weekday analysis and does not consider the impacts of traffic resulting from weekend tourism or weekend agricultural uses (e.g. wineries, Apple Hill, etc.).

General Plan Policy TC-Xd states that the LOS will be as defined in the latest edition of the Highway Capacity Manual (Transportation Research Board, National Research Council), and calculated using the methodologies contained in that manual. At the time of the 2004 General Plan, the *Highway Capacity Manual 2000* (HCM2000) was used to determine LOS (the volumes used to determine the LOS are included in the attached spreadsheet.)

The revised draft TDM LOS was calculated using the HCM2000 for direct comparison purposes. However, the *Highway Capacity Manual 2010* (HCM2010), Transportation Research Board, December 2010, has been published, and the methodologies for determining LOS may have changed. Additional columns have been added to the table, which will be populated with the LOS using the HCM2010 methodologies, as required by General Plan Policy TC-XA.

The changes between the HCM2000 and the HCM2010 (**Methodological Changes by System Element**) are listed in Chapter 1 of the HCM2010. The system elements that can apply to El Dorado County roads are:

- *Multilane Highways:* The multilane highways automobile methodology is essentially the same as that given in the HCM2000. A methodology for calculating bicycle LOS for multilane highways has been added.
- *Two-Lane Highways:* The following revisions have been made to the HCM2000 methodologies:
  - The two-directional analysis has been dropped. The one-direction methodology is the only one used, with two-direction results obtained by appropriate weighted averaging of the one-direction results.
  - Several key curves and tables used in one-direction analyses have been adjusted and incorporated into the chapter.
  - A bicycle LOS methodology for two-lane highways has been added.
- *Signalized Intersection:* The following revisions have been made to the HCM2000 methodology:
  - A new incremental queue accumulation method has been added to calculate the  $d_1$  delay term and the  $Q_1$  length term. It is equivalent to the HCM2000 method for idealized case, but is more flexible to accommodate non-ideal cases, including coordinated arrivals and multiple green periods with differing saturation flow rates (i.e., protected-plus-permitted left turns and sneakers).
  - An actuated controller operation modeling procedure has been added.
  - A left-turn lane overflow check procedure has been added.
  - Pedestrian and bicycle LOS methodologies relating to signalized intersections have been moved into this chapter.
- *Unsignalized Intersections:* The HCM2000's Unsignalized Intersections chapter has been split into three chapters: two-way STOP-controlled intersections, all-way STOP-controlled intersections, and roundabouts.

**Two-Way Stop-Controlled Intersections:** The two-way STOP- controlled intersection methodology for the automobile mode is essentially the same as the one given in the HCM2000, except gap-acceptance parameters for six-lane streets have been added. In addition, pedestrian and bicycle LOS methodologies relating to two-way STOP-controlled intersections have been moved into this chapter.

**All-Way STOP-Controlled Intersections:** The all-way STO-controlled intersection methodology is essentially the same as the one given in the HCM2000. A queue-estimation model has been added.

**Roundabouts:** This chapter replaces the HCM2000 roundabout content. It is based on the work of the NCHRP 3-65 project, which developed a comprehensive database of U.S. roundabout operations and new

methodologies for evaluating roundabout performance. A LOS table for roundabouts has been added.

- The **Urban Street Facilities** is a new chapter and may apply to certain roads in El Dorado County as well as the rewritten **Urban Street Segments** chapter.

The U.S. 50 LOS reported in the attached spreadsheet has more segments than are reported in the Caltrans' *Transportation Corridor Concept Report United States Highway 50*, June 2010 (Attachment C). This Caltrans report does not reflect the High Occupancy Vehicle lanes on U.S. 50, as they were opened after this report was generated. It should be noted that this report does not reflect HCM2010 methodologies.

#### **4. Iterative Process**

The results in Attachment A are the first **draft** of the projections based on the historical trend forecasts. Additional iterations of the forecast assumptions may be analyzed based on direction by the Board. Each iteration will result in a new generation of a Capital Improvement list, from a planning level analysis, which will be needed to accommodate the level of development proposed in the forecasts.

Additionally, the TDM is a regional, County-wide **macro** level model. It is acknowledged that due to the newness of the TDM, there is a potential to identify road segments that may need additional modeling. This process is covered under the model disclaimer that potential users must sign in order to have access to the TDM files (Attachment B). One such area is the Missouri Flat Road corridor. County staff is working with Caltrans modeling staff, SACOG modeling staff and El Dorado County Transportation Commission's (EDCTC) traffic consultants to resolve any discrepancies.

Attachments:

Attachment A: Draft TDM comparison table

Attachment B: Model Disclaimer

Attachment C: Caltrans' *Transportation Corridor Concept Report United States Highway 50*, June 2010

Links:

[Kimley-Horn and Associates, Inc. Draft Technical Memorandums #1 and #6](#)  
[Kimley-Horn and Associates, Inc. Draft Technical Memorandums #2 and #7](#)  
[Kimley-Horn and Associates, Inc. Draft Technical Memorandum #3](#)  
[Kimley-Horn and Associates, Inc. Draft Technical Memorandum #4](#)  
[Kimley-Horn and Associates, Inc. Draft Technical Memorandum #5](#)  
[Kimley-Horn and Associates, Inc. Draft Technical Memorandum #8](#)



Approved by EDC on 8-1-13

Draft



						2004GP MODEL Assumes 3% Annual Growth		2013GP MODEL Assumes 1% Annual Growth							
		Existing	General Plan	Year 2010	Year 2010	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025
		Functional Class	Max LOS	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR
ROAD NAME	SEGMENT	(2010)		COUNT	LOS	2004GP Model	LOS (Using HCM2000)	2013GP Model Volume	LOS (Using HCM2000)	2013 GP Model Directional Volume	LOS (Using HCM2010)	2013GP Model Volume	LOS (Using HCM2000)	2013 GP Model Directional Volume	LOS (Using HCM2010)
CAMBRIDGE ROAD															
	1. US 50 EB ramps to Country Club Dr	2A	E	856	C	1,245	2A/D	1,000	2A/D			1,000	2A/D		
	2. Country Club Dr to Oxford Rd	2A	F	735	C	1,092	2A/D	920	2A/C			1,100	2A/D		
	3. Oxford Rd to Green Valley Rd	2U	E	414	C	580	2U/C	540	2U/C			600	2U/C		
CAMERON PARK DRIVE															
	1. Durock Rd to Coach Ln	4AU	F	823	C	2,558	4AU/D	1,100	4AU/C			1,200	4AU/C		
	2. Coach Ln to Palmer Dr	4AU	E	2099	D	3,314	4AU/F	2,600	4AU/D			2,890	4AU/E		
	3. Palmer Dr to Oxford Rd	2A	E	1402	D	2,930	2A/F	1,900	2A/F			2,000	2A/F		
	4. Oxford Rd to Green Valley Rd	2U	E	805	D	1,071	2U/D	950	2U/D			1,000	2U/D		
CARSON ROAD															
	1. Placerville City Limits to Union Ridge Rd	2R	D	173	B	403	2R/C	210	2R/C			270	2R/C		
	2. Union Ridge Rd to US 50	2R	D	135	B	303	2R/C	190	2R/B			220	2R/C		
	3. US 50 to Barkley Rd	2R	D	281	C	535	2R/C	310	2R/C			340	2R/C		
	4. Barkley Rd to Pony Express Tr	2R	E	220	C	309	2R/C	270	2R/C			1,000	2R/D		
CEDAR RAVINE ROAD															
	1. Pleasant Valley Rd to Quarry Rd	W20	D	168	C	185	W20/C	300	W20/C			390	W20/C		
	2. Quarry Rd to Placerville City Limits	2R	D	218	C	335	2R/C	340	2R/C			380	2R/C		
COLD SPRINGS ROAD															
	1. Placerville City Limits to Cool Water Cr	2R	E	304	C	757	2R/D	500	2R/C			570	2R/C		
	2. Cool Water Cr to Gold Hill Rd	2R	D	479	C	466	2R/C	850	2R/D			970	2R/D		
	3. Gold Hill Rd to SR 49	W22	D	180	B	250	W22/C	290	W22/C			330	W22/C		
COUNTRY CLUB DRIVE															
	1. Bass Lake Rd to Merrychase Dr	2R	D	347	C	838	2R/D	550	2R/C			700	2R/D		
	2. Merrychase Dr to Cambridge Rd	2R	E	244	C	674	2R/C	520	2R/C			660	2R/C		
	3. Cambridge Rd to Royal Dr (W)	2R	E	269	C	967	2R/D	300	2R/C			410	2R/C		
	4. Royal Dr (W) to Cameron Park Dr	2R	E	366	C	596	2R/C	440	2R/C			500	2R/C		
COUNTRY CLUB DRIVE EXTENSION															
	1. Silva Valley Pkwy to Bass Lake Rd	N/A	D	N/A	N/A	799	2A/C	400	2A/C			730	2A/C		
DUROCK ROAD															
	1. Cameron Park Dr to Heinz Rd	2U	E	579	C	1,417	2U/D	690	2U/C			740	2U/C		
	2. Hines Rd to S Shingle Rd	2U	E	557	C	1,294	2U/D	630	2U/C			670	2U/C		
EL DORADO HILLS BLVD															
	1. US 50 to Lassen Ln	6AD	E	2580	C	4,724	6AD/D	3,200	6AD/D			3,560	6AD/D		
	2. Lassen Ln to Olson Ln	4AD	E	1801	C	1,770	4AD/C	2,400	4AD/D			2,600	4AD/D		
	3. Olson Ln to St Andrews Dr	4AD	E	1543	C	1,252	4AD/C	2,000	4AD/D			2,000	4AD/D		
	4. St Andrews Dr to Francisco Dr	2A	E	1317	D	1,171	2A/D	1,500	2A/D			1,600	2A/D		
	5. Francisco Dr to Green Valley Rd	2A	E	439	C	446	2A/C	590	2A/C			650	2A/C		
EL DORADO ROAD															
	1. Pleasant Valley Rd to Mother Lode Dr	W22	E	252	C	506	W22/C	410	W22/C			460	W22/C		
	2. Mother Lode Dr to US 50	W22	E	500	C	732	W22/D	730	W22/D			810	W22/D		
	4. US 50 to Missouri Flat Rd	W22	E	205	C	577	W22/D	420	W22/C			470	W22/C		
	5. Missouri Flat Rd to Green Valley Rd	W22	E	250	C	518	W22/C	470	W22/C			500	W22/C		
FAIRPLAY ROAD															
	1. Mt Aukum to Omo Ranch Rd	W20	D	170	C	186	W20/C	200	W20/C			220	W20/C		
FORNI ROAD															
	1. SR49 to Enterprise Dr	2R	E	334	C	385	2R/C	280	2R/C			550	2R/C		
	2. Enterprise Dr to Missouri Flat Rd	2R	E	815	D	639	2R/C	810	2R/D			830	2R/D		
	3. Missouri Flat Rd to Wamego Rd	2R	E	150	B	554	2R/C	280	2R/C			280	2R/C		
	4. Wamego Rd to Placerville City Limits	W20	D	122	B	554	W20/D	590	W20/D			720	W20/D		
FRANCISCO DRIVE															
	1. EDH Blvd to Green Valley Rd	2A	E	1132	D	811	2A/C	1,100	2A/D			1,200	2A/D		
GARDEN VALLEY ROAD															
	1. SR 193 to Marshall Rd	W20	D	120	B	166	W20/C	130	W20/B			140	W20/B		
GOLD HILL ROAD															
	1. Lotus Rd to Cold Springs Rd	W22	D	185	B	205	W22/C	310	W22/C			340	W22/C		
	2. Cold Springs Rd to SR 49	W22	D	43	A	24	W22/A	80	W22/A			90	W22/B		
GREEN VALLEY ROAD															
	1. County Line to Francisco Dr	2U Section	E	2321	F	2,543	F	2,300	F			2,400	F		
		4AD Section			D		4AD/D		4AD/D				4AD/D		



						2004GP MODEL Assumes 3% Annual Growth		2013GP MODEL Assumes 1% Annual Growth							
ROAD NAME	SEGMENT	Existing	General Plan	Year 2010	Year 2010	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2035	Year 2035	Year 2035	Year 2035
		Functional Class (2010)	Max LOS	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR
		2010	2010	COUNT	LOS	2004GP Model	LOS (Using HCM2000)	2013GP Model Volume	LOS (Using HCM2000)	2013 GP Model Directional Volume	LOS (Using HCM2010)	2013GP Model Volume	LOS (Using HCM2000)	2013 GP Model Directional Volume	LOS (Using HCM2010)
GREEN VALLEY ROAD	2. Francisco Dr to Salmon Falls Rd	4AD Section	E	1441	C	1,914	4AD/C	1,500	4AD/C			1,700	4AD/C		
		2U Section			D		2U/E		2U/D				2U/E		
	3. Salmon Falls Rd to Deer Valley Rd (W)	2U	E	1150	D	2,147	2U/F	1,400	2U/D			1,600	2U/D		
	4. Deer Valley Rd (W) to Bass Lake Rd	2U	D	880	D	1,002	2U/D	950	2U/D			1,000	2U/D		
	5. Bass Lake Rd to Cameron Park Dr	2U	E	953	D	1,369	2U/D	1,400	2U/D			1,500	2U/D		
	6. Cameron Park Dr to Deer Valley Rd (E)	W22	E	528	C	801	W22/D	670	W22/D			740	W22/D		
	7. Deer Valley Rd (E) to Lotus Rd	W18	D	652	D	1,274	W18/F	830	W18/D			910	W18/D		
	8. Lotus Rd to Greenstone Rd	W20	D	354	C	825	W20/D	560	W20/D			610	W20/D		
	9. Greenstone Rd to Missouri Flat Rd	W20	D	565	D	847	W20/D	880	W20/D			970	W20/D		
	10. Missouri Flat Rd to Placerville City Limits	W18	D	277	C	871	W18/D	480	W18/D			510	W18/D		
GREENSTONE ROAD															
	1. Mother Lode Dr to US 50	W18	D	118	B	484	W18/D	170	W18/C			200	W18/C		
	2. US 50 to Green Valley Rd	2R	D	219	C	262	2R/C	270	2R/C			280	2R/C		
LATROBE ROAD															
	1. County Line to S Shingle Rd	2U	D	298	C	439	2U/C	260	2U/B			320	2U/C		
	2. S Shingle Rd to Wetsel Oviatt	2R	D	310	C	446	2R/C	280	2R/C			350	2R/C		
	3. Wetsel Oviatt to Investment Blvd	2U	D	418	C	943	2U/D	410	2U/C			500	2U/C		
	4. Investment Blvd to Carson Creek	2U	D	712	C	3,149	2U/F	700	2U/C			850	2U/D		
	5. Carson Creek to White Rock Rd	4AD	E	1725	C	5,199	4AD/F	1,300	4AD/C			1,400	4AD/C		
LOTUS ROAD	6. White Rock Rd to US 50	6AD	E	2116	C	5,307	6AD/D	2,200	6AD/C			2,300	6AD/C		
MARSHALL ROAD	1. Green Valley Rd to Springvale Rd	2U	D	571	C	891	2U/D	860	2U/D			1,000	2U/D		
	2. Springvale Rd to Thompson Hill Rd	2U	D	430	C	484	2U/C	410	2U/C			490	2U/C		
	3. Thompson Hill Rd to SR 49	2R	D	461	C	509	2R/C	570	2R/C			680	2R/C		
MARSHALL ROAD															
	1. SR 49 to Mt Murphy Rd	2R	D	301	C	327	2R/C	340	2R/C			400	2R/C		
MEDER ROAD	2. Mt Murphy Rd to Black Oak Mine Rd	2R	D	380	C	283	2R/C	490	2R/C			550	2R/C		
MEDER ROAD	1. Cameron Park Dr to Rosebud Dr	W22	E	581	C	645	W22/D	808	W22/D			1,200	W22/D		
	2. Rosebud Dr to Ponderosa Rd	W22	E	506	C	486	W22/C	620	W22/D			770	W22/D		
MISSOURI FLAT ROAD															
	1. Green Valley Rd to El Dorado Rd	2U	E	652	C	815	2U/D	730	2U/C			880	2U/D		
	2. El Dorado Rd to Headington Rd	2U	E	837	D	1,191	2U/D	1,000	2U/D			1,200	2U/D		
	3. Headington Rd to US 50	2A Section	E	654	C	2,343	2A/F	830	2A/C			930	2A/C		
		4AD Section			B		4AD/D		4AD/B				4AD/B		
	4. US 50 to Mother Lode Dr	4AD	F	2651	D	3,450	4AD/D	1,900	4AD/C			2,100	4AD/D		
MISSOURI FLAT ROAD CONNECTOR	5. Mother Lode Dr to China Garden Rd	4AU	F	1835	D	3,284	4AU/F	2,300	4AU/E			2,600	4AU/D		
	6. China Garden Rd to SR 49	2A	E	1551	D	1,225	2A/D	1,800	2A/E			1,800	2A/E		
MORMON EMIGRANT TRAIL															
	1. Missouri Flat Rd to SR-49	N/A	E	N/A	N/A	2,006	2A/F	780	2A/C			670	2A/C		
MORMON EMIGRANT TRAIL															
	1. Sly Park Rd to 2nd Dam	2U	D	94	A	309	2U/C	120	2U/A			140	2U/B		
MOSQUITO ROAD															
	1. Placerville City Limits to Union Ridge Rd	2R	E	311	C	280	2R/C	550	2R/C			620	2R/C		
MOTHER LODE DRIVE	2. Union Ridge Rd to Rock Creek Rd	W18	D	166	C	244	W18/C	230	W18/C			280	W18/C		
MOTHER LODE DRIVE	1. S Shingle Rd to French Creek Rd	2U	E	1102	D	1,721	2U/E	1,200	2U/D			1,300	2U/D		
	2. French Crk Rd to Greenstone Rd	2U	D	737	D	1,400	2U/D	840	2U/D			940	2U/D		
	3. Greenstone Rd to Pleasant Valley Rd	2U	E	737	D	1,430	2U/D	850	2U/D			930	2U/C		
	4. Pleasant Valley Rd to El Dorado Rd	2U	E	355	C	367	2U/C	480	2U/C			530	2U/C		
	5. El Dorado Rd to Missouri Flat Rd	2U	E	422	C	759	2U/C	500	2U/C			510	2U/C		
MT AUKUM ROAD															
	1. County Line to Omo Ranch Rd	2R	D	158	B	336	2R/C	310	2R/C			340	2R/C		
	2.. Omo Ranch Rd to Grizzly Flat Rd	2R	D	293	C	517	2R/C	350	2R/C			400	2R/C		
NEWTOWN ROAD	3. Grizzly Flat Rd to Sly Park Rd	2R	D	272	C	403	2R/C	330	2R/C			370	2R/C		
	1. Pleasant Valley Rd to Snows Rd	2R	D	242	C	400	2R/C	270	2R/C			320	2R/C		
NEWTOWN ROAD	2. Snows Rd to Weber Creek	2R	D	284	C	421	2R/C	340	2R/C			400	2R/C		
	3. Weber Creek to Placerville City Limits	2R	E	309	C	404	2R/C	350	2R/C			400	2R/C		



[illegible]



						2004GP MODEL Assumes 3% Annual Growth		2013GP MODEL Assumes 1% Annual Growth							
		Existing	General Plan	Year 2010	Year 2010	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025
				WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR
ROAD NAME	SEGMENT	Functional Class (2010)	Max LOS	COUNT	LOS	2004GP Model	LOS (Using HCM2000)	2013GP Model Volume	LOS (Using HCM2000)	2013 GP Model Directional Volume	LOS (Using HCM2010)	2013GP Model Volume	LOS (Using HCM2000)	2013 GP Model Directional Volume	LOS (Using HCM2010)
STATE HIGHWAYS															
SR 49															
	1. County Line to Sand Ridge Rd	2R	D	200	B	500	2R/C	270	2R/C			280	2R/C		
	2. Sand Ridge Rd to Crystal Blvd	2R	D	370	C	540	2R/C	410	2R/C			440	2R/C		
	3. Crystal Blvd to China Hill Rd	2R	E	1200	D	872	2R/D	1,500	2R/E			1,700	2R/E		
	4. China Hill Rd to Pleasant Valley Rd	W22	E	1050	D	872	W22/D	1,300	W22/E			1,500	W22/E		
	5. Pleasant Valley Rd to Missouri Flat Rd	W22	E	1400	E	1,487	W22/E	1,600	W22/F			1,700	W22/F		
	6. Missouri Flat Rd to Pleasant Valley Rd	2A	E	560	C	851	2A/C	440	2A/B			450	2A/B		
	7. Pleasant Valley Rd to Placerville City Limits	2R	E	1150	D	1,536	2R/E	1,700	2R/E			1,800	2R/F		
	8. Placerville City Limits to Gold Hill Rd	2R	D	350	C	307	2R/C	480	2R/C			520	2R/C		
	9. Gold Hill Rd to SR 153	W22	D	230	C	499	W22/C	340	W22/C			380	W22/C		
	10. SR 153 to Marshall Rd	2R	D	500	C	687	2R/D	700	2R/D			800	2R/D		
	11. Marshall Rd to Rattlesnake Bar Rd	2U	D	540	C	805	2U/D	840	2U/D			970	2U/D		
	12. Rattlesnake Bar Rd to SR 193	W22	D	540	C	1,157	W22/D	560	W22/C			510	W22/C		
	13. SR 193 to County Line	2R	F	860	D	1,361	2R/D	990	2R/D			1,100	2R/D		
SR 193															
	1. SR 49 to Greenwood Rd	2U	D	410	C	932	2U/D	460	2U/C			510	2U/C		
	2. Greenwood Rd to Main St (Georgetown)	2R	D	430	C	208	2R/C	460	2R/C			490	2R/C		
	3. Main St (Georgetown) to Shoo Fly Rd	2R	D	260	C	280	2R/C	310	2R/C			350	2R/C		
	4. Shoo Fly Rd to Placerville City Limits	2R	D	140	B	338	2R/C	170	2R/C			190	2R/B		
US HIGHWAY 50															
	1. County Line to EDH Blvd/Latrobe Rd	2F	E	3,300	D	4,149	2FA/D	3,100	2FA/C			3,400	2FA/C		
WB	HOV				NO HOV			740	HOV/B			740	HOV/B		
EB	HOV							960	HOV/B			960	HOV/B		
EB		2F	E	4,900	F	6,333	2FA/F	3,800	2FA/D			4,000	2FA/D		
	2. EDH Blvd/Latrobe Rd to Bass Lake Rd (Silva Valley Parkway after 2015)	2F	E	2,500	C	4,261	2FA/D	3,300	2FA/C			3,600	2FA/C		
WB	HOV				NO HOV			610	HOV/B			610	HOV/B		
EB	HOV							780	HOV/B			780	HOV/B		
EB		2F	E	3,700	E	6,014	2FA/F	4,300	2FA/D			4,500	2FA/E		
WB	2a. Silva Valley Parkway to Bass Lake Road	2F	E	N/A	N/A			3,400	2FA/C			3,700	2FA/D		
WB	HOV							580	HOV/B			680	HOV/B		
EB	HOV							680	HOV/B			830	HOV/B		
EB		2F	E	N/A	N/A			4,300	2FA/D			4,700	2FA/E		
WB	3. Bass Lake Rd to Cambridge Rd	2F	E	2,400	C	4,872	2F/F	3,100	2F/D			3,500	2F/D		
WB	HOV				NO HOV			610	HOV/B			610	HOV/B		
EB	HOV							670	HOV/B			670	HOV/B		
EB		2F	E	3,600	E	5,772	2F/F	3,700	2F/E			4,200	2F/F		
WB	4. Cambridge Rd to Cameron Park Dr	2F	E	2,300	C	4,438	2F/E	3,200	2F/D			3,500	2F/D		
WB	HOV				NO HOV			650	HOV/B			650	HOV/B		
EB	HOV							700	HOV/B			700	HOV/B		
EB		2F	E	3,300	D	5,033	2F/F	3,400	2F/D			3,800	2F/E		
WB	5. Cameron Park Dr to Ponderosa Rd	2F	E	2,300	C	4,007	2F/E	3,200	2F/D			3,500	2F/D		
WB	HOV				NO HOV			390	HOV/A			490	HOV/A		
EB	HOV							380	HOV/A			540	HOV/A		
EB		2F	E	3,300	D	3,964	2F/F	3,700	2F/E			4,000	2F/E		
WB	6. Ponderosa Rd to Shingle Springs Dr	2F	E	1,800	B	3,868	2F/D	2,300	2F/C			2,500	2F/C		
WB	HOV				NO HOV			430	HOV/A			470	HOV/A		
EB	HOV							400	HOV/A			470	HOV/A		
EB		2F	E	2,700	C	3,529	2F/D	2,500	2F/C			2,800	2F/C		
WB	7. Shingle Springs Dr to Greenstone Rd	2F	D	1,700	B	3,073	2F/D	2,700	2F/C			2,900	2F/D		
EB		2F	D	2,500	C	3,274	2F/D	2,800	2F/C			3,200	2F/D		
WB	8. Greenstone Rd to El Dorado Rd	2F	E	1,700	B	3,299	2F/D	2,600	2F/C			2,800	2F/C		
EB		2F	E	2,500	C	3,107	2F/D	2,700	2F/C			3,000	2F/D		
WB	9. El Dorado Rd to Missouri Flat Rd	2F	E	1,700	B	2,898	2F/D	2,500	2F/C			2,700	2F/C		
EB		2F	E	2,500	C	3,229	2F/D	2,500	2F/C			2,700	2F/C		



						2004GP MODEL Assumes 3% Annual Growth		2013GP MODEL Assumes 1% Annual Growth							
		Existing	General Plan	Year 2010	Year 2010	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025	Year 2025
				WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR	WKDY PM PK HR
ROAD NAME	SEGMENT	Functional Class (2010)	Max LOS	COUNT	LOS	2004GP Model	LOS (Using HCM2000)	2013GP Model Volume	LOS (Using HCM2000)	2013 GP Model Directional Volume	LOS (Using HCM2010)	2013GP Model Volume	LOS (Using HCM2000)	2013 GP Model Directional Volume	LOS (Using HCM2010)
WB	10. Missouri Flat Rd to Placerville City Limits	2F	E	2,200	C	3,155	2F/D	2,200	2F/C			2,300	2F/C		
EB		2F	E	3,400	D	2,636	2F/C	2,500	2F/C			2,800	2F/C		
WB	11. Placerville City Limits to Newtown Rd	2F	E	990	A	1,560	4F/A	1,500	4F/A			2,900	4F/B		
EB		2F	E	1,500	B										
WB	12. Newtown Rd to Carson Rd. (W)		D	990	D	3,355	4M/E	3,000	4M/D			3,300	4M/E		
EB		4M	D	1,500	D										
WB	13. Carson Rd (W) to Carson Rd (E)		D	840	C	3,109	4M/D	2,800	4M/D			3,100	4M/D		
EB		4M	D	1,300	D										
WB	14. Carson Rd (E) to Sawmill Rd	2F	D	840	A	2,356	4F/B	3,000	4F/B			3,300	4F/B		
EB		2F	D	1,500	B										
WB	15. Sawmill Rd to Sly Park Rd	2F	D	830	A	2,378	4F/B	2,800	4F/B			3,100	4F/B		
EB		2F	D	1,300	B										
WB	16. Sly Park Rd to Fresh Pond		D	550	B	1,632	4M/B	2,100	4M/C			2,500	4M/C		
EB		4M	D	850	C										
WB	17. Fresh Pond to Ice House Rd		D	550	B	1,555	4M/B	2,100	4M/C			2,300	4M/C		
EB		4M	D	850	C										
WB	18. Ice House Rd to Echo Lake		F	600	D	2,066	2U/F	2,100	2U/F			2,200	2U/F		
EB		2U	F	910	E										

Draft



## **DRAFT EL DORADO COUNTY TRAVEL DEMAND MODEL**

### **DATA DISCLAIMER AND USER AGREEMENT**

This Data Disclaimer and User Agreement is made on \_\_\_\_\_ (Date) by and between \_\_\_\_\_ (Person/Entity/Agency/Consultant Name) (Recipient) whose offices are located at \_\_\_\_\_ (Address), and the County of El Dorado (County), whose offices are located at 330 Fair Lane, Placerville, CA 95667 (Agreement).

The purpose of this Agreement is to allow Recipient to use the DRAFT El Dorado County Travel Demand Model dated May 23, 2013, which includes the 2010 Baseline Dataset (2010 Baseline) and the Draft 2035 Land Use Forecast Data (Draft 2035 Forecast) (collectively referred to herein as the Draft EDC TDM) for analysis purposes relating to the \_\_\_\_\_ (Study/Project Name) (Study/Project) while recognizing that as a draft dataset, the data included in the Draft EDC TDM is **subject to change without notice** and that use of the Draft EDC TDM is at the **Recipient's own risk**. Recipient agrees that it will only use the Draft EDC TDM for analysis relating to the Study/Project and that the Draft EDC TDM may not be used for any other purpose or on any other project(s) without prior written authorization from the County.

#### **DATA DISCLAIMER**

1. The Draft EDC TDM is a DRAFT dataset and is subject to change without notice.
2. The Draft EDC TDM is being provided to Recipient by the County for informational purposes only, any use of or reliance on the Draft EDC TDM for any purpose is at the Recipient's own risk and Recipient will hold County harmless from any liability or damages associated with any use of or reliance on the Draft EDC TDM.
3. While County has made all reasonable efforts to ensure the accuracy and integrity of the data, the DRAFT 2035 Forecast utilized in the Draft EDC TDM comes from a variety of datasets and inputs and represents the County's best effort to forecast economic activity in a consistent manner, as such, the County disclaims any and all responsibility for the validity, accuracy and/or correctness of the Draft EDC TDM. The County does not guarantee positional accuracy and/or value of accuracy of the attribute data being provided to Recipient.
4. The County is not required to notify Recipient of any changes, revisions, corrections, additions, and/or deletions to the Draft EDC TDM and the County does not and is not warranting the accuracy, timeliness and/or completeness of the Draft EDC TDM or any changes, revisions, corrections, additions, deletions and/or representations with regard thereto.
5. Recipient acknowledges and agrees that in the event the County makes any changes, revisions, corrections, additions, and/or deletions to the Draft EDC TDM, whether to the 2010 Baseline, the Draft 2035 Forecast, or otherwise, that such changes, revisions, corrections, additions, and/or deletions to the Draft EDC TDM may affect the Study/Project and the County may require, in its sole discretion, that Recipient update, change or modify the Study/Project to reflect the changes, revisions, corrections, additions, and/or deletions to the Draft EDC TDM. Any required updates, changes or modifications to the Study/Project shall be at the sole cost of the Recipient.
6. In no event shall County become liable to Recipient and/or users of the Draft EDC TDM, or any other party, for any loss or damages, consequential or otherwise,

including but not limited to time, money, or goodwill, arising from any use of, reliance on, operation of, or modification of the Draft EDC TDM. Recipient agrees to defend, indemnify and hold harmless County for any and all liability of any nature arising out of, resulting from or associated with the accuracy, validity or correctness of the Draft EDC TDM, the use or reliance on the Draft EDC TDM, the operation of the Draft EDC TDM, any modification of the Draft EDC TDM, or the unauthorized distribution of the Draft EDC TDM to third parties.

7. THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OR MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND/OR ANY OTHER TYPE WHETHER EXPRESSED OR IMPLIED.

It is understood and agreed that Recipient shall not make any changes to the Draft EDC TDM except as follows: (1) changes to the 2010 Baseline are strictly prohibited; (2) any changes to the Model Settings (e.g. Trip Generation Rates, Gravity Model Settings, Assignment Settings, etc.) are strictly prohibited unless prior written authorization is obtained from the County; and, (3) Project Level data changes, including but not limited to, network edits and socioeconomic data revisions, are allowed only if all Project Level data changes are clearly documented in any and all resulting analyses and are shared, in writing, with the County during the process as well as at the end of the Study/Project. No County authorization or knowledge of Model Setting changes, Project Level data changes or any other changes to the Draft EDC TDM shall constitute or be deemed acknowledgment or certification by the County of the accuracy, validity or correctness of any such changes. The County is not responsible for any changes, revisions, additions, deletions, and/or misrepresentations that Recipient makes with regard to the Draft EDC TDM.

Recipient shall not distribute the Draft EDC TDM to any other person or entity without the prior written authorization of County.

The County may terminate this Agreement, in whole or in part, at any time by written notice when it is in the best interest of the County, with or without cause.

Upon execution of the Agreement, Recipient certifies and affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the results and/or usage of the Draft EDC TDM.

Copyright: It is understood that the County retains all copyright to the Draft EDC TDM and any data produced under this Agreement.

To assist County in the maintenance of the data, Recipient shall provide County with information concerning anything that Recipient believes to be an error or discrepancy in the Draft EDC TDM.

**I hereby acknowledge that I have read and understand the above and agree with and accept the representations herein.**

\_\_\_\_\_  
Signature of Recipient or Authorized Representative\*  
(\* If a consultant will be using the Draft EDC TDM on behalf of a client then both the client and consultant must execute a copy of this Agreement)

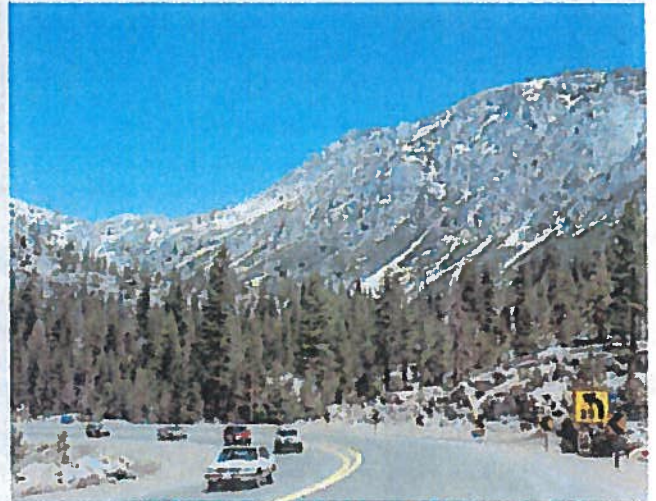
\_\_\_\_\_  
Agency/Consultant

\_\_\_\_\_  
Printed Name of Recipient and Title

\_\_\_\_\_  
Date



# TRANSPORTATION CORRIDOR CONCEPT REPORT UNITED STATES HIGHWAY 50



Transportation Corridor Concept Reports (TCCR) are Caltrans' long range (20-year) planning documents for each State Highway Route. The purpose and need of each TCCR are to identify existing route conditions and future needs, including existing and forecasted travel data, a concept level of service (LOS) standard, and the facility needed to maintain the concept LOS and address mobility needs over the next 20 years.

While this U.S. Highway 50 (US 50) TCCR presents travel data for all of US 50, Segment Summaries are provided only for the portion of US 50 from the Cedar Grove Exit to the Nevada State Line (Segments numbered 13 through 18). The US 50 Corridor System Management Plan (CSMP) now serves as the TCCR for US 50 from its origin at Interstate 80 in West Sacramento to the Cedar Grove Exit (Segments 1 through 12). The CSMP and the TCCR for US 50 combine to provide a comprehensive vision for all 108 miles of US 50.

## Approvals:

  
 Jeff Pulverman

District 3 Deputy Director  
 Planning and Local Assistance

6/16/10  
 Date

  
 Jody Jones

District 3 Director

6/17/10  
 Date



## **U.S. Highway 50 TCCR Summary of Major issues**

U.S. Highway 50 (US 50) is one of three remaining transcontinental routes signed with the U.S. Highway System shield. It begins at Interstate 80 (I-80) in West Sacramento and traverses portions of Yolo, Sacramento, and El Dorado Counties before passing into the State of Nevada. All 108 miles of US 50 in California lie within Caltrans District 3.

US 50 serves as a major east-west connector to I-5 and State Route (SR) 99, and interconnects with other major routes, including US 395 in Nevada. It is an Officially Designated Scenic Highway from its descent into Downtown Placerville to the western city limit of South Lake Tahoe.

Long-term planning for US 50 is addressed in two documents, the US 50 Corridor System Management Plan (CSMP) which addresses segments (numbered 1 to 12) from West Sacramento to the Cedar Grove Exit, and this TCCR, which addresses the remainder of the route from the Cedar Grove Exit to the Nevada State Line in South Lake Tahoe, which is divided into segments numbered from 13 to 18.

US 50 is part of the Interregional Transportation Strategic Plan and is classified as a “High Emphasis Route”, one of Caltrans’ highest priority route designations for interregional routes. High Emphasis Routes are intended to have priority for programming and construction to minimum facility standards in order to better assure that a statewide trunk system is in place and able to handle higher volume interregional trip movements between urbanized areas.

While LOS D is the District standard Concept Level of Service (LOS) standard for rural highway segments, it is not feasible to maintain LOS D on Segment 13 or on Segments 15 through 18, because of the monetary and environmental costs and impacts of creating additional capacity.

On US 50’s two-lane segments (15, 16, and 17), the Concept LOS F is a result of either low travel speed or drivers’ experience of the amount of time spent following other vehicles, or both. Additional passing opportunities and climbing lanes are needed on two-lane segments, but suitable locations for such improvements are limited due to horizontal curves. Where feasible, paved shoulders should be widened to an 8-foot standard width to improve traffic operations, to allow for enhanced pavement performance, to reduce maintenance, and to provide greater assurance of highway safety.

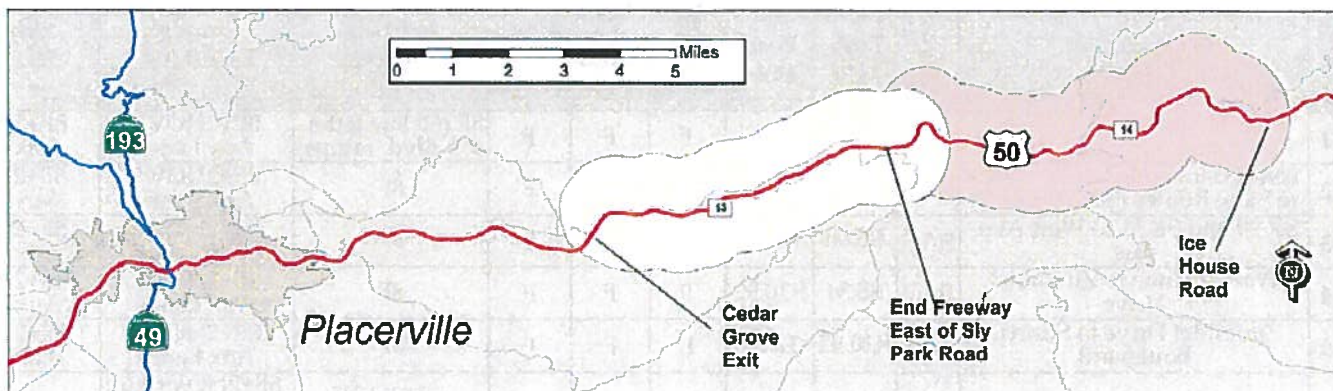
In the Lake Tahoe Basin (Segments 16, 17, and 18), Complete Streets policies including those formulated by the Tahoe Regional Planning Agency support multimodal planning and foster innovation in areas as diverse as winter operations and Intelligent Transportation Systems. On Segment 18 in south Lake Tahoe, operational improvements are needed to enhance conditions near the Nevada State Line.

## **State and Local Responsibility**

Improvements to the State Highway System are the responsibility of both Caltrans and partner agencies. Developments affecting this Route and the regional State Highway System may necessitate local jurisdictions to provide nexus-based proportional fair-share funding for future highway improvements and other transportation system improvements.



# U.S. Highway 50 Segment 13 and 14 Summaries



## Segment 13 - Cedar Grove Exit to 0.67 miles east of Sly Park Road (R25.95/R31.97)

Segment 13 is a 4-lane rural freeway that begins at the Cedar Grove Exit and ends at the freeway-to-conventional-highway transition east of Sly Park Road.

This segment currently operates at LOS D. While LOS is expected to decline to LOS F by 2028, no major capacity-increasing improvements are anticipated because of restricted right-of-way availability, adjacent development, and environmental impacts. Afternoon peak congestion is relatively brief.

## Segment 14, From 0.67 miles east of Sly Park Road to Ice House Road (R31.97/39.77)

Segment 14 begins at the end of the last freeway portion of US 50 within California and descends to the South Fork of the American River at Ice House Road. Over this segment, US 50 is a rural highway beginning as three-lane conventional highway (with 2 full-service lanes westbound and one eastbound) for 2.0 miles, then a four-lane expressway for 5.3 miles, and then a three-lane conventional highway again for 0.3 miles. This variation in lane configuration is in response to varying terrain and steep grades.

The facility currently operates at LOS C. This segment is expected to maintain LOS C through the 20-year planning period. No major capacity-increasing improvements will be needed.

## Highway Improvement Projects

With Construction Cost in Millions (M) and Year of Funding or Completion

### Segment 13

#### Planned:

- ◆ Replace Bridge Deck over Sly Park Rd, \$5.9M, Funding in 2013/14 (2009 10-Year SHOPP Plan)
- ◆ Install changeable message signs at (westbound-only) Camino Weigh Station, \$685K; Funding in 2015/16 (2009 10-Year SHOPP Plan)
- ◆ Maintenance and Operations

#### Programmed:

- ◆ Construct wildlife crossings from Placerville to Strawberry, \$1.5M in Interregional Improvement (IIP) Transportation Enhancement (TE); Funding in 2010/11 (MTIP)

#### Conceptual:

- ◆ Support the development of parallel arterials for local trips and incident response.
- ◆ Mitigate LOS F impacts according to the County General Plan: "Traffic from residential development projects of five or more units or parcels of land shall not result in, or worsen, Level of Service 'F' (gridlock, stop-and-go) traffic congestion during weekday, peak-hour periods on any highway, road, interchange or intersection in the unincorporated areas of the County."

### Segment 14

#### Planned:

- ◆ Maintenance and Operations

#### Programmed:

- ◆ Rehabilitate culverts, \$4.3M Shared with Other Routes; Funding in 2009/10 (2008 SHOPP)
- ◆ Construct wildlife crossings from Placerville to Strawberry, \$1.5M in IIP TE; Funding in 2010/11 (MTIP)
- ◆ Install Intelligent Transportation Systems, \$4.6M Shared with Other Routes; Funding in 2011/12 (2009 10-Year SHOPP Plan)

#### Conceptual:

- ◆ Rehabilitate Pavement, Sly Park Road to Ice House Road, \$25M; Fund by 2025
- ◆ Drainage Rehabilitation, Carson Road to Sly Park Road, \$3.0M; Fund by 2025

**SEGMENT SUMMARIES CONTINUE ON PAGE 6...**



# U.S. Highway 50 TCCR Data

Segment	Location				Forecasted Level of Service <sup>1</sup> (LOS) and Facility Type					
	Description	County	From Post-Mile	To Post-Mile	Current LOS <sup>1</sup>	20-Yr No Build LOS <sup>1,2</sup>	20-Yr Concept LOS <sup>1,3</sup>	Existing Facility <sup>4</sup>	Concept Facility <sup>4,5,6</sup>	Ultimate Facility <sup>4,5,7</sup>
1	Interstate 80 to Yolo/Sacramento County Line	YOL	0.00	3.16	F	F	F	8F (6F btw Jefferson Blvd. ramps)	8F+2HOV+ Aux Lanes	8F+2HOV+ Aux Lanes
2	Yolo/Sacramento County Line to State Routes (SR) 99 and 51	SAC	L0.00	L2.48 = R0.00	F	F	F	8F	8F+2HOV+ Aux Lanes	8F+2HOV+ Aux Lanes
3	SR 99 and SR 51 to Watt Avenue	SAC	R0.00	R5.34	F	F	F	8F	8F+2HOV+ Aux Lanes	8F+2HOV+ Aux Lanes
4	Watt Avenue to Zinfandel Drive	SAC	R5.34	R10.92	F	F	F	8F	8F+2HOV+ Aux Lanes	8F+2HOV+ Aux Lanes
5	Zinfandel Drive to Sunrise Boulevard	SAC	R10.92	12.50	E	F	F	8F	8F+2HOV+ Aux Lanes	8F+2HOV+ Aux Lanes
6	Sunrise Boulevard to Folsom Boulevard	SAC	12.50	17.01	E	F	F	6F+2HOV to Hazel Ave., 4F+2HOV to Folsom Blvd.	6F+2HOV+ Aux Lanes to Hazel Ave., 4F+2HOV+ Aux Lanes to Folsom Blvd.	8F+2HOV+ Aux Lanes
7	Folsom Boulevard to Sacramento/El Dorado County Line	SAC	17.01	23.14	D	F	F	4F+2HOV	4F+2HOV+ Aux Lanes	6F+2HOV+ Aux Lanes
8	Sacramento/El Dorado County Line to Cameron Park Drive	ELD	0.00	R6.57	E	F	F	4F	4F+2HOV+ Aux Lanes	6F+2HOV+ Aux Lanes
9	Cameron Park Drive to Missouri Flat Road	ELD	R6.57	R15.06	E	F	E	4F	4F+2HOV+ Aux Lanes to Greenstone Rd, 4F+ Aux Lanes to Missouri Flat Rd	6F+2HOV+ Aux Lanes to Greenstone, 4F+2HOV+ Aux Lanes to Missouri Flat Rd
10	Missouri Flat Road to End of Freeway in Placerville	ELD	R15.06	17.25	D	F	F	4F	4F+ Aux Lanes	4F+ Aux Lanes
11	End of Freeway in Placerville to Bedford Avenue	ELD	17.25	18.11	D	E	E	4E	4E	4E
12	Bedford Ave. to Cedar Grove Exit	ELD	18.11	R25.95	D	F	F	4F to Smith Flat Rd, 4E to Camino, 4F to Cedar Grove	4F+ Aux Lanes to Smith Flat, 4E to Camino, 4F to Cedar Grove	4F+ Aux Lanes
13	Cedar Grove Exit to 0.67 mi. east of Sly Park Rd	ELD	R25.95	R31.97	D	F	F	4F	4F	4F
14	0.67 miles east of Sly Park Road to Ice House Road	ELD	R31.97	39.77	C	C	C	3C, 2.0 miles 4E, 5.3 miles 3C, 0.3 miles	3C, 2.0 miles 4E, 5.3 miles 3C, 0.3 miles	4E
15	Ice House Road to Echo Summit	ELD	39.77	66.63	E	F	F	2C; 0.35 mi. of 2-wy left turn lane	2C; 0.35 mi. of 2-wy left turn lane	2C; 0.35 mi. of 2-wy left turn lane
16	Echo Summit to SR 89 South	ELD	66.63	70.62	D	F	F	2C	2C	2C
17	State Route 89 South/Luther Pass Road to State Route 89 North/Lake Tahoe Blvd	ELD	70.62	75.45	E	F	F	2C, 4.23 miles 5C, 0.60 miles	2C, 4.23 miles 5C, 0.60 miles	4C, 4.10 miles 5C, 0.73 miles
18	State Route 89 North/Lake Tahoe Blvd to State of Nevada	ELD	75.45	80.44	C	F	F	4C with 2-way left turn lane	4C with 2-way left turn lane	4C with 2-way left turn lane

## Notes/Definitions

1. **Level of Service (LOS)**-A measure of traffic density conditions, with "A" representing the least amount of density and "F" the most congested conditions. For the above peak hour LOS, A and B are not needed to provide good conditions.



LOS A - Free Flowing Conditions.

LOS B - Speeds at or near free-flow speed, but presence of other users begins to be noticeable.

LOS C - Speeds at or near free-flow speed, but freedom to maneuver is noticeably restricted.

LOS D - Speeds begin to decline slightly with increasing flow; freedom to maneuver is more restricted.

LOS E - Operating conditions at or near roadway capacity. Even minor disruptions to the traffic stream can cause delay.

LOS F - Breakdown in vehicle flow. Queues form quickly behind point in the roadway where the arrival flow rate temporarily exceeds the departure rate.

Note: For segments featuring one lane in either direction or intersection delay, LOS is experienced differently. On Segment 13, which is at LOS C in the Peak Hour, the 2.0-mile single eastbound lane experiences LOS F congestion that is atypical and nonrecurring<sup>11</sup>.



# U.S. Highway 50 TCCR Data *continued*

Location	Current Traffic Data—2008					Prior 3 Years	Future Traffic Data — 2028			
Segment	Percentage of Trucks	Peak Directional Split <sup>8</sup>	Peak Hour Traffic	Average Annual Daily Traffic <sup>9</sup>	Volume over Capacity <sup>10</sup>	Reported Collision Rate Index (% Compared to State Average) <sup>12</sup>	Peak Hour Traffic	Average Annual Daily Traffic <sup>9</sup>	Volume over Capacity <sup>10</sup> (No-Build)	Volume over Capacity <sup>10</sup> (Build)
1	6%	60%	15,370	178,080	1.09	+26.0%	23,911	277,032	1.69	1.36
2	4%	59%	20,378	226,765	1.35	+19.8%	28,080	312,480	1.86	1.93
3	4%	59%	21,423	219,450	1.45	+24.2%	27,942	286,230	1.89	1.66
4	4%	59%	17,535	194,250	1.15	-32.2%	24,783	274,540	1.63	1.36
5	4%	60%	14,175	156,450	0.93	-32.9%	20,331	224,394	1.33	1.10
6	4%	66%	12,826	134,620	0.89	-14.1%	18,888	198,247	1.31	1.40
7	3%	66%	8,692	98,580	0.87	-11.3%	13,341	151,311	1.33	1.36
8	4%	61%	7,314	74,200	0.95	-35.4%	11,454	116,200	1.65	1.14
9	4%	62%	6,042	65,720	0.92	-60.9%	8,647	94,054	1.32	0.96
10	4%	57%	4,988	53,550	0.69	+20.0%	7,101	76,245	0.98	1.02
11	4%	55%	4,968	55,890	N/A <sup>11</sup>	+81.1%	6,595	74,196	N/A <sup>11</sup>	N/A <sup>11</sup>
12	4%	62%	4,275	39,655	0.77	+6.2%	5,474	50,782	0.99	0.99
12	4%	62%	4,275	39,655	0.77	-7.0%	5,474	50,782	0.99	0.99
13	5%	65%	2,204	13,120	0.46	+8.5%	2,741	16,320	0.57	0.57
14	3%	65%	1,948	13,530	0.71 <sup>11</sup>	-50.9%	2,423	16,830	0.89 <sup>11</sup>	0.89 <sup>11</sup>
15	3%	65%	1,538	9,225	0.56 <sup>11</sup>	-24.6%	1,913	11,475	0.88 <sup>11</sup>	0.88 <sup>11</sup>
16	3%	55%	2,511	19,988	0.91 <sup>11</sup>	-45.5%	3,124	24,863	1.14 <sup>11</sup>	1.14 <sup>11</sup>
17	3%	55%	3,290	36,494	N/A <sup>11</sup>	-59.4%	4,186	46,434	N/A <sup>11</sup>	N/A <sup>11</sup>

2. **20-Year LOS (No Build)**—The LOS that would be expected at 20 years with no improvements.

3. **20-Year Concept LOS**—The minimum acceptable LOS over the next 20 years.

4. **Facility Type Codes**—C = Conventional Highway; E = Expressway; F = Freeway; HOV = High Occupancy Vehicle lanes; Aux = Auxiliary lanes.

5. **Operational Improvements** are included in future facilities for all segments. Examples of operational improvements include Traffic Operations Systems improvements and Auxiliary Lanes.

6. **Concept Facility**—The future roadway with improvements needed in the next 20 years. If LOS "F", no further degradation of service from existing "F" is acceptable, as indicated by delay performance measurement.

7. **Ultimate Facility**—The future roadway with improvements needed beyond a 20 year timeframe.

8. **Peak Directional Split**—The percentage of total traffic in the heaviest traveled direction during the peak hour.

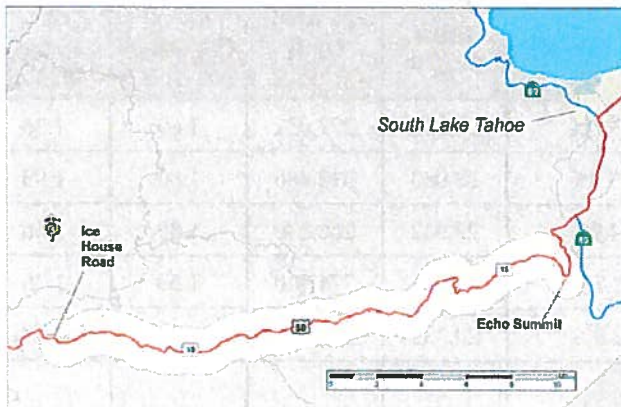
9. **Average Annual Daily Traffic (AADT)**—The average number of vehicles per day in both directions.

10. **Volume over Capacity (V/C)**—The volume of traffic compared to the capacity of the roadway.

11. **Volume over Capacity does not determine LOS** for two- or three- lane facilities, or segments with intersection delay.

12. **Reported Collision Rate Index (% Compared to State Average)**— The percentage by which each segment's reported collisions rate (fatal, injury, and property-damage-only) is above or below the statewide average reported collisions rate on comparable facilities. Source: 3-Year Caltrans Traffic Accident Surveillance and Analysis System data.

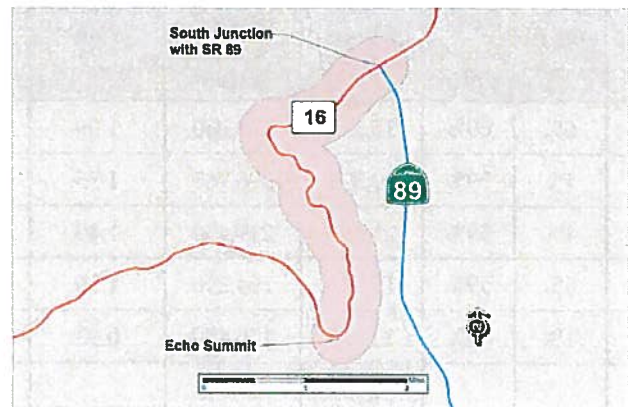
# U.S. Highway 50 Segment 15 & 16 Summaries



**Segment 15 - Ice House Road to Echo Summit (39.77/66.63)**

Segment 15 is a 2-lane conventional highway with six extents of passing lanes in both directions, two extents of eastbound-only passing lanes, and short extents with a two-way left-turn lane in Strawberry (0.10 mi.) and Twin Bridges (0.25 mi.). Joining the South Fork of the American River up to Twin Bridges, US 50 then rises on a steep grade to Sayles Flat. From there, Segment 15 climbs to Echo Summit.

The facility currently operates at LOS E. It is not feasible to provide enough passing opportunity in 20 years to avoid LOS F. However, a limited, targeted approach could provide more regular spacing between passing opportunities. Adding eastbound passing lanes to Segment 15 would provide more utility because the lanes tend to run uphill and because peak eastbound traffic is greater than peak westbound traffic.



**Segment 16 - Echo Summit to South Junction with SR 89 (66.63 to 70.62)**

Segment 16, a two-lane conventional highway, descends almost 1,000 feet from Echo Summit to the junction of US 50 and SR 89 South on an average grade of 4.5%, with some steeper sections. From 0.1 to 0.8 miles east of the summit, Segment 15 is cut into rock faces with the roadway supported by rock wall abutments on the downhill side. Roadway shoulders are either very narrow or non-existent. Several small turn-outs are available along the eastbound lane.

The facility currently operates at LOS D, but on peak weekends, LOS F can occur due to heavy recreational traffic. LOS is expected to decline over the 20-year planning period. It is considered infeasible to add lanes due to the environmental sensitivity of the area and the topography.

## Highway Improvement Projects

With Construction Cost in Millions (M) and Year of Funding or Completion

### Segment 15

#### Planned:

- ◆ Maintenance and Operations.

#### Programmed:

- ◆ Construct Wildlife Crossings between Placerville and Strawberry, \$1.5M in IIP TE; Funding in 2010/11 (MTIP)
- ◆ Install Intelligent Transportation Systems, \$4.6M Shared with Other Routes; Funding in 2011/12 (2009 10-Year SHOPP Plan)

#### Conceptual:

- ◆ Drainage Rehabilitation, South Fork American River Bridge near Riverton to Wright Lake Road, \$3.5M; Fund by 2025
- ◆ Investigate additional passing lanes targeted to provide more regular spacing of passing opportunities.

### Segment 16

#### Planned:

- ◆ Maintenance and Operations

#### Programmed:

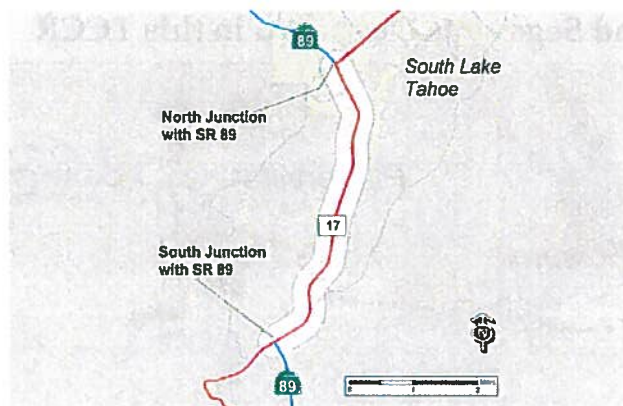
- ◆ Upgrade Rock Retaining Wall/Guard Wall, 0.1 to 1.2 miles east of Echo Summit Rd, \$8.9M, Funding in 2010/11 (2009 10-Year SHOPP Plan)
- ◆ Water Quality Improvements, Echo Summit to Old Meyers Grade Rd, \$1.2M, Funding in 2010/11 (2009 10-Year SHOPP Plan)
- ◆ Water Quality Improvements, Old Meyers Grade Rd to 0.1 mile east of Incline Rd, \$46.1M, Funding in 2011/12 (2009 10-Year SHOPP Plan)

#### Conceptual:

- ◆ Replace Echo Summit Viaduct with new structure.
- ◆ Investigate additional westbound passing opportunities.



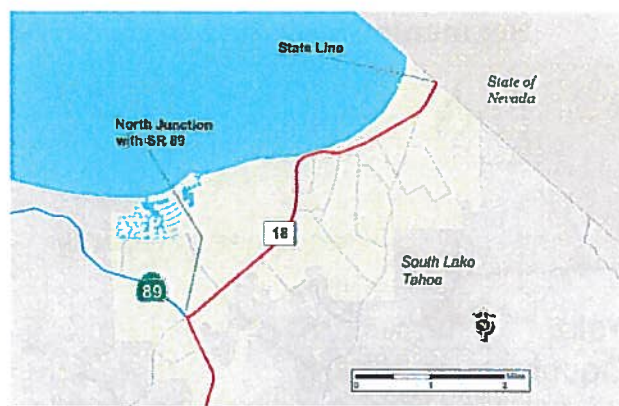
# U.S. Highway 50 Segment 17 & 18 Summaries



**Segment 17 - South Junction with SR 89 to North Junction with SR 89 (70.62/75.45)**

Segment 17 begins as a 2-lane conventional highway with a two-way left turn lane passing through the unincorporated community of Meyers. At Pioneer Trail, it becomes a 2-lane highway with narrow shoulders. After passing into the City of South Lake Tahoe, it becomes a 4-lane facility with a two-way left turn lane at PM 74.84. The segment ends at the South Wye ("Y"), where SR 89 continues north and US 50 turns east.

During Sunday-peak and seasonal congestion, westbound traffic will sometimes queue back from Echo Summit all of the way to the Wye. Traffic leaving South Lake Tahoe via Pioneer Trail adds to peak congestion. The facility currently operates at LOS E, and is expected to decline to LOS F by 2028. Though improvement to 4 lanes is envisioned beyond 2028, studies may recommend 4 lanes before 2028 in some locations.



**Segment 18, North Junction with SR 89 to the Nevada State Line (75.45/80.44)**

Segment 18 is a 4-lane conventional urban arterial with a center turn lane. This is the "main street" of South Lake Tahoe. Most of the commercial, tourist, and recreational uses are located along this segment and there are many individual driveways. The segment ends at the Nevada State line.

This segment operates at LOS C in weekday peak hours, but existing peak summer traffic causes significant congestion. There are 14 signalized intersections along this segment. Further signal synchronization will help improve operations and reduce congestion. Sidewalk conditions vary significantly along the route. Programmed (STIP and SHOPP) and planned projects will rehabilitate sidewalks to ADA compliant conditions. Class II bike lanes are also proposed.

## Highway Improvement Projects

With Construction Cost in Millions (M) and Year of Funding or Completion

### Segment 17

#### Planned:

- ◆ Synchronize Signals, Meyers to Stateline, \$3.2M; 2010 (RTP)
- ◆ Intersection Improvements, US 50/Apache Ave, \$374K, 2012 (RTP)
- ◆ Class II bike lanes and sidewalk rehabilitation, Portion of \$56M shared with similar Segment 18 projects; 2012 (RTP)
- ◆ Maintenance and Operations

#### Programmed:

- ◆ Water Quality Improvement Project, South Tahoe Airport to Route 89, \$22.1M, Funding in 2011/12 (2009 10-Year SHOPP Plan)

#### Conceptual:

- ◆ Participate in El Dorado County's Meyers Highway Corridor Operations Study; operational strategies considered could include a roundabout or nontraditional connection at US 50/Pioneer Trail and/or extension of westbound channelization in the vicinity of the Pioneer Trail intersection.
- ◆ Mitigate LOS F impacts to the unincorporated portion of Segment 17 from residential development in accordance with the County General Plan (See Segment 13 for excerpt). Because residential developments of five or more units are rare, contributions from impact fees will be low.

### Segment 18

#### Planned (RTP is Source unless otherwise noted):

- ◆ Create new loop road, Park Ave to Stateline, \$113M, 2022
- ◆ Synchronize Signals, Meyers to Stateline, \$3.2M; 2010
- ◆ Intersection Improvements, US 50/Sierra Blvd., \$849K, 2011
- ◆ Class II bike lanes and sidewalk rehabilitation, North Junction SR 89 to Trout Creek, Portion of \$56M; 2012

#### Programmed:

- ◆ Water Quality Improvements, SR 89 North to Trout Creek \$38.2M; Funding in 2010/11 (2009 10-Year SHOPP Plan)
- ◆ Water Quality Improvements, Trout Creek to Ski Run Bl., \$33.4M; Funding in 2009/10 (2008 SHOPP)
- ◆ Water Quality Improvements, Ski Run Blvd. to Nevada State Line, \$7.7M; Funding in 2010/11 (2008 SHOPP)
- ◆ Add Curb, Gutter, Sidewalk, and Class II Bike Lane, Trout Creek to Ski Run Bl., \$25.5M (Portion of \$56M in RTP), Funding in 2009/10 (RTIP)

#### Conceptual:

- ◆ Encourage consolidation of driveways and other access management measures in order to preserve capacity/reduce congestion/reduce travel times and to improve safe access for and between pedestrians, bicyclists, transit, and other modes.



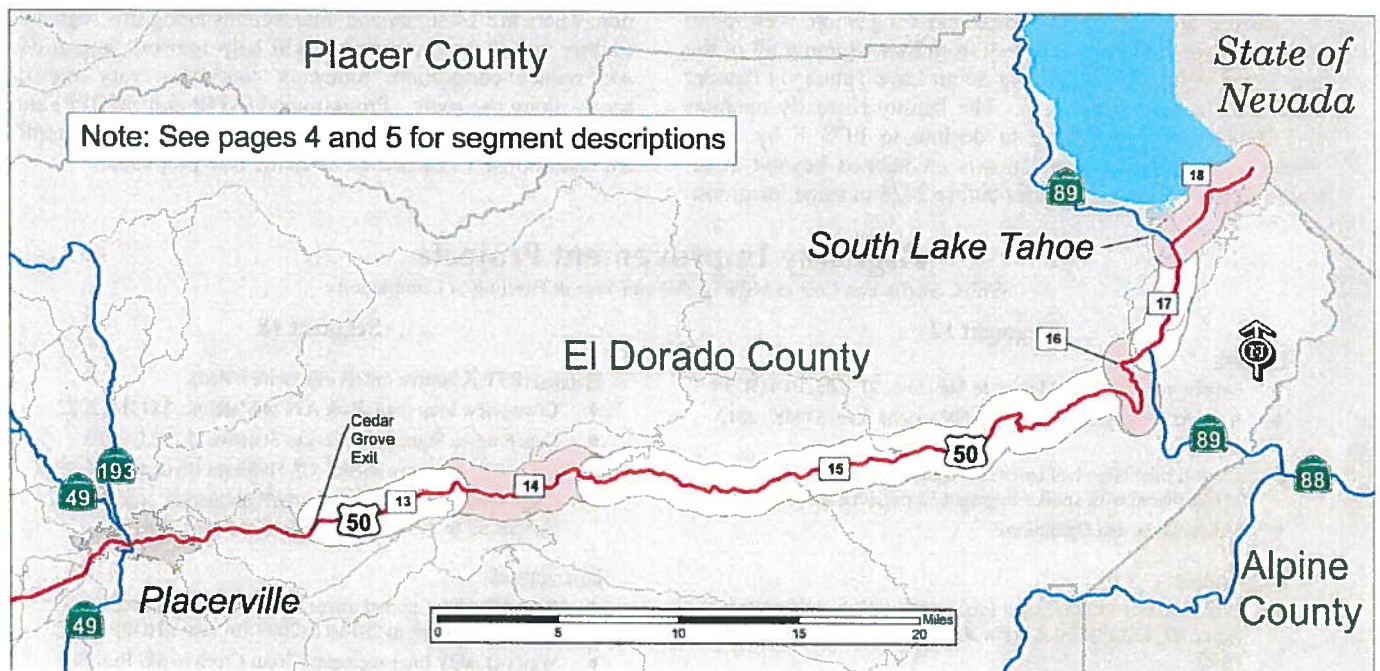


## U.S. Highway 50 Segmentation Maps

Segments Described in the CSMP and Segments Described in this TCCR



Map of Segments 1-12; No Segment Summaries Provided in this TCCR (See CSMP)



Map of Segments 13-18; Segment Summaries Included in this TCCR

Please contact below for questions and concerns about this TCCR:

Caltrans District 3, Office of Transportation Planning

P.O. Box 911, Marysville, CA, 95901-0911

Telephone: (530) 741-5151

Or visit the TCCR website at: <http://www.dot.ca.gov/dist3/departments/planning/systemplanning.html>