

# Memorandum

*Serious drought!  
Help Save Water!*

To: RAY I. DESSELLE  
Deputy District Director  
Planning

Date: June 13, 2016

File: TCR: SR-330

From:   
RICHARD A. DENNIS  
Office of System and Freight Planning

Subject: Transportation Concept Reports for State Route 330

It is recommended that the attached Transportation Concept Report be approved for the above-referenced District 8 State Route.

RECOMMENDED BY:

  
LORNA FOSTER  
Tribal Liaison

CONCURRED BY:

  
MARK ROBERTS  
Regional Planning

CONCURRED BY:

  
MARIA S. ARANGUIZ  
Forecasting

CONCURRED BY:

  
DIANE MORALES  
Pre-Programming

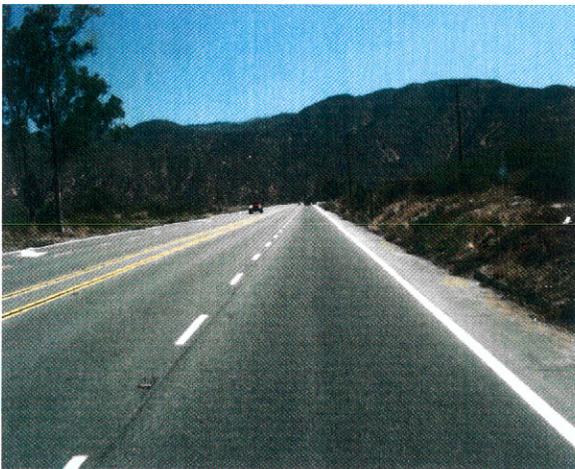
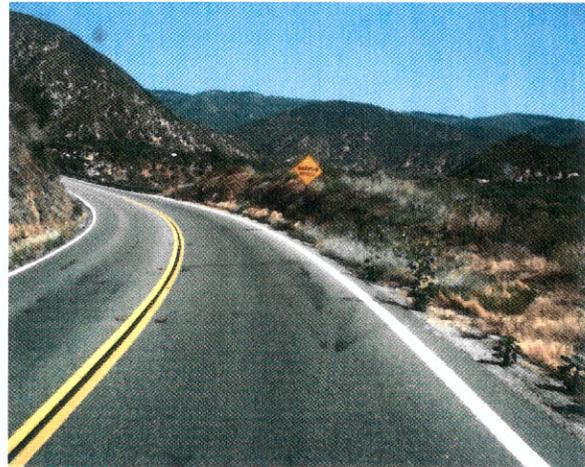
Enclosure  
Transportation Concept Report



# Transportation Concept Report

## State Route 330

### District 8



Disclaimer: The information and data contained in this document are for planning purposes only and should not be relied upon for final design of any project. Any information in this Transportation Concept Report (TCR) is subject to modification as conditions change and new information is obtained. Although planning information is dynamic and continually changing, the District 8 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

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

Approvals:

*for Lorna Foster*  
 RAY I. DESSELLE  
 Deputy District Director  
 Planning

7-1-2016  
 Date

*John Bulinski*  
 JOHN BULINSKI  
 District Director

7/1/16  
 Date

# TABLE OF CONTENTS

About the Transportation Concept Report .....	1
Stakeholder Participation.....	1
EXECUTIVE SUMMARY .....	2
Concept Summary .....	2
Concept Rationale .....	2
Proposed Projects and Strategies.....	2
CORRIDOR OVERVIEW.....	3
Route Description.....	5
Community Characteristics .....	5
Land Use .....	6
System Characteristics.....	6
Bicycle Facility.....	7
Pedestrian Facility .....	7
Transit Facility.....	7
Freight.....	8
CORRIDOR PERFORMANCE .....	9
KEY CORRIDOR ISSUES.....	9
CORRIDOR CONCEPT .....	9
Concept Rationale .....	9
Planned and Programmed Projects and Strategies.....	10
Projects and Strategies to Achieve Concept.....	10
Appendices.....	11
Appendix A: Glossary of Terms and Acronyms.....	11
Definitions .....	12
Appendix B: Factsheets .....	16
Appendix C: Additional Corridor Data .....	16
Appendix D: Resources.....	16
Appendix E: System Planning Flow Chart.....	17

## ABOUT THE TRANSPORTATION CONCEPT REPORT

System Planning is the long-range transportation planning process for the California Department of Transportation (Caltrans). The System Planning process fulfills Caltrans' statutory responsibility as owner/operator of the State Highway System (SHS) (Gov. Code §65086) by evaluating conditions and proposing enhancements to the SHS. Through System Planning, Caltrans focuses on its mission to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability.

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

### TCR Purpose

California's State Highway System needs long-range planning documents to guide the logical development of transportation systems as required by CA Gov. Code §65086 and as necessitated by the public, stakeholders, and system users. The purpose of the TCR is to document the evaluation of current and projected conditions along the route and to communicate the vision for the development of the route in each Caltrans District during a 20-25 year planning horizon. The TCR is developed with the goals of increasing safety and health; providing good stewardship and system efficiency; making Smart Mobility decisions that sustainably improve the environment and a vibrant economy; and providing reliable and accessible mobility options through an integrated management of the transportation network, including the highway, transit, pedestrian, bicycle, freight, operational improvements, and travel demand management components of the corridor.

## STAKEHOLDER PARTICIPATION

The State Route 330 TCR involved a collaboration between agency staff as well as outside stakeholders from local, county and regional public agencies, advocacy organizations, nonprofits and community members at large. Feedback from the stakeholders helped solidify the findings of the performance assessment, bottleneck identification, and causality analysis given their intimate knowledge of local conditions. Moreover, stakeholders have provided support and insight, and shared valuable field and project data without which this study would not have been possible. The stakeholders included representatives from the following organizations: the Southern California Association of Governments, the San Bernardino Associated Governments, the County of San Bernardino, the City of Highland, and Native American tribes.

## EXECUTIVE SUMMARY

State Route 330 (SR-330) is a north-south Conventional Highway that begins at the SR-210 interchange in the City of San Bernardino and traverses the City of Highland, the San Bernardino National Forest, and the community of Running Springs. The route terminates at its junction with SR-18. Most of SR-330 is within the San Bernardino National Forest. Shoulders are narrow and there are no sidewalks along the length of the route. SR-330 provides access to the mountains for the residents and tourists.

### CONCEPT SUMMARY

Seg.	Segment Description	Existing Facility	2035						
			Capital Facility Concept	System Operations and Management Concept	No-Build		Planned SCAG-RTP		Minimum to attain LOS "D"
1	SR-210 to County Flood Channel	4L, F	4L, F	No TMS improvements planned	4 MF		4 MF		4 MFE
					V/C	LOS	V/C	LOS	
					0.45	B	0.45	B	
2	County Flood Channel to SR-18	2L, C	2L, C	Install Changeable Message Signs and Highway Advisory Radio	2 C		2 C		4 MFE
					V/C	LOS	V/C	LOS	
					1.03	F	1.03	F	

Source: Caltrans District 8 District System Management Plan Update, 2016

C = Conventional Highway  
L = Number of mainline lanes

MF = Mixed-Flow Lane  
MFE = Mixed-Flow Equivalent Lane  
LOS = Level of Service  
V/C = Volume to Capacity Ratio

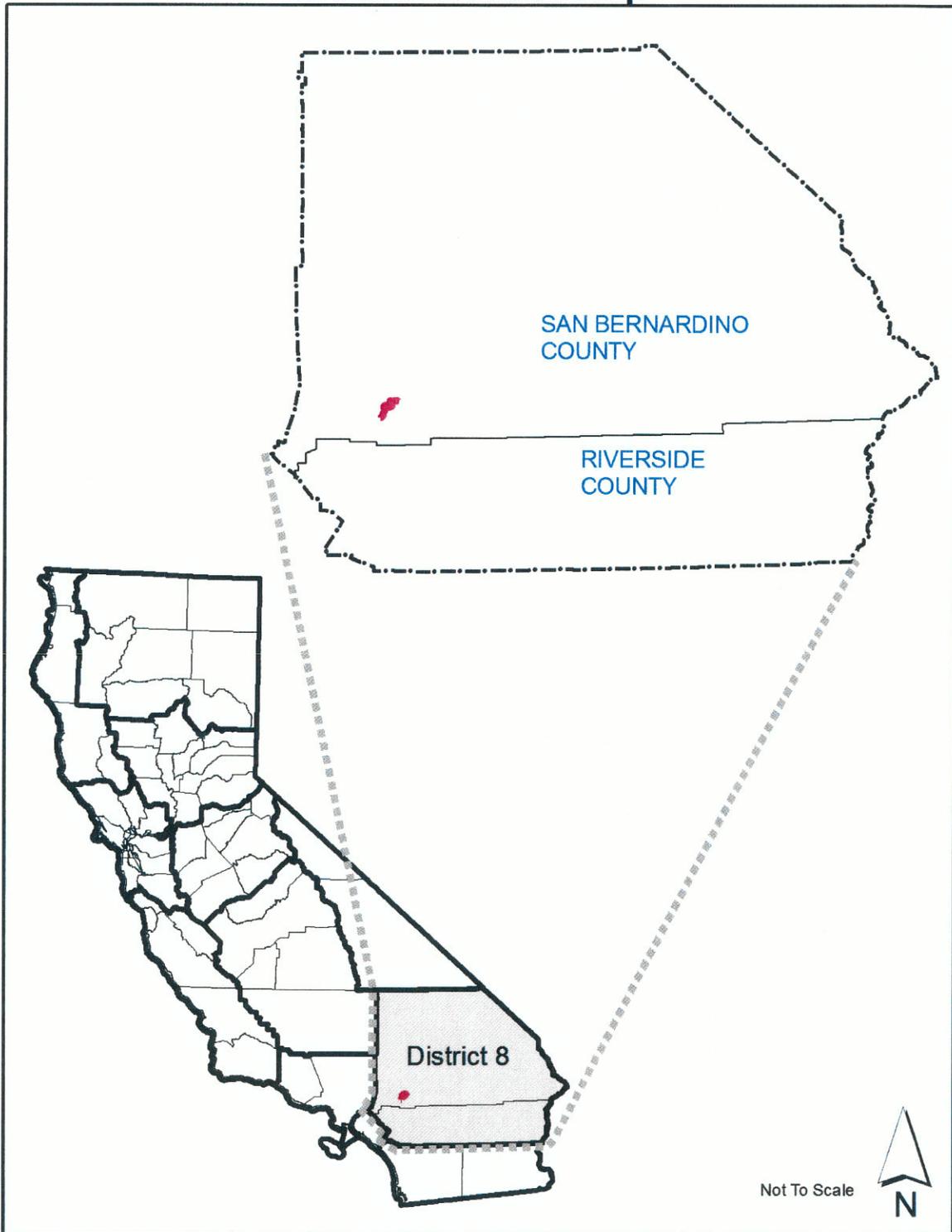
### CONCEPT RATIONALE

This Transportation Concept Report serves as a guide for long-range planning of route improvements. SR-330 Segment 2 is expected to experience significant growth in future traffic volumes. However, because a benefit-cost analysis demonstrated the costs are greater than the benefits, no capacity improvements are recommended through 2035. To achieve Caltrans Strategic Management Plan goals of reduced transportation-related air pollution, infrastructure improvements such as shoulders for bicycle and pedestrian travel should be considered as well as increased public transit service.

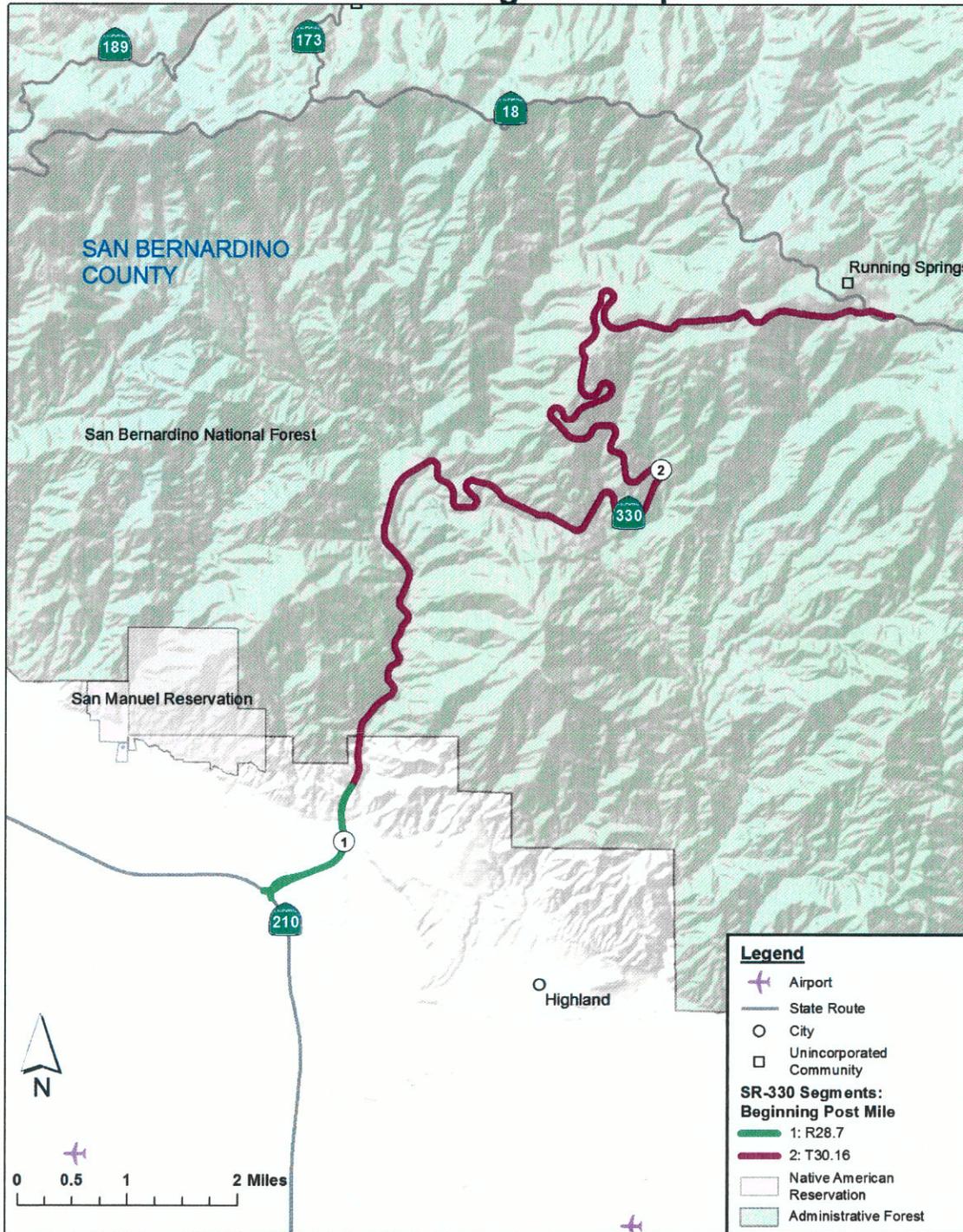
### PROPOSED PROJECTS AND STRATEGIES

Several traffic management system improvements are proposed for the SR-330 corridor, including new Changeable Message Signs and Highway Advisory Radio equipment.

**CORRIDOR OVERVIEW**  
**SR-330 Location Map**



# SR-330 Segment Map



Segment	Location Description	County_Route_Begin PM	County_Route_End PM
1	SR-210 to County Flood Channel	SBd_330_R28.696	SBd_330_T30.160
2	County Flood Channel to SR-18	SBd_330_T30.160	SBd_330_44.118

## ROUTE DESCRIPTION

### Route Location

SR-330 is located in the south western portion of California in San Bernardino County. The route is approximately 14 miles in length.

### Route Purpose

SR-330 currently serves as a corridor for mountain residents to access services, shopping, and employment in the Inland Empire. Goods movement uses the route to deliver goods to shops in the mountain communities. Tourists use the route to access vacation homes and recreational opportunities in the mountain communities and the surrounding San Bernardino National Forest. The route can serve as an alternate route when portions of SR-18 are closed.

### Major Route Features

SR-330 is built as a freeway from the SR-210 interchange to the county flood control channel. When the route narrows to a two-lane conventional highway, the route has a steep grade throughout, with over 3,000 feet of elevation change from the bottom of the route to the top. There are many curves, turnouts, and passing lanes.

### Route Designations and Characteristics

Segment	1	2
Freeway & Expressway System	Yes	No
National Highway System	Yes	No
Strategic Highway Network	No	No
Scenic Highway	No	No
Interregional Road System	Yes	Yes
High Emphasis	No	No
Focus Route	No	No
Federal Functional Classification	Minor Arterial	Minor Arterial
Goods Movement Route	Yes	Yes
Truck Designation	Terminal Access Route (STAA)	Terminal Access Route (STAA)/ California Legal Network
Rural / Urban / Urbanized	Urbanized	Rural
Metropolitan Planning Organization	SCAG	SCAG
Regional Transportation Planning Agency	SCAG	SCAG
Congestion Management Agency	SANBAG	SANBAG
County Transportation Commission	SANBAG	SANBAG
Local Agency	City of San Bernardino/ City of Highland	County of San Bernardino
Tribes	San Manuel Band of Mission Indians	
Air District	SCAQMD	SCAQMD
Terrain	Mountainous	Mountainous

## COMMUNITY CHARACTERISTICS

Jurisdiction	San Bernardino	Highland	Running Springs
Total Population	209,924	53,104	4,862
Median Income	\$38,385	\$59,549	\$65,275
Drive Alone to Work	75.3%	78.1%	77.5%

Source: 2010 U.S. Census

SR-330 is rural along most of the route, with residents and businesses being located primarily at both ends. The Cities of San Bernardino and Highland are located at the south end and the community of Running Springs is located at the north end.

The City of San Bernardino is the largest city and was incorporated in 1869. The City has many restaurants, a country club, an international airport, apartments, office buildings, commercial shopping centers, and single family homes. The city is home to California State University San Bernardino which employs over 2,500 people and has over 20,000 students. The City’s growing economy is in the logistics industry with many warehouses being built in the central and southern part of the city.

The City of Highland was incorporated in 1997 and is primarily a residential city with some commercial shopping centers. The city is located adjacent to southern border of the San Bernardino Mountains and is in close proximity to many recreational opportunities in the area.

Running Springs is a rural residential community with a small commercial area located at the northern end of SR-330.

## **LAND USE**

On the south end of SR-330 in San Bernardino and Highland, the highway is surrounded by residential and commercial uses. On the north end in Running Springs, there is also a mix of residential and commercial properties surrounding the highway. The property between the two ends is mountainous and is part of the San Bernardino National Forest where land development is not expected.

## **SYSTEM CHARACTERISTICS**

<b>Segment #</b>	<b>1</b>	<b>2</b>
<b>Existing Facility</b>		
<b>Facility Type</b>	Freeway	Conventional Highway
<b>General Purpose Lanes</b>	4	2
<b>Lane Miles</b>	5.88	27.91
<b>Centerline Miles</b>	1.47	13.95
<b>HOV Lanes</b>	0	0
<b>HOT/ Express Lanes</b>	0	0
<b>Concept Facility 2035</b>		
<b>Facility Type</b>	F	C
<b>General Purpose Lanes</b>	4	2
<b>Lane Miles</b>	5.88	27.91
<b>Centerline Miles</b>	1.47	13.95
<b>HOV Lanes</b>	0	0
<b>HOT/ Express Lanes</b>	0	0
<b>TMS Elements</b>		
<b>TMS Elements 2008</b>	Highway Advisory Radio (HAR)	None
<b>TMS Elements 2035</b>	No TMS improvements planned	Changeable Message Signs (CMS), HAR

## BICYCLE FACILITY

Segment	Bicycle Access Prohibited	Facility Type
1	No*	Freeway/No designated bicycle facility
2	No	No designated bicycle facility

\* From Highland Avenue, north only

Bicycle access is prohibited from the SR-210 interchange to Highland Avenue. From Highland Avenue to the SR-18 Junction, bicyclists are allowed to use SR-330. The shoulder width varies from 0 to 10 feet.

## PEDESTRIAN FACILITY

Segment	Pedestrian Access Prohibited	Sidewalk Present
1	No*	No
2	No	No

\* From Highland Avenue, north only

Pedestrian access is prohibited from the SR-210 interchange to Highland Avenue. Pedestrians may walk on the edge of the pavement from Highland Avenue to SR-18 Junction. Sidewalks are not present along the route.

## TRANSIT FACILITY

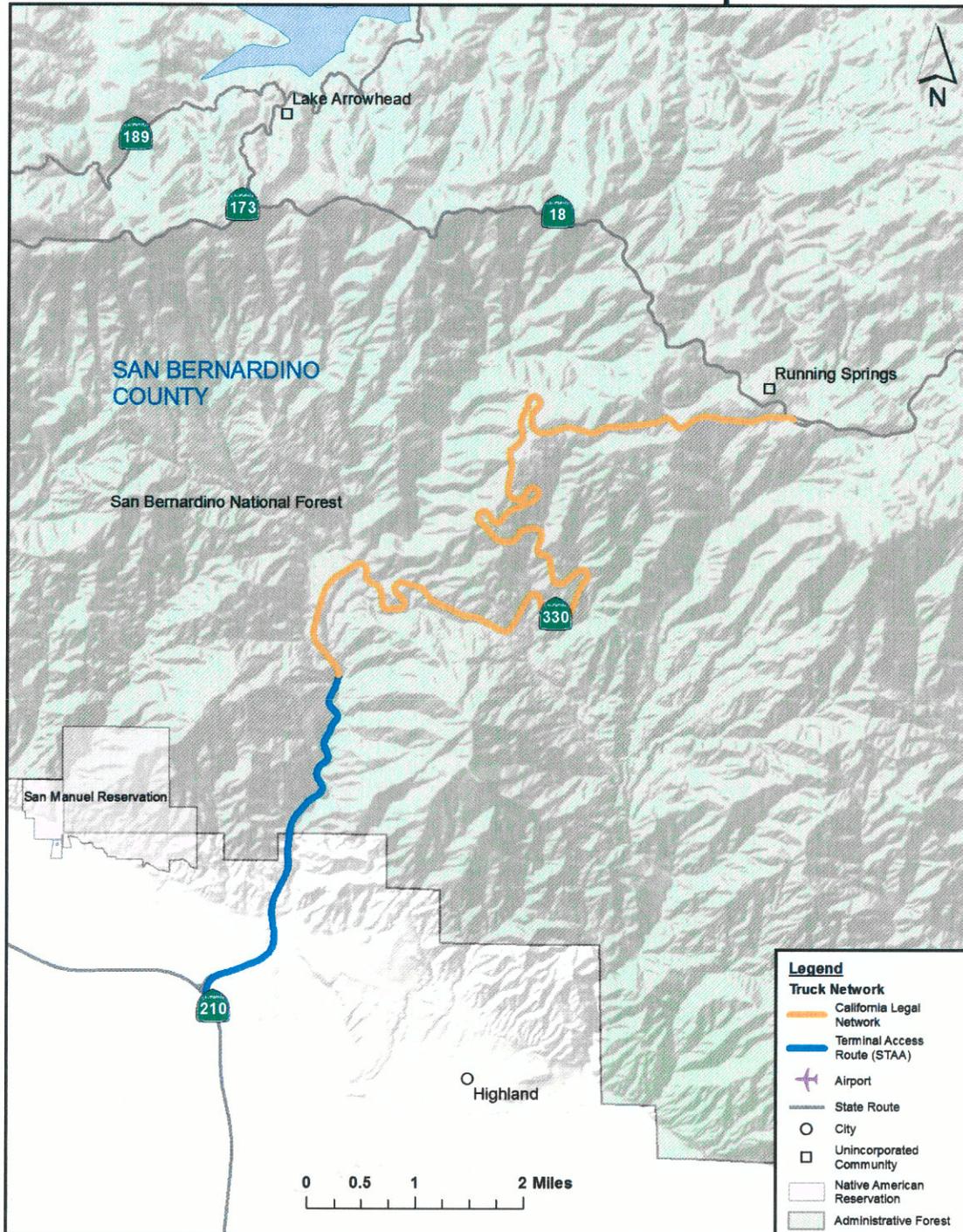
Segment	Mode & Collateral Facility	Name	Route End Points	Operating Period	Station Cities	Bikes Allowed On Transit	Location Description	# Parking Spaces*
1-2	Commuter Bus	Mountain Transit Big Bear off the Mountain	Interlaken Center to San Bernardino Courthouse	Commute Periods	Big Bear, Highland, San Bernardino, and Mountain Communities	2	N/A	N/A

Mountain Area Regional Transit Authority (Mountain Transit) operates seven days per week and provides service to the mountain communities of Crestline, Lake Arrowhead, Running Springs, and Big Bear Lake. The “Big Bear Off the Mountain” route provides service every day, primarily during commute hours to and from the mountain communities into San Bernardino-Fontana area.

Mountain Transit also provides on-demand (dial-a-ride) service for persons over 60 years old and older, persons with disabilities, and residents that live more than 0.75 mile away from a fixed-route transit stop within the dial-a-ride service area.

**FREIGHT**

**SR-330 Goods Movement Map**



Freight generators, terminals, and/or inter-modal facilities are not present along SR-330. Truck volumes are low. SR-330 can serve as an alternate route if SR-18 is closed. SR-330 serves as the primary route for goods movement between mountain and valley communities.

## CORRIDOR PERFORMANCE

Traffic volumes on SR-330 are expected to increase greatly over the next 20 years.

Segment #	1	2
<b>Basic System Operations</b>		
<b>AADT 2008</b>	9,700	9,700
<b>AADT 2035</b>	21,600	20,200
<b>LOS Method</b>	HCM	HCM
<b>LOS 2008</b>	A	E
<b>LOS 2035</b>	B	F
<b>LOS Concept</b>	D	F*
<b>VMT 2008</b>	14,550	119,310
<b>VMT 2035</b>	32,400	226,440
<b>Truck Traffic</b>		
<b>Total Average Annual Daily Truck Traffic (AADTT) 2008</b>	300	300
<b>Total Average Annual Daily Truck Traffic (AADTT) 2035</b>	650	600
<b>Total Trucks (% of AADT) 2008</b>	3%	3%
<b>Total Trucks (% of AADT) 2035</b>	3%	3%
<b>5+ Axle Average Annual Daily Truck Traffic (AADTT) 2008</b>	60	40
<b>5+ Axle Trucks (% of AADT) 2008</b>	1%	1%
<b>Peak Hour Traffic Data</b>		
<b>Peak Hour Directional Split 2008</b>	84%	84%
<b>Peak Hour Directional Split 2035</b>	65%	65%
<b>Peak Hour % 2008</b>	14%	14%
<b>Peak Hour % 2035</b>	12%	12%
<b>Peak Hour V/C 2008</b>	0.32	0.80
<b>Peak Hour V/C 2035</b>	0.45	1.03

Source: Caltrans District 8 Forecast Unit forecast based on SCAG 2012 RTP traffic model

\* LOS "F" is recommended as the concept for Segment 2 because a benefit-cost analysis of widening the road from two to four lanes demonstrated that costs would be greater than the benefits received.

## KEY CORRIDOR ISSUES

Key corridor issues on SR-330 include recreational traffic heading to and from the mountains during the summer and winter seasons are expected to cause congestion, and narrow shoulders do not accommodate bicycles and pedestrians.

## CORRIDOR CONCEPT

### CONCEPT RATIONALE

This Transportation Concept Report serves as a guide for long-range planning of route improvements. SR-330 Segment 2 is expected to experience significant growth in future traffic volumes. However, because a benefit-cost analysis demonstrated that the improvement costs are greater than the benefits, no capacity improvements are recommended through 2035. To achieve Caltrans Strategic Management Plan goals of reduced transportation-related air pollution, infrastructure improvements such as shoulders for bicycle and pedestrian travel should be considered as well as increased public transit service.

### **PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES**

No capacity increasing or major operational projects or strategies are planned or programmed for SR-330.

### **PROJECTS AND STRATEGIES TO ACHIEVE CONCEPT**

Several traffic management system improvements are proposed for the SR-330 corridor, including new Changeable Message Signs and Highway Advisory Radio equipment.

# APPENDICES

## APPENDIX A: GLOSSARY OF TERMS AND ACRONYMS

### Acronyms

- AADT** – Annual Average Daily Traffic
- ADT** – Average Daily Traffic
- AQMD** – Air Quality Management District
- Caltrans** – California Department of Transportation
- CMA** – Congestion Management Plan
- CSS** – Context Sensitive Solutions
- FHWA** – Federal Highway Administration
- GHG** – Green House Gas
- HCM** – Highway Capacity Manual
- HCP** – Habitat Conservation Plan
- HCS** – Highway Capacity Software
- HOV** – High Occupancy Vehicle Lane (2 or more occupants per vehicle)
- HOT** – High Occupancy Toll Lane
- IC** – Interchange
- ITS** – Intelligent Transportation System
- LOS** – Level of Service
- MF** – Mixed-Flow Lane
- MFE** – Mixed-Flow Lane Equivalent
- ML** – Managed Lane
- MPO** – Metropolitan Planning Organizations
- NOA** – Naturally Occurring Asbestos
- NCCP** – Natural Community Conservation Plan
- OC** – Overcrossing
- PID** – Project Initiation Document
- PM** – Post Mile
- PSR** – Project Study Report
- RCTC** – Riverside County Transportation Commission
- Riv** – Riverside County
- RTP** – Regional Transportation Plan
- RTIP** – Regional Transportation Improvement Program
- RTPA** – Regional Transportation Planning Agency
- SANBAG** – San Bernardino Associated Governments
- SBd** – San Bernardino County
- SCAG** – Southern California Association of Governments
- SCS** – Sustainable Community Strategies
- SHOPP** – State Highway Operation Protection Program
- STIP** – State Transportation Improvement Program
- T** – Truck Lane
- TDM** – Transportation Demand Management
- TMS** – Transportation Management System
- TSN** – Transportation System Network
- UC** – Undercrossing
- V/C** – Volume to Capacity Ratio
- VMT** – Vehicle Miles Traveled

## Definitions

**Annual Average Daily Traffic (AADT)** – Annual Average Daily Traffic is the total volume for the year divided by 365 days. The traffic count year is from October 1st through September 30<sup>th</sup>. Traffic counting is generally performed by electronic counting instruments moved from location throughout the State in a program of continuous traffic count sampling. The resulting counts are adjusted to an estimate of annual average daily traffic by compensating for seasonal influence, weekly variation and other variables which may be present. Annual ADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways, and other purposes.

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

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

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

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

**Capital Facility Concept** – The 20-25 year vision of future development on the route to the capital facility. The capital facility can include capacity increasing, state highway, bicycle facility, pedestrian facility, transit facility (Intercity Passenger rail, Mass Transit Guide way etc.), grade separation, and new managed lanes.

**Concept LOS** – The minimum acceptable level of service over the next 20-25 years.

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

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

**Facility Concept** – Describes the facility and strategies that may be needed within 20-25 years. This can include capacity increasing, state highway, bicycle facility, pedestrian facility, transit facility, non-capacity increasing operational improvements, new managed lanes, conversion of existing managed lanes to another managed lane type or characteristic, TMS field elements, transportation demand management, and incident management.

**Facility Type** – The facility type describes the state highway facility type. The facility could be freeway, expressway, conventional, or one-way city street.

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

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

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

**Level of Service (LOS)** – It is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. A LOS definition generally describes these conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. LOS can generally be categorized as follows:



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



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



**LOS C** represents a range in which the influence of traffic density on operations becomes marked. The ability to maneuver with the traffic stream is now clearly affected by the presence of other vehicles.



**LOS D** demonstrates a range in which the ability to maneuver is severely restricted because of the traffic congestion. Travel speed begins to be reduced as traffic volume increases.



**LOS E** reflects operations at or near capacity and is quite unstable. Because the limits of the level of service are approached, service disruptions cannot be damped or readily dissipated.



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

**Mainline** – Includes travelway for through traffic but not freeway to freeway interchanges, local road interchanges, ramps, or auxiliary lanes.

**Multimodal** – The availability of transportation options using different modes within a system or corridor, such as automobile, subway, bus, rail, or air.

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

**Peak Hour Volume** – The hourly volume during the highest hour traffic volume of the day traversing a point on a highway segment. It is generally between six percent and 10 percent of the Annual Daily Traffic (ADT). The lower values are generally found on roadways with low volumes.

**PeMS** – Caltrans Performance Measurement System is an archived data user service that provides over ten years of data for historical analysis. PEMS provides access to real-time and historical performance data which conducts assessment of freeway performance, base operational decisions on knowledge of the current state of the freeway network, and identifies congestion bottlenecks.

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

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

**Post Mile (PM)** – A post mile is an identified point on the State Highway System. The milepost values increase from the beginning of a route within a county to the next county line. The milepost values start over again at each county line. Mile post values usually increase from south to north or west to east depending upon the general direction the route follows within the state. The mile post at a given location will remain the same year after year. When a section of road is relocated, new milepost (usually noted by an alphabetical prefix such as "R" or "M") are established for it. If relocation results in a change in length, "mile post equations" are introduced at the end of each relocated portion so that mile posts on the remainder of the route within the county will remain unchanged.

**Programmed Project** – A programmed improvement or action is a project in a near-term programming document identifying funding amounts by year, such as the State Transportation Improvement Program or the State Highway Operations and Protection Program.

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

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

**RTP Model** – Forecasting model developed by Southern California Association of Governments (SCAG) prepares travel demand model approximately every 4 years in conjunction with the Regional Transportation Plan Project List. SCAG’s trip based model is structured on a four-step gravity model, which includes trip generation, trip distribution, mode choice, and trip assignment.

**Segment** – A portion of a facility between two points.

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

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

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

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

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

**Vehicle Miles Traveled (VMT)** – Is the total number of miles traveled by motor vehicles on a road or highway segments.

## **APPENDIX B: FACTSHEETS**

There are no factsheets available for this route.

## **APPENDIX C: ADDITIONAL CORRIDOR DATA**

There is no additional corridor data for this route.

## **APPENDIX D: RESOURCES**

- California State Transportation Improvement Program Project List 2014
- Caltrans Earth: <http://earth.dot.ca.gov/>
- Caltrans TASAS Highway Sequence Listing for Caltrans District 8
- Census 2010: <http://www.census.gov/2010census/>
- District 8 System Management Plan 2011
- Focus Routes: [http://www.dot.ca.gov/hq/tpp/corridor-mobility/documents/library/List\\_of\\_Focus\\_Routes.doc](http://www.dot.ca.gov/hq/tpp/corridor-mobility/documents/library/List_of_Focus_Routes.doc)
- GIS Data Library: <http://www.dot.ca.gov/hq/tsip/gis/datalibrary/gisdatalibrary.html>
- High Emphasis Routes: [http://www.dot.ca.gov/hq/tpp/corridor-mobility/documents/library/Caltrans\\_High\\_Emphasis\\_Routes\\_HER.doc](http://www.dot.ca.gov/hq/tpp/corridor-mobility/documents/library/Caltrans_High_Emphasis_Routes_HER.doc)
- Interregional Transportation Strategic Plan 2015
- Metropolitan Planning Organizations and RTPAs Map: [http://www.dot.ca.gov/hq/tpp/offices/orip/index\\_files/Updated%20Files/MPO\\_RTPA\\_Map\\_June\\_2012.pdf](http://www.dot.ca.gov/hq/tpp/offices/orip/index_files/Updated%20Files/MPO_RTPA_Map_June_2012.pdf)
- Regional Transportation Planning Contacts: [http://www.dot.ca.gov/hq/tpp/offices/orip/list/agencies\\_files/regional\\_6-12.xls](http://www.dot.ca.gov/hq/tpp/offices/orip/list/agencies_files/regional_6-12.xls)
- SCAG FY 2011-2012 Annual Listing of Obligated Projects for State and Local Highways
- SCAG 2012 Regional Transportation Plan: <http://rtpscs.scag.ca.gov/Pages/2012-2035-RTP-SCS.aspx>
- SCAG 2012 Regional Transportation Plan Level of Service Model
- Scenic Highway Routes: [http://www.dot.ca.gov/hq/LandArch/16\\_livability/scenic\\_highways/scenic\\_hwy.htm](http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/scenic_hwy.htm)
- Streets and Highways Code §250-257: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=shc&group=00001-01000&file=250-257>
- Truck Route List and Truck Network Maps: <http://www.dot.ca.gov/hq/traffops/trucks/truckmap/>
- Mountain Transit Agency: <http://mountaintransit.org/>
- City of Highland: <http://www.cityofhighland.org/AboutTheCity/>
- City of San Bernardino: <http://www.ci.san-bernardino.ca.us/about/default.asp>

## APPENDIX E: SYSTEM PLANNING FLOW CHART

