Transportation Concept Report

SR 150
District 5
January 2016

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California Department of Transportation

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

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EXECUTIVE SUMMARY

Caltran's mission is to provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability. Transportation Concept Reports (TCRs) play an active role in achieving this mission to serve the traveling public. The Transportation Concept Report (TCR) is primarily a technical document that: (1) identifies trends and deficiencies within a transportation corridor, and (2) provides a basis for considering future actions to preserve the integrity of the corridor over the long-term. This information is valuable to Caltrans and its local and regional partners as they consider needs and priorities for future investments.

The TCR is unique and complementary to the Regional Transportation Plan/Metropolitan Transportation Plan – Sustainable Communities Strategy (RTP-SCS or MTP-SCS) developed by Metropolitan Planning Organizations (MPOs) and Regional Transportation Planning Agencies (RTPAs). These documents guide decision making in support of transportation facilities that sustain mobility into the future. The TCR is a technical document, focused on one specific corridor, and identifies projected future corridor deficiencies. By contrast, the RTP-SCS is a policy element that interprets the land use and transportation interrelationship, evaluates future growth scenarios, considers overall transportation needs, and applies regional priorities and funding constraints to establish an action plan for implementing specific improvements.

The 2013 Santa Barbara County Association of Governments (SBCAG) RTP-SCS and supporting regional travel demand model, and Caltrans historical data served as a basis for the technical analysis presented in this TCR. These projections forecast future demand on SR 150 in a 2040 horizon year.

SEGMENT DESCRIPTION

State Route (SR) 150 is 37 miles in length and located in Santa Barbara and Ventura Counties. The primary purpose of SR 150 is to connect the city of Carpinteria in District 5 to the cities of Ojai and Santa Paula in District 7. In District 5, SR 150 consists of one segment extending from the intersection of US 101 (PM R0.000) in the city of Carpinteria, through unincorporated areas of Santa Barbara, to the Santa Barbara/Ventura county line (PM 2.197). This segment serves as a two-lane conventional highway and is approximately 2 miles in length. The 2040 route concept for SR 150 proposes the route remain a two-lane conventional highway (Table 1).

SR 150 KEY FINDINGS & ROUTE CONCEPT

- Volume ranges from 2,800 to 5,000 vehicles per day. Historic Annual Average Daily Trips (AADT) data indicates a fairly steady growth in volumes between 1992 and 2012. According to the SBCAG regional model (using count data), the segment volume ranges from 3,200 to 7,200 vehicles per day by 2040. Daily Vehicle Miles Traveled (VMT) is projected to be 600 by 2040. Volumes decrease as one travels east along segment 1.
- In the base year and horizon year, congestion is low along the entire segment. Demand reaches 39% of capacity in 2040 (Appendix A).
- In both the base year and horizon year, there are no bottlenecks.

Table 1: State Route 150 Route Concept

Segment	Route Concept
US 101 to the Santa Barbara/Ventura county line (PM R0.000 to PM 2.197)	Maintain two-lane Conventional Highway.
Multimodal Improvements	
• Work in partnership with the city of Carpinteria to study walkable options between Camino Carreta and Carpinteria Avenue. • Coordinate with the city of Carpinteria, county of Santa Barbara, and SBCAG to further evaluate Class II and Class III bicycle improvements proposed in local and regional plans.	
Operational Improvements	
• Work with the city of Carpinteria to study reconstruction of the SR 150/US 101 interchange. This study could evaluate bridge widening, realignment of ramps, traffic controls, bike and pedestrian facilities and other aspects to improve mobility.	
Maintenance and Preservation	
• Maintenance efforts will focus on keeping the facility functional and extending the service life of the existing facility. • Maintain facility in a state of good repair to minimize traveler cost and delays.	

STAKEHOLDER PARTICIPATION

Stakeholder participation is important to the TCR development process. The success of the TCR is dependent on collaboration with all stakeholders in the development of the document. Stakeholder participation requires outreach to agency staff and technical advisory committees. Table 2 shows the stakeholders within the SR 150 corridor.

Table 2: Key State Route 150 Stakeholders

Stakeholder	Role
Santa Barbara County Association of Governments (SBCAG)	Metropolitan Planning Organization and Regional Transportation Planning Agency
City of Carpinteria	Local municipality
Santa Barbara County	County
Ventura County Transportation Commission (VCTC)	Metropolitan Planning Organization and Regional Transportation Planning Agency
Ventura County	County
Santa Barbara Metropolitan Transit District (SBMTD)	Public Transit Agency
Coalition for Sustainable Transportation (COAST)	Transportation Advocacy Group
Santa Barbara Bicycle Coalition	Bicycling Advocacy and Resource Organization
California Coastal Commission	California Coastal Commission

CORRIDOR OVERVIEW

ROUTE DESCRIPTION

SR 150 is a two-lane urban and rural State Highway located in Santa Barbara and Ventura Counties. The route extends 37 miles and serves as a commuter and recreational facility connecting the communities of Carpinteria, Ojai and Santa Paula and routes US 101, SR 192, SR 33, and SR 126. The route is heavily traveled by recreational cyclists. In District 5, SR 150 consists of one segment that extends 2.197 miles from the US 101 interchange (PM R0.000) in the city of Carpinteria to the Santa Barbara/Ventura county line (PM 2.197). This includes a small section (PM H1.132 to PM H1.518) within the sphere of influence for Ventura County and District 7 but is maintained by District 5 (*Figure 1*). SR 150 provides access to the Lake Casitas Recreational area located west of Ojai, and Dennison Park and Steckel Park, located west of Santa Paula. Anticipated corridor growth, particularly in the city of Ojai, will increase demand on SR 150. The route provides access to agriculture lands and residential amenities north of the city of Carpinteria.

Figure 1: State Route 150 Segment Map

Major Route Features:

SR 150 is classified as a Minor Arterial (MA) and Conventional highway for its entire length and traverses easterly through rolling terrain. It travels through the unincorporated areas of Santa Barbara and Ventura Counties, and the incorporated cities of Carpinteria, Ojai, and Santa Paula. There are no parallel routes to SR 150 that would provide an alternative service to these communities in either district. Parking restrictions exist along SR 150 in Ojai and Santa Paula. While there are no signalized intersections in the District 5 segment, a 55 mph speed limit is observed.

Rincon Creek traverses SR 150 and portions of the route are located within the 100 year flood zone (*Figure 2*). West of US 101, the Rincon Creek serves as a critical habitat for Steelhead. A portion of SR 150 from PM R0.0 to PM 1.9 resides within the California Coastal Zone. The route is identified in Section 263.1 and 263.6 of the California Streets and Highways Code as eligible for designation as a state scenic highway. The city of Carpinteria's General Plan and Local Coastal Land Use Plan identify policies to enhance scenic vistas along SR 150 and to cooperate with other agencies in the designation of SR 150 as an official scenic highway.

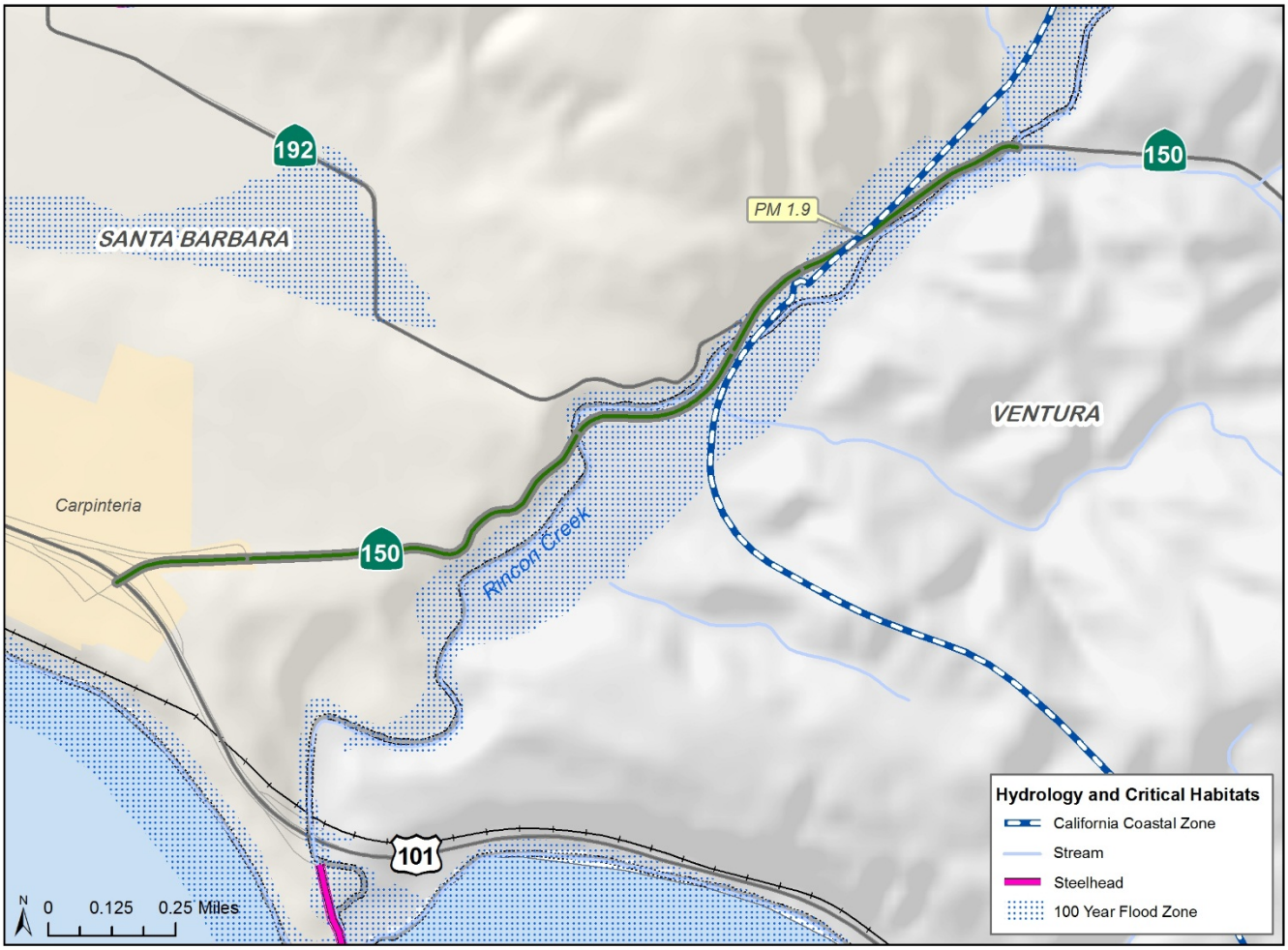

Figure 2: State Route 150 Hydrology and Critical Habitats

Route Designations and Characteristics:

Table 3 provides existing route designations and characteristics for SR 150 in District 5. Interest from the city of Carpinteria to designate SR 150 as a scenic highway is the only designation change proposed for the facility in the next 20 to 25 years.

Table 3: Route Designations and Characteristics

Segment	1
Freeway & Expressway	No
Access Control	Conventional
National Highway System	No
Strategic Highway Network	No
Scenic Highway	Eligible
Interregional Road System	No
Federal Functional Classification	Minor Arterial
Goods Movement Route	No
Truck Designation	Advisory – KPRA is less than 30 ft.
Rural/Urban/Urbanized	Both Urban/Rural
Metropolitan Planning Organization	SBCAG
Regional Transportation Planning Agency	SBCAG
Congestion Management Agency	SBCAG
Local Agency	Santa Barbara County and city of Carpinteria
Tribes	None
Air District	Santa Barbara County Air Pollution Control District and Ventura County Air Pollution Control District
Terrain	Rolling
General Purpose Lanes	2
Lane Miles	4.394
Centerline Miles	2.197

LAND USE

There is a direct nexus between land use and transportation; changes to one will inevitably impact the other. A better understanding of future development growth and transportation trends will help determine how to best plan for a transportation system that can accommodate future growth. The transportation system includes a network of local routes as well as state routes that serve different functions. Local routes are intended to serve transportation needs within a community.

In Santa Barbara county, land use surrounding the SR 150 corridor ranges from agricultural and recreational land to low and medium density residential. The prevalent land use located directly along SR 150, east of the SR 192 intersection is agriculture and designated by Santa Barbara county as AG-I-5 and AG-I-10. Low Density Residential and Medium Density Residential land use designations are located west of the SR 192 intersection along SR 150. Agriculture, commercial, recreational, and residential land uses exist in the District 7 segments. Within the city of Carpinteria, the land use closely adjacent to the corridor is designated Research Development Industrial (RDI) and Vistor-Serving Commercial (VC). According to the city's General Plan, which was adopted in April 2003, RDI is defined to feature groups of offices, research and development, and light industrial uses that tend to employ large numbers of individuals.

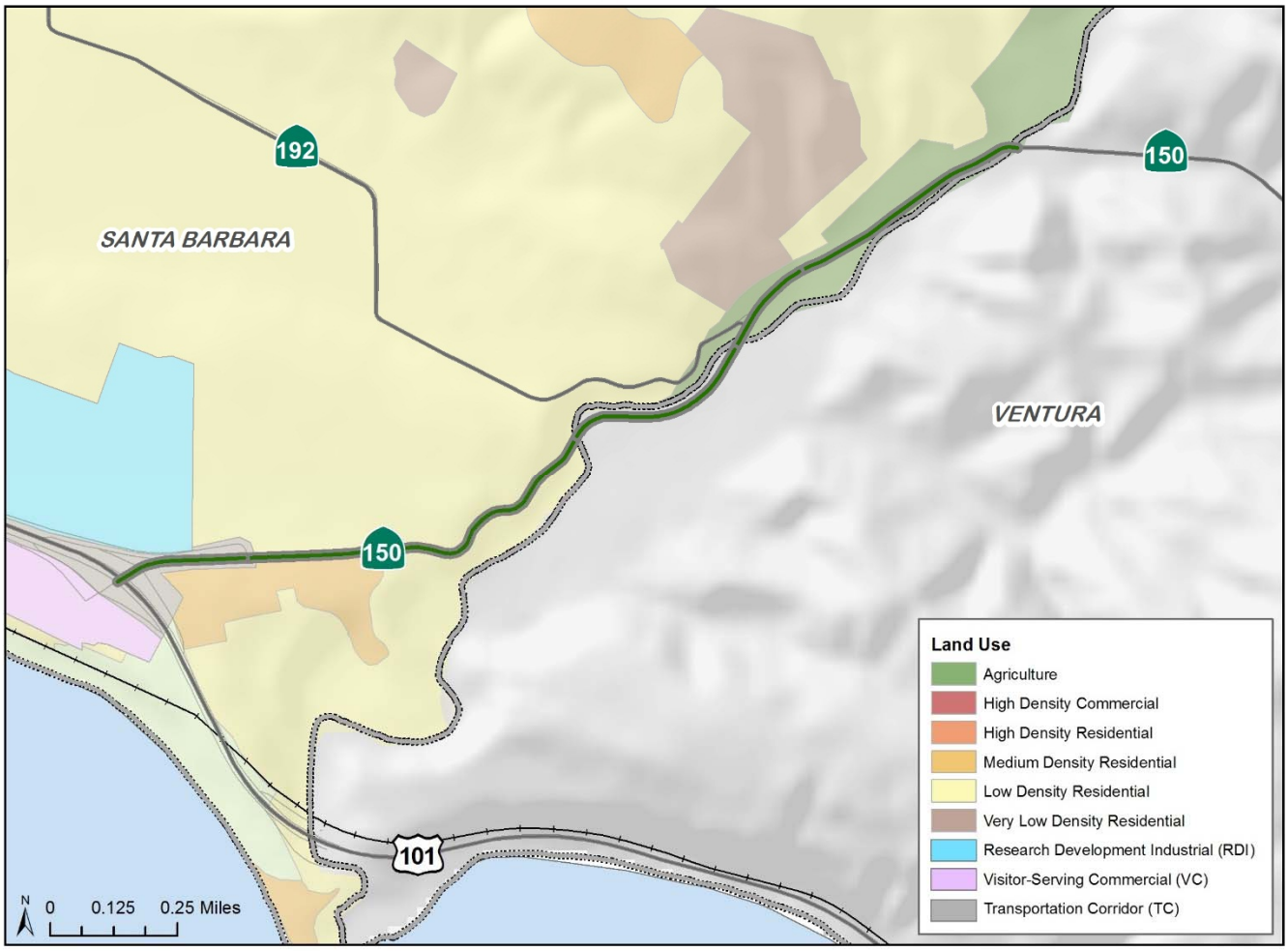

Figure 3: State Route 150 Land Use Map

Travel Patterns:

Residents who live near SR 150 connect to other regions located to the north and south via US 101 or regions located to the east via SR 150. The route provides access from US 101 to recreational uses including the Las Casistas Recreational Area and the communities of Ojai and Santa Paula. As of 2012, the PM peak hour (from 5:00 PM to 6:00 PM) showed a directional split average of 60 percent for vehicles traveling eastbound and average of 40 percent traveling westbound. The PM peak hour projection for 2040 shows directional splits 55 percent for vehicles traveling eastbound and average of 45 percent traveling westbound (Table 6).

SR 150 has a 2012 PM Peak Hour Volume/Capacity (V/C) Ratio of 0.183 to 0.306 in the eastbound direction and 0.106 to 0.255 in the westbound. SR 150 is projected to experience a PM Peak Hour V/C Ratio increase of 0.195 to 0.369 eastbound and 0.126 to 0.390 westbound for the horizon year of 2040.

Future Development:

Areas adjacent to SR 150 are expected to experience some additional development. According to the city of Carpinteria, the coastal region located west of the US 101 and SR 150 interchange is zoned Visitor-Serving Commercial, and is intended to provide adequate opportunities for commercial development which will serve visitors to the city. This specific location, which the city has identified as Bluffs Area III, is planned to include a hotel with up to 225 rooms, restaurants, a conference center, meeting facilities, a banquet facility, health spa, and small shops.

Additionally, the city of Carpinteria's *General Plan/Local Coastal Land Use Plan & Environmental Impact Report* (2003) and *Master Facility Plan* (1993) identifies that SR 150 would be expected to receive traffic from future build out and recommends "Reconfiguration and reconstruction of the Highway 150/Highway 101 Interchange in the eastern portion of town, including the widening of the bridge to four lanes, the realignment of the ramps and installation of new traffic signals and turn lanes, or alternative interchange improvements capable of achieving similar effects on Level of Service." It is recommended that Caltrans work with the city of Carpinteria in the future to study reconstruction of the SR 150/US 101 interchange.

PEDESTRIAN FACILITY

SR 150 contains a section of sidewalk on the north side the US 101/SR 150 interchange. Otherwise pedestrian facilities do not exist on the route in District 5. The need for additional pedestrian improvements between the US 101/SR 150 interchange and the SR 150/Camino Carreta intersection (PM 0.283) could be further analyzed. This may benefit pedestrian connectivity for residents living in the neighborhood adjacent to SR 150 by providing continuous access to Carpinteria Avenue located on the west side of the US 101/SR 150 interchange.

From Carpinteria Avenue, pedestrians can access the Carpinteria Bluffs Trail that serves recreational purposes and provides scenic views of the Pacific Coast (*Figure 4*). There are also plans to extend a portion of the California Coast Trail from the approved parking lot and trailhead located at the intersection of SR 150 and Carpinteria Avenue south to Rincon Beach County Park. This is depicted as Class I proposed in *Figure 5*. Completion of this portion of the trail, known locally as the Rincon Trail, would close the gap needed for continuous non-motorized access between the city of Carpinteria in Santa Barbara county, and La Conchita and Mussel Shoals in Ventura County. These future improvements should be made in coordination and partnership with the city of Carpinteria, Santa Barbara County and SBCAG. Table 4 describes the exiting pedestrian facilities for SR 150.

Figure 4: Carpinteria Bluffs Vista

BICYCLE FACILITY

SR 150 is a popular route for bicyclists who ride between Carpinteria and Ojai because of the surrounding beauty and low traffic volumes. The *City of Carpinteria Bicycle Master Plan* (2013) proposes a Class II facility for SR 150 from Carpinteria Avenue to East City Limits (PM R0.000 to PM 0.300). The SBCAG *Regional Active Transportation Plan* (2015) identifies a proposed Class III bicycle facility on SR 150 from the city limits to SR 192 (PM 0.300 to PM R1.598). This is depicted in *Figure 5*. Shoulders vary in width 4 to 8 feet between the US 101/SR 150 interchange and the Camino Carreta/Via Real intersection (PM R0.000 and PM 0.283). East of Camino Carreta to the Santa Barbara/Ventura County line (PM 0.283 to PM 2.917) there is no shoulder.

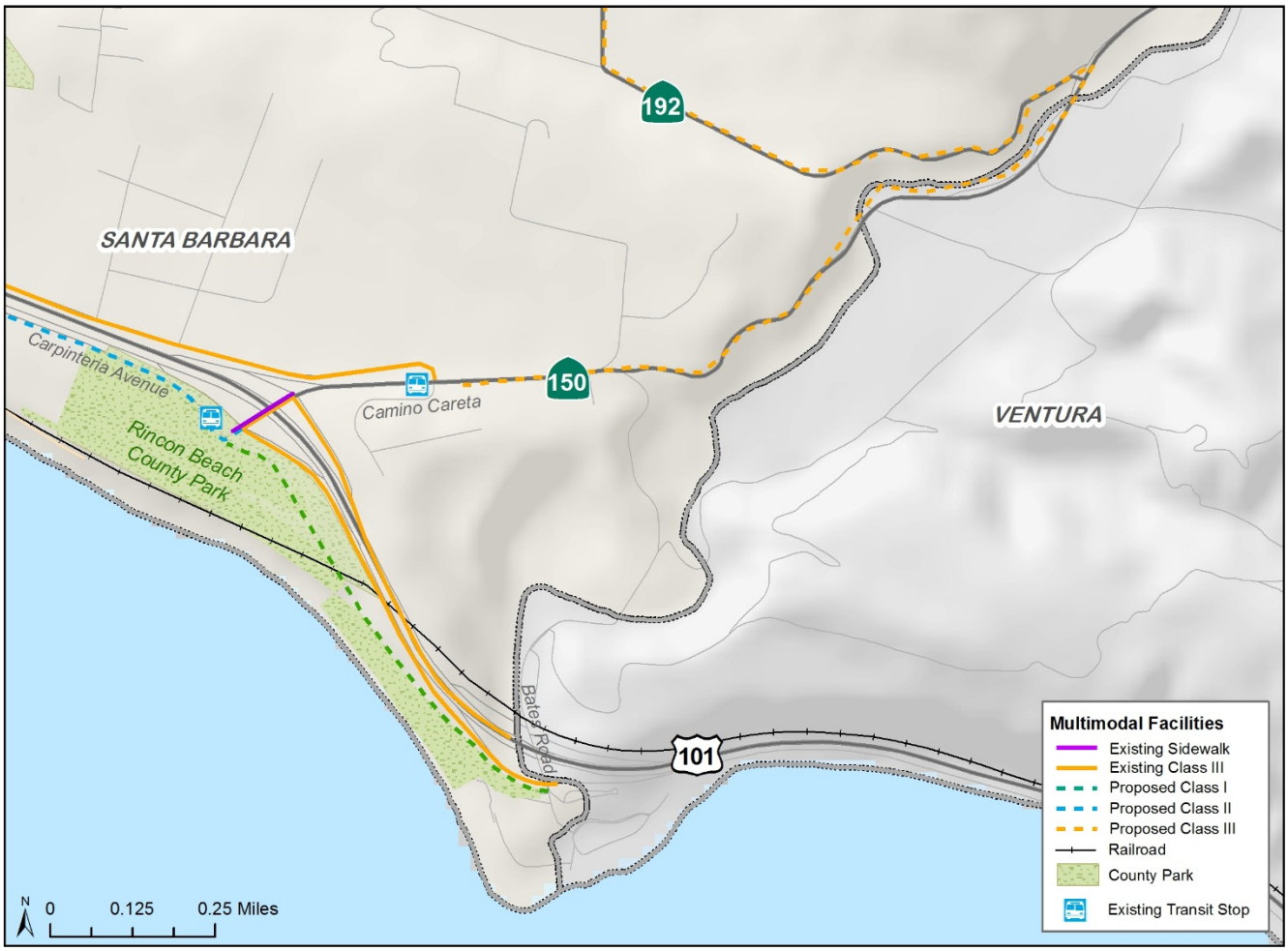

Figure 5: State Route 150 Multimodal Facilities Map

TRANSIT FACILITY

Public transit is accessible along SR 150 in two locations in the city of Carpinteria. One transit stop is located near the Carpinteria Avenue/SR 150 intersection and at the SR 150/Camino Carreta intersection (*Figure 6*). These transit stops are served by the 20 Carpinteria and 21X Carpinteria Express buses. These buses are operated through the Santa Barbara Metropolitan Transit District (MTD) and provide local service within the city of Carpinteria and a regional connection as far north as the downtown Santa Barbara Transit Center. The remainder of the corridor in District 5 is not served by transit. There are no park-and-ride facilities directly within the SR 150 corridor, but the city of Carpinteria recommends support for a future park-and-ride lot in close proximity to the corridor located southwest of the Bailard/US 101 interchange. This can be found in the city of Carpinteria 2003 *General Plan/Local Coastal Land Use Plan & Environmental Impact Report.*

Figure 6: Camino Carreta Transit Stop

FREIGHT

SR 150 is predominantly surrounded by low-density residential and agriculture land uses which generates moderate truck trips on the route. Approximately 3%-7% of traffic is made up of trucks. SR 150 is classified as an "Advisory" route since the kingpin-to-rear most-axle (KPRA) distance posted length is less than 30 feet. California Legal Trucks are allowed on SR 150. Existing truck routes direct trips on Via Real between the Bailard Avenue freeway interchange and Mark Avenue to Carpinteria Avenue, SR 150, and Via Real (east of Mark Avenue). US 101 remains the major freight corridor through the Santa Barbara County. *Figure 7* displays the California Truck Network designations for SR 150.

Figure 7: State Route 150 Truck Network Map

CORRIDOR PERFORMANCE

Segment 1 Corridor Performance Key Findings:

- Base Year (2012) Conditions: Congestion is low throughout the corridor in both directions.
- Horizon Year (2040) Conditions: Congestion remains low in both directions.

SEGMENT 1: SANTA BARBARA COUNTY

SR-101 TO SANTA BARBARA / VENTURA COUNTY LINE (SB PM R0.000-2.197)

System Characteristics

Segment 1 starts at US 101 and travels east along the southern border of the city of Carpinteria to the Santa Barbara/Ventura county line 0.53 miles east of SR 192. The route serves agriculture and low density housing, and travels through a rural and rolling terrain environment. Trucks make up 3% to 7% of total traffic along Segment 1.

System Operations

2012 Annual Average Daily Traffic (AADT) segment volume ranges from 2,800 to 5,000 vehicles per day (Table 4). Historic AADT data indicates a fairly steady growth in volumes between 1992 and 2012 (*Figure 8*). According to the SBCAG regional model (corrected with counts), the segment volume ranges from 3,200 to 7,200 vehicles per day by 2040. Daily Vehicle Miles Traveled (VMT) is projected between 400 and 500 in 2012 and 600 by 2040. Volumes decrease as one travels east along segment 1.

PM Peak Hour Data

In the base year and horizon year, congestion is low along the entire segment (*Figure 10*). Demand reaches 39% of capacity in 2040 (Appendix A).

Bottlenecks:

In both the base year and horizon year, there are no bottlenecks.

Table 4: State Route 150 Segment 1 Daily System Operations

AADT Base Year 2012	2,800 to 5,000
AADT Horizon Year 2040	3,200 to 7,200
AADT: Growth Rate (Vehicles/Year)	20 to 80
VMT Base Year 2012	9,700
VMT Horizon Year 2040	13,500

**2012 base year is established by Caltrans historic data and 2040 horizon year projections are based on the SBCAG regional travel model.*

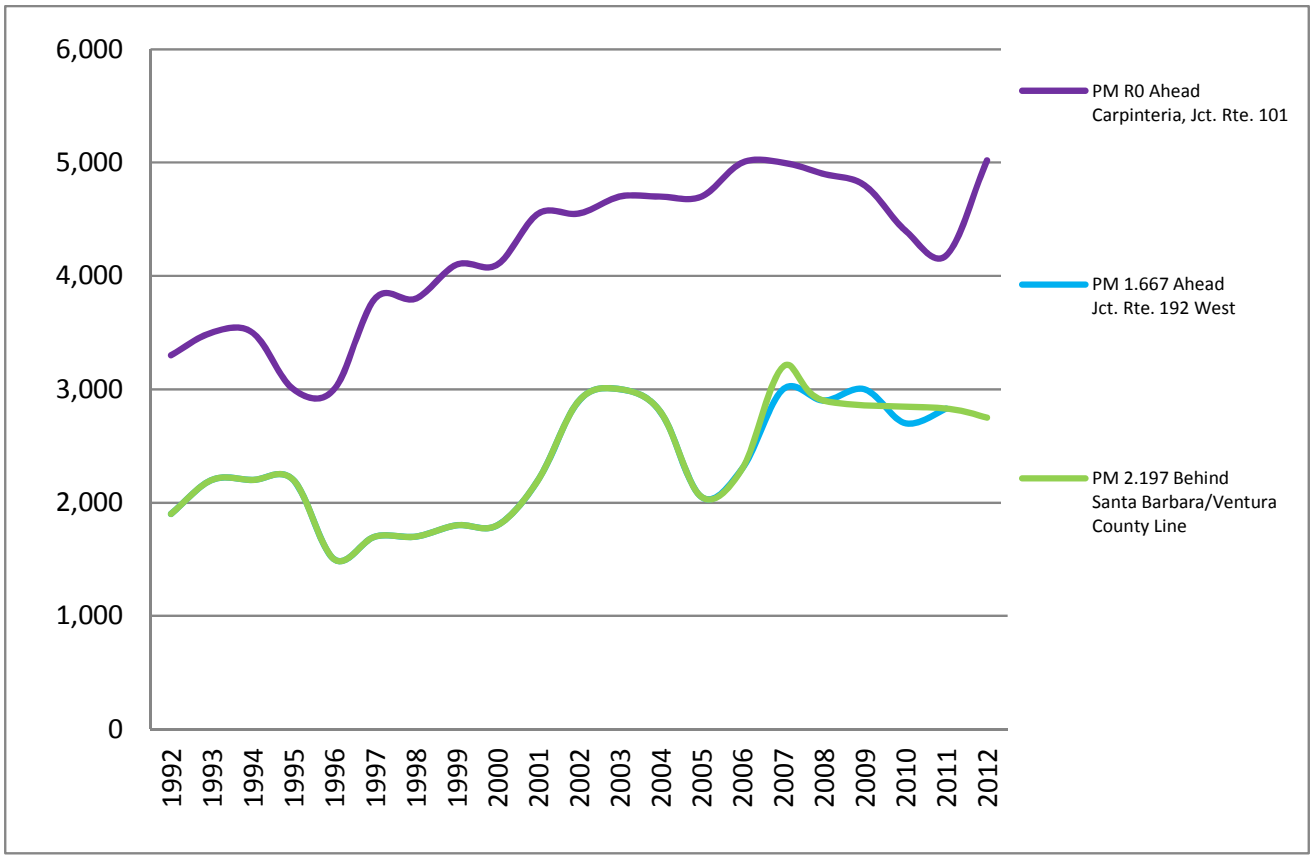

Figure 8: State Route 150 Segment 1 Historical AADT by Year

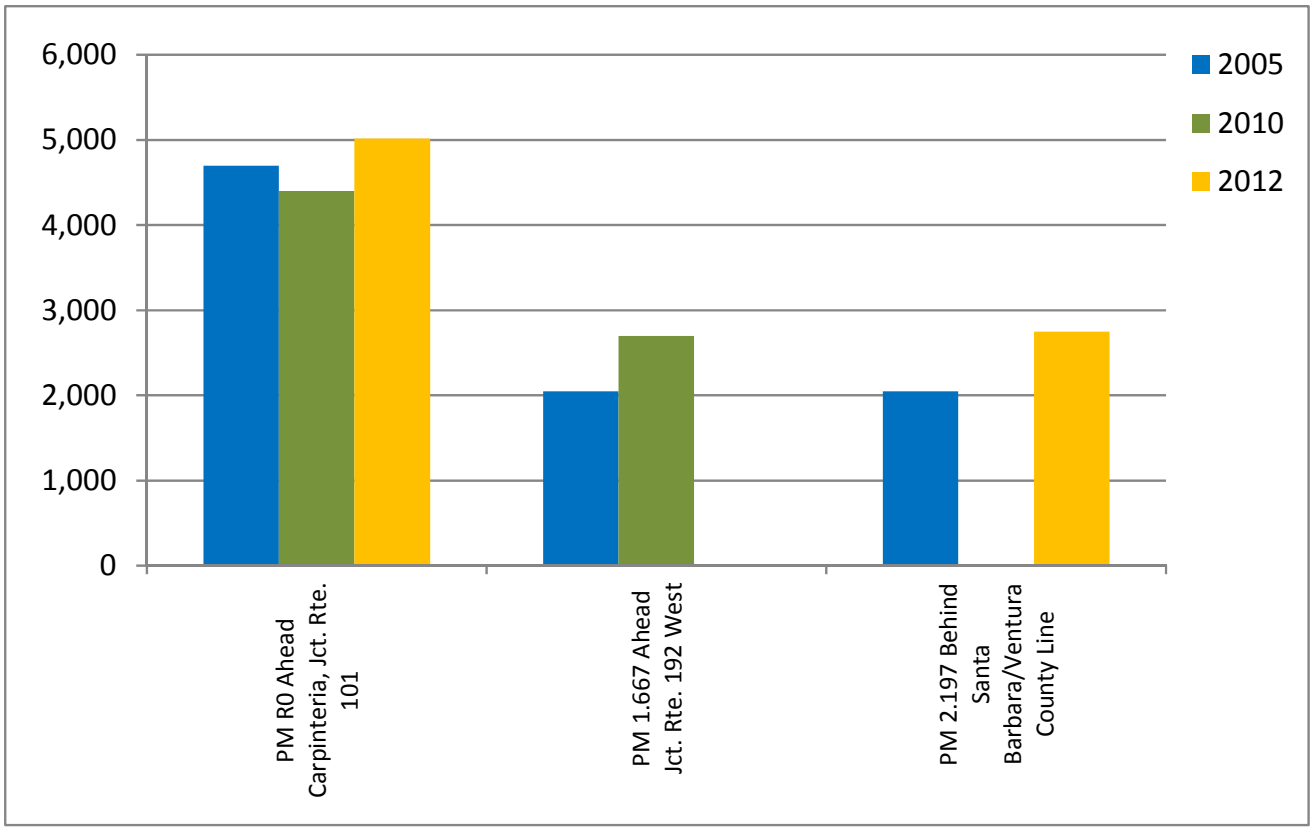

Figure 9: State Route 150 Segment 1 Historical AADT by Location

Table 5: State Route 150 Segment 1 Peak Hour Traffic Data

	Eastbound	Westbound
Segment Length (Miles)	2.174	
PM Peak Hour	5:00 - 6:00 PM	
PM Peak Hour Directional Split Base Year 2012	54.5% to 63.3%	36.7% to 45.5%
PM Peak Hour Directional Split Horizon Year 2040	48.7% to 60.8%	39.2% to 51.3%
PM Peak Hour Volume Base Year 2012	300 to 500	
	200 to 300	100 to 200
PM Peak Hour Volume Horizon Year 2040	300 to 700	
	200 to 300	100 to 300
PM Peak Hour Growth Rate (vehicles/year)	1 to 6	
PM Peak Hour VMT Base Year 2012	500	400
PM Peak Hour VMT Horizon Year 2040	600	600
PM Peak Hour Model VHT Base Year 2012	10	10
PM Peak Hour Model VHT Horizon Year 2040	10	10
PM Peak Hour V/C Base Year 2012	0.183 to 0.306	0.106 to 0.255
PM Peak Hour V/C Horizon Year 2040	0.195 to 0.369	0.126 to 0.390
PM Model Speed (mph) Base Year 2012	49.4 to 55.0 mph	49.4 to 55.0 mph
PM Model Speed (mph) Horizon Year 2040	49.3 to 55.0 mph	49.3 to 55.0 mph

**VHT = Vehicle Hours Traveled and VMT = Vehicle Miles Traveled*

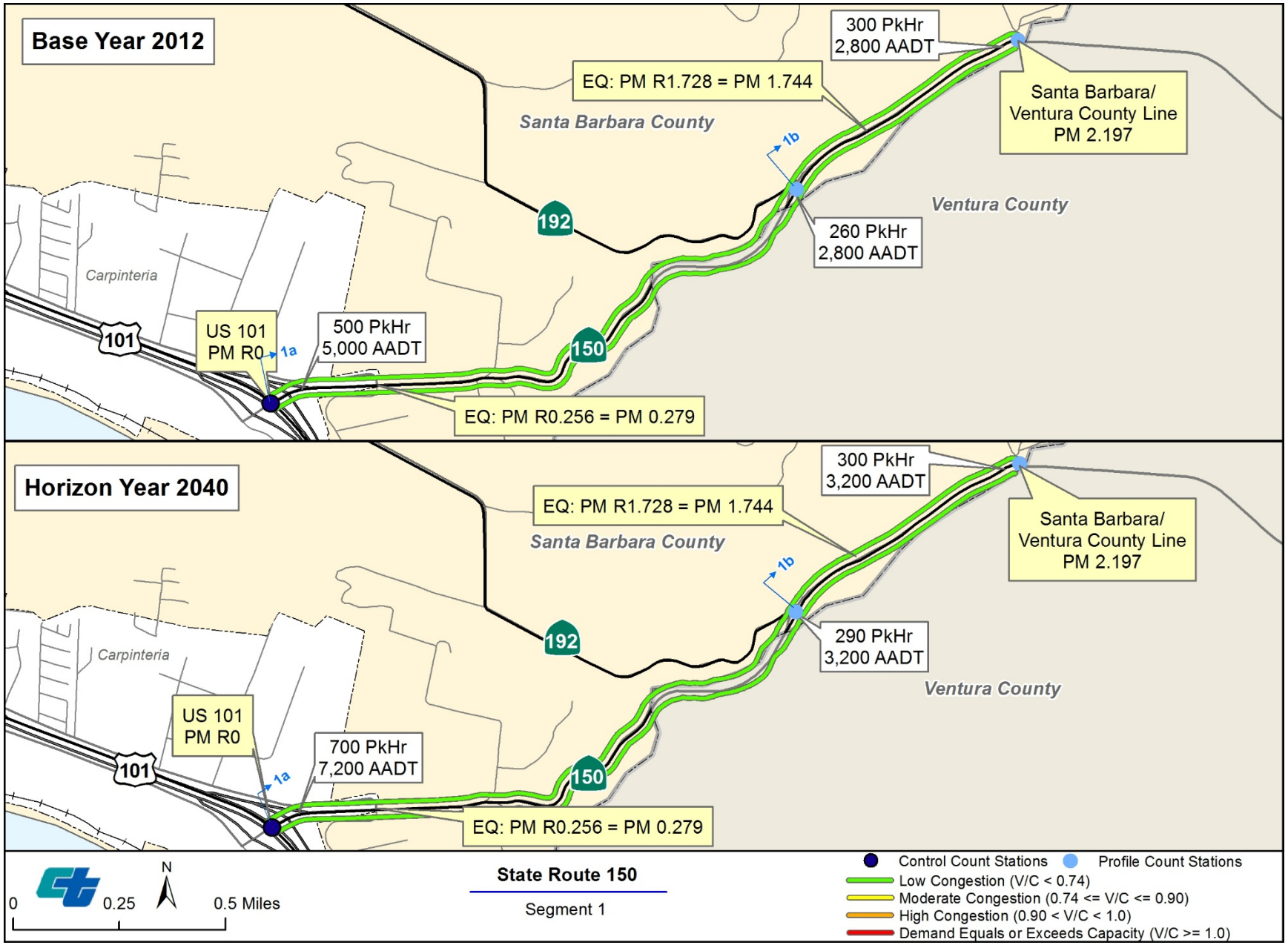

Figure 10: State Route 150 Base Year/Horizon Year Congestion Map

CORRIDOR CONCEPT

CONCEPT RATIONALE

The primary purpose of the SR 150 TCR is to develop strategies to manage the corridor and sustain existing transportation investments. The data analysis shows that the majority of the route should continue to operate under capacity through 2040. The concept for SR 150 is to maintain conventional highway with two lanes. This concept is based on preserving and managing the facility as it currently exists.

Table 6: State Route 150 Concept

Segment	Route Concept
US 101 to the Santa Barbara/Ventura county line (PM R0.000 to PM 2.197)	Maintain two-lane Conventional Highway.
Multimodal Improvements	
• Work in partnership with the city of Carpinteria to study walkable options between Camino Carreta and Carpinteria Avenue. • Coordinate with the city of Carpinteria, county of Santa Barbara, and SBCAG to further evaluate Class II and Class III bicycle improvements proposed in local and regional plans.	
Operational Improvements	
• Work with the city of Carpinteria to study reconstruction of the SR 150/US 101 interchange. This study could evaluate bridge widening, realignment of ramps, traffic controls, bike and pedestrian facilities and other aspects to improve mobility.	
Maintenance and Preservation	
• Maintenance efforts will focus on keeping the facility functional and extending the service life of the existing facility. • Maintain facility in a state of good repair to minimize traveler cost and delays.	

RESOURCES

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The following people contributed to the production of this document:

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SOURCES

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APPENDICES

The following appendices can be accessed at: http://www.dot.ca.gov/dist05/planning/system_planning.htm#TCRs.

Appendix A: SR 150 Data Sheet

Appendix B: About the TCR