Transportation Concept Report

State Route 144
District 5
August 2015

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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

Caltrans 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 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. It provides existing conditions information 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 144 in a 2040 horizon year. While the model forecasts traffic volumes to increase, a strategic combination of system management and preservation will allow the existing corridor to serve these volumes without major capacity expansions.

SR 144 CORRIDOR VISION

Caltrans' vision for the SR 144 corridor is to:

- Optimize the mobility of the existing facility for people and goods through Complete Streets strategies and preservation of the existing facility. This includes the following strategies:

    - Multimodal Improvements – Coordinate with the city of Santa Barbara and SBCAG in future Complete Streets bicycle and pedestrian planning efforts for SR 144.

    - Corridor Preservation – maintain and preserve the corridor including preventative maintenance, rehabilitation and reconstruction, and regulatory mandates.

SR 144 Key Findings & Route Concept

Caltrans vision for SR 144 would be to maintain the existing facility (Table 1). Key findings about SR 144 include the following:

- Over the next 20 years, the route has a low increase in volumes, serving a residential community that is largely at "build out". Future development is focused on infill in this area.
- A portion of SR 144, between U.S. 101 and Alameda Padre Serra was transferred to the City of Santa Barbara in 1999.
- The northernmost portion of SR 144 was closed from 2005 to 2012 due to mudslide damage. This section of the roadway was reopened in 2012.
- Right-of-way along SR 144 just north of Ranchito Vista (PM 1.8) was vacated January 2013.

SR 144 Candidate for Relinquishment

SR 144 serves the local residential neighborhoods adjacent to the route within the city of Santa Barbara. The route does not serve regional or interregional needs. Its primary use is for local trips. Greater flexibility for community Complete Streets projects would be achieved if the local agency would retain ownership of the route. This would be subject to negotiation with the city.

Table 1: Route Concept

Segment	Route Concept
At intersection of Alameda Padre Serra, E Montecito, N Salinas Street, and SR 144/Sycamore Canyon Road (PM 0.870) to SR 192 (PM 1.953).	Maintain two-lane conventional highway.
Multimodal Improvements	
• Support collaboration with the city of Santa Barbara and SBCAG in future multimodal planning of SR 144.	
Maintenance and Preservation	
• Maintain two lane conventional highway. • Promote preventative maintenance and rehabilitation of aging transportation infrastructure to prevent project deferrals, which can lead to more expensive, full-scale replacements.	

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 includes outreach to agency staff and technical advisory committees. Other mechanisms to solicit discussion and feedback include meetings and presentations to internal and external partners throughout the project schedule. Table 2 shows the stakeholders associated with SR 144.

Table 2: Key SR 144 Stakeholders

Stakeholder	Role
Santa Barbara County Association of Governments (SBCAG)	Metropolitan Planning Organization and Regional Transportation Planning Agency
City of Santa Barbara	Local municipality

CORRIDOR OVERVIEW

ROUTE DESCRIPTION

SR 144 is located in the city of Santa Barbara. According to the Streets and Highways Code Section 444(a), Route 144 begins at the intersection of Alameda Padre Serra, E Montecito, N Salinas Street (PM 0.870), and travels northwest through the steep hillside terrain bordering Montecito, and ends at SR 192 (PM 1.953). The route is described as one segment in Table 3 and depicted in *Figure 1*. SR 144 is also known locally as Sycamore Canyon Road.

Caltrans relinquished a portion of SR 144 (US 101 to Alameda Padre Serra) to the city of Santa Barbara in 1999 after constructing a yield-controlled five legged roundabout connecting Alameda Padre Serra, E Montecito, N Salinas Street, and SR 144/Sycamore Canyon Road. This was the first modern roundabout to be constructed on the California State Highway System. For the relinquished portion of Route 144, the city of Santa Barbara maintains signs directing motorists to the remaining portion of Route 144.

Table 3: State Route 144 Route Segmentation

Segment #	Location Description	County/Route/Beg. PM	County/Route/End PM
1	Alameda Padre Serra to SR 192	SB_144_0.870	SB_144_1.953

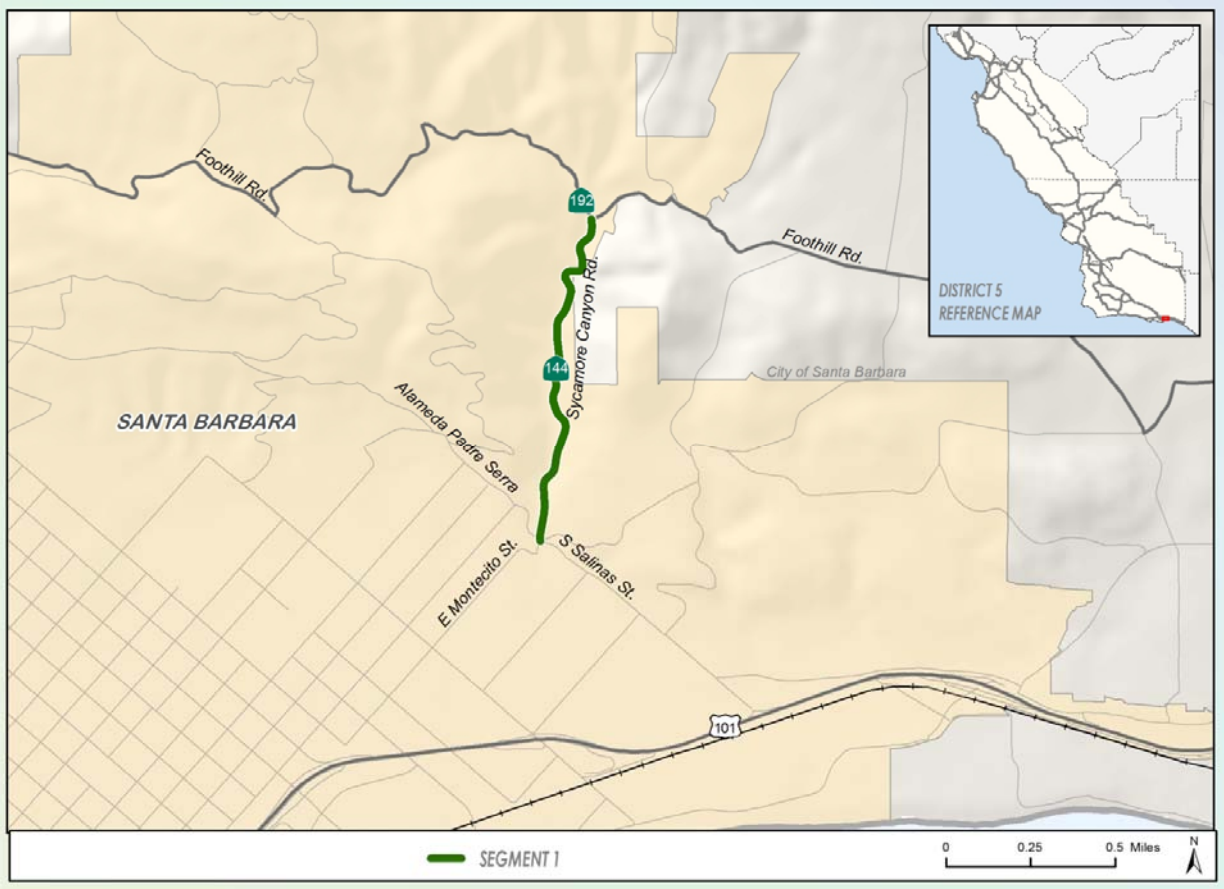

Figure 1: State Route 144 Segmentation

Route Purpose:

The primary purpose of SR 144 is to serve local residential trips within the city of Santa Barbara. SR 144 primarily serves vehicular needs for the surrounding neighborhoods.

Major Route Features:

SR 144 is proposed for a scenic route designation in order for the city to preserve the hillside and creek channel areas in their natural state. The city of Santa Barbara has the ability to create a city scenic route designation which would protect the appearance of any selected highway corridor through adopted land use regulations. There are no shoulders or pedestrian facilities on either side of the roadway.

SR 144 is located within the 100 year flood zone of Sycamore Creek which runs parallel to SR 144. The Sycamore Creek watershed serves Santa Barbara as an open space corridor and provides drainage from the adjacent hills as well as habitat and recreational benefits. Sycamore Creek is recognized as a critical habitat for the southern California steelhead, which is a protected species under the National Marine Fisheries Service. *Figure 2* shows the steelhead critical habitat locations surrounding SR 144.

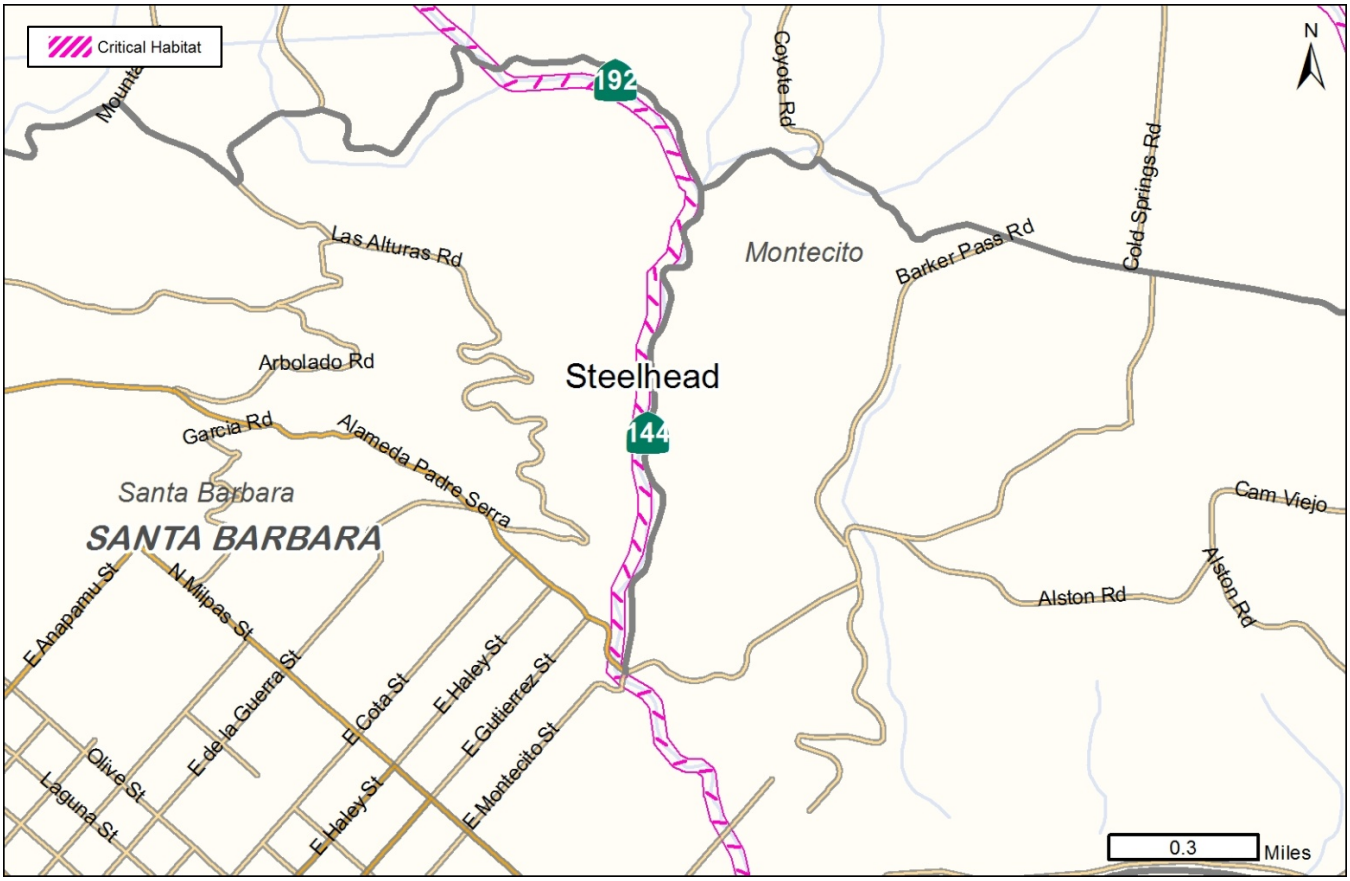

Figure 2: State Route 144 Critical Habitat

The northernmost portion of SR 144 was closed from January 2005 to April 2012 due to mudslide damage. The new slide also damaged Canyon View Road, a private road providing access to a number of the homes. Future activities will likely include discussion on the feasibility of ongoing preservation and protection from erosion.

Route Designations and Characteristics:

Table 4 provides the route designations and characteristics of SR 144.

Table 4: Route Designations and Characteristics

Segment	1
Freeway & Expressway	No
Access Control	Conventional
National Highway System	No
Strategic Highway Network	No
Scenic Highway	No
Interregional Road System	No
Federal Functional Classification	Major Collector
Goods Movement Route	No
Truck Designation	Advisory – KPRA is less than 30 ft.
Rural/Urban/Urbanized	Urban
Metropolitan Planning Organization	SBCAG
Regional Transportation Planning Agency	SBCAG
Congestion Management Agency	SBCAG
Local Agency	City of Santa Barbara and Santa Barbara County
Tribes	None
Air District	Santa Barbara County Air Pollution Control District
Terrain	Rolling

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.

The prevalent land use located directly along SR 144 includes two classifications of Low Density Residential: maximum one dwelling unit per acre and maximum three dwelling units per acre. In the city of Santa Barbara, Low Density Residential places restrictions on the number of dwelling units for single family residential areas in order to preserve the hillside environment.

In addition to the land use designations found in the city of Santa Barbara, approximately half of SR 144 travels directly adjacent to Montecito. The most notable land use in the area of Montecito adjacent to SR 144 is Low Density Residential 2-E-1. The County defines Low Density Residential zone 2-E-1 to have a minimum lot and building site area of 2 acres.

SR 144 is within the Cold Spring School District. Cold Springs Elementary School, which serves students in the Montecito foothills, is within close proximity to SR 144. Additionally, SR 144 serves travelers to Westmont College, Parma Park, and Hale Park. *Figure 3* shows surrounding land use designations around SR 144 in the Santa Barbara and Montecito regions.

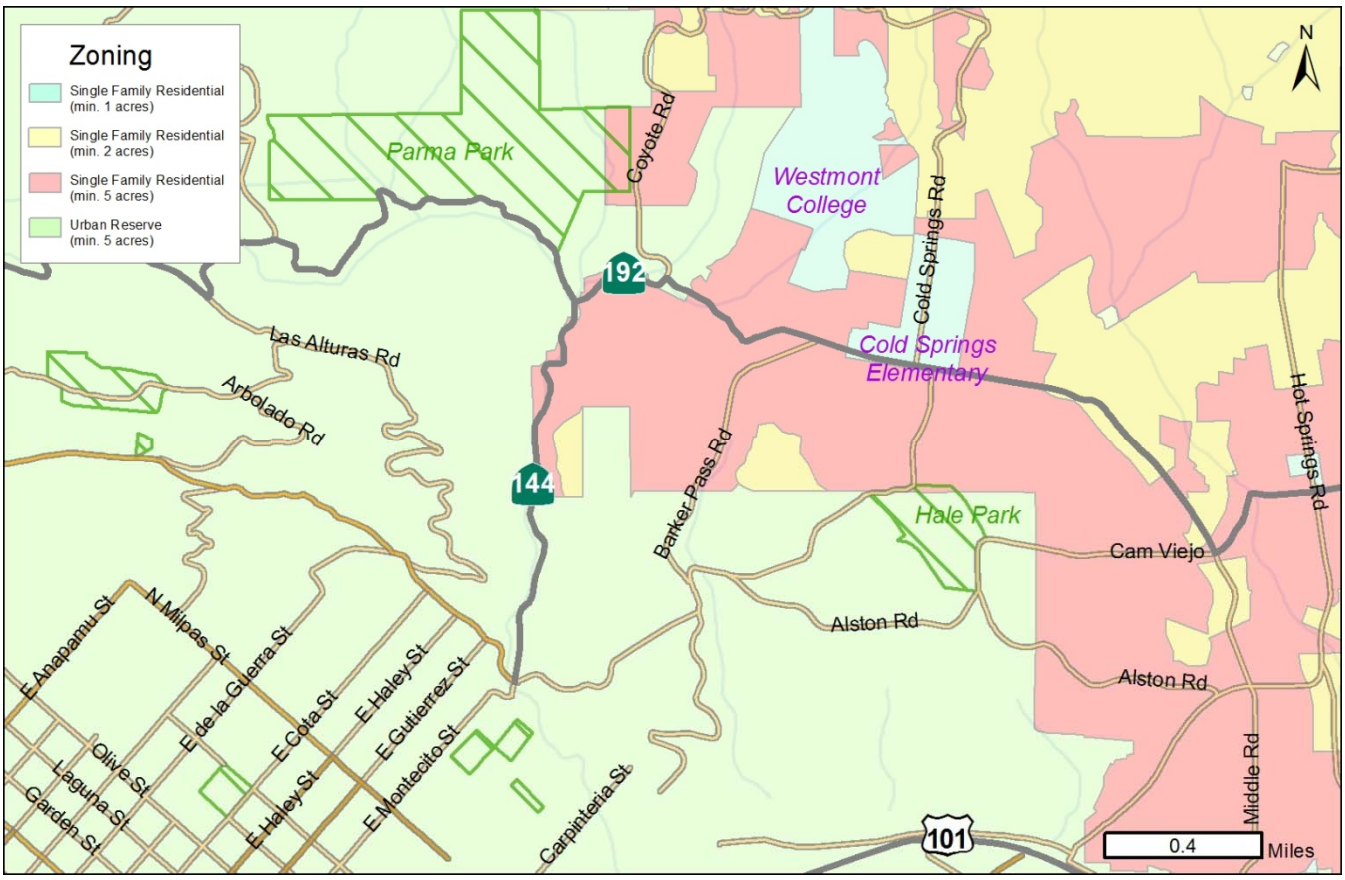

Figure 3: State Route 144 Land Use

The city of Santa Barbara has identified the development of affordable housing as a priority for future growth. Resources such as water, wastewater treatment capacity, and other key infrastructure will be carefully managed to ensure future growth does not exceed available resources over the lifetime of the city's 2011 General Plan Update. The Plan sets the maximum allowable non-residential square footage through the year 2030 to 1.35 million net new square feet over the entire city.

The city's percentage of total County population has been decreasing over time. As of 2006, the city of Santa Maria became the largest city in Santa Barbara County. The Regional Growth Forecast (RGF) 2005-2040 prepared by SBCAG indicates that a population shift has occurred from the South Coast region of the County to the North County. The city of Santa Barbara's population in 2010 was 88,410 (U.S. Census, 2010) and is projected to reach approximately 93,000 by the year 2040 (Santa Barbara General Plan, 2011); representing a 3.8 percent total change or a 0.1 percent annual average increase from 2000 to 2040.

SR 144 is eligible under the State Scenic Highways Program. The Mesa and Riviera hillsides are important resources for the city of Santa Barbara. Future development of these hillsides is limited by the city's Slope Density Ordinance and includes a limited number of developable lots. Potential development of single-family residences requires grading and vegetation clearing for fire protection, impacting these valuable scenic resources.

Travel Patterns:

Residents who live near SR 144 travel to other regions via U.S. 101 in the south or SR 192 in the north. SR 144 is has an annual average daily traffic (AADT) of 3,600 vehicles, as of 2012. Volumes on SR 144 are projected to increase at a rate of 10 vehicles per year and expected to reach 3,800 vehicles by 2040. Vehicle miles traveled (VMT) in 2012 is 3,800 miles and projected to reach 4,000 miles by 2040. *Figure 4* shows the Peak Hour (PkHr) and AADT congestion on SR 144 for the Base Year (2012) and the Horizon Year (2040).

As of 2012, the PM peak hour (from 5:00 PM to 6:00 PM) showed a directional split of 50.1% of vehicles traveling eastbound and 49.9% traveling westbound. The PM peak hour projection for 2040 shows similar splits (48.7% eastbound and 51.3% westbound).

SR 144 has a PM Peak Hour Volume/Capacity (V/C) Ratio of 0.237 in the eastbound direction and 0.236 in the westbound, as of 2012. SR 144 is projected to experience a PM Peak Hour V/C Ratio of 0.235 eastbound and 0.248 westbound for the horizon year of 2040.

PM model speed in miles per hour (mph) for the 2012 base year was 40 mph in both directions. Similarly, the PM model speed for the 2040 horizon year is projected to be 40 mph.

Future Development:

Future development in the area surrounding SR 144 is limited to infill development in order to preserve the surrounding hillsides, according to the city's Slope Density Ordinance. SR 144 features a portion of roadway within the city's largest currently active existing slide area. Additionally, SR 144 crosses active and potentially active fault lines.

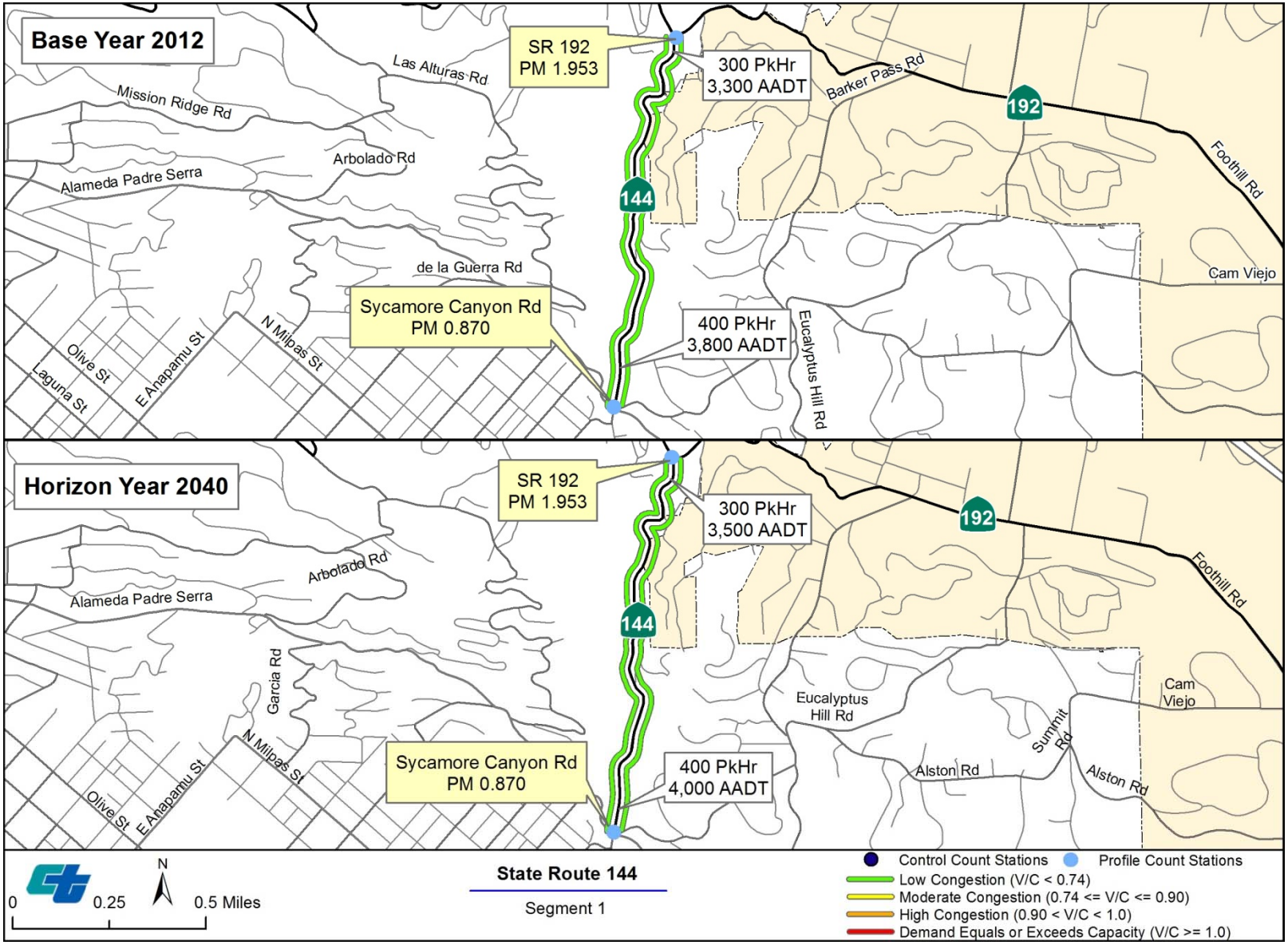

Figure 4: State Route 144 Base Year/Horizon Year Congestion

SYSTEM CHARACTERISTICS

Table 5 shows no change to existing facility characteristics proposed in the 20-25 Year facility concept.

Table 5: Existing Facility Characteristics

Segment	1
Facility Type	Conventional
General Purpose Lanes	2
Lane Miles	2.126
Centerline Miles	1.063

PEDESTRIAN FACILITY

SR 144 does not have pedestrian facilities, such a sidewalks. In coordination with local planning efforts, evaluation of appropriate pedestrian improvements along the corridor should consider ways to accommodate pedestrian travel along the SR 144 corridor in order to provide walk-able options from nearby residences to surrounding open space designations and the city's urban center. The city's Pedestrian Master Plan (2006) does not identify existing or planned pedestrian facilities along the corridor. Should the city consider improvements in the future, these improvements should be made in coordination with Caltrans and SBCAG. Table 6 provides information about existing pedestrian facilities and access on SR 144.

Table 6: State Route 144 Pedestrian Facility

Segment	1
Pedestrian Access Prohibited	No
Sidewalk Present	No, 0 foot Shoulder Width

BICYCLE FACILITY

Bicycles are permitted along SR 144. In California, a person riding a bicycle has all the rights and is subject to all provisions applicable to the driver of a vehicle and as such may operate on any street, road, or highway where they are not specifically prohibited.

Limitations due to the physical characteristics of the topography along the corridor present challenges for widening shoulders for bicycle facilities along SR 144. An additional issue related to bicycles is the lack of alternative routes parallel to SR 144 able to accommodate bicycles during construction. Table 7 shows bicycle facilities and access on SR 144.

Table 7: State Route 144 Bicycle Facility

Segment	1
Bicycle Access Prohibited	No
Facility Type	No Bikeway Designation
Parallel Facility Present	No

There are no shoulders along the entire SR 144 segment. Caltrans determines shoulder width based on multiple variables including but not limited to facility type, traffic volume, number of lanes, and design speed. *Figure 5* shows existing shoulder widths for SR 144 as zero feet. Neither the city of Santa Barbara's Bicycle Master Plan (2008), nor SBCAG's Regional Active Transportation Plan (2015) identify existing or planned bicycle facilities for SR 144.

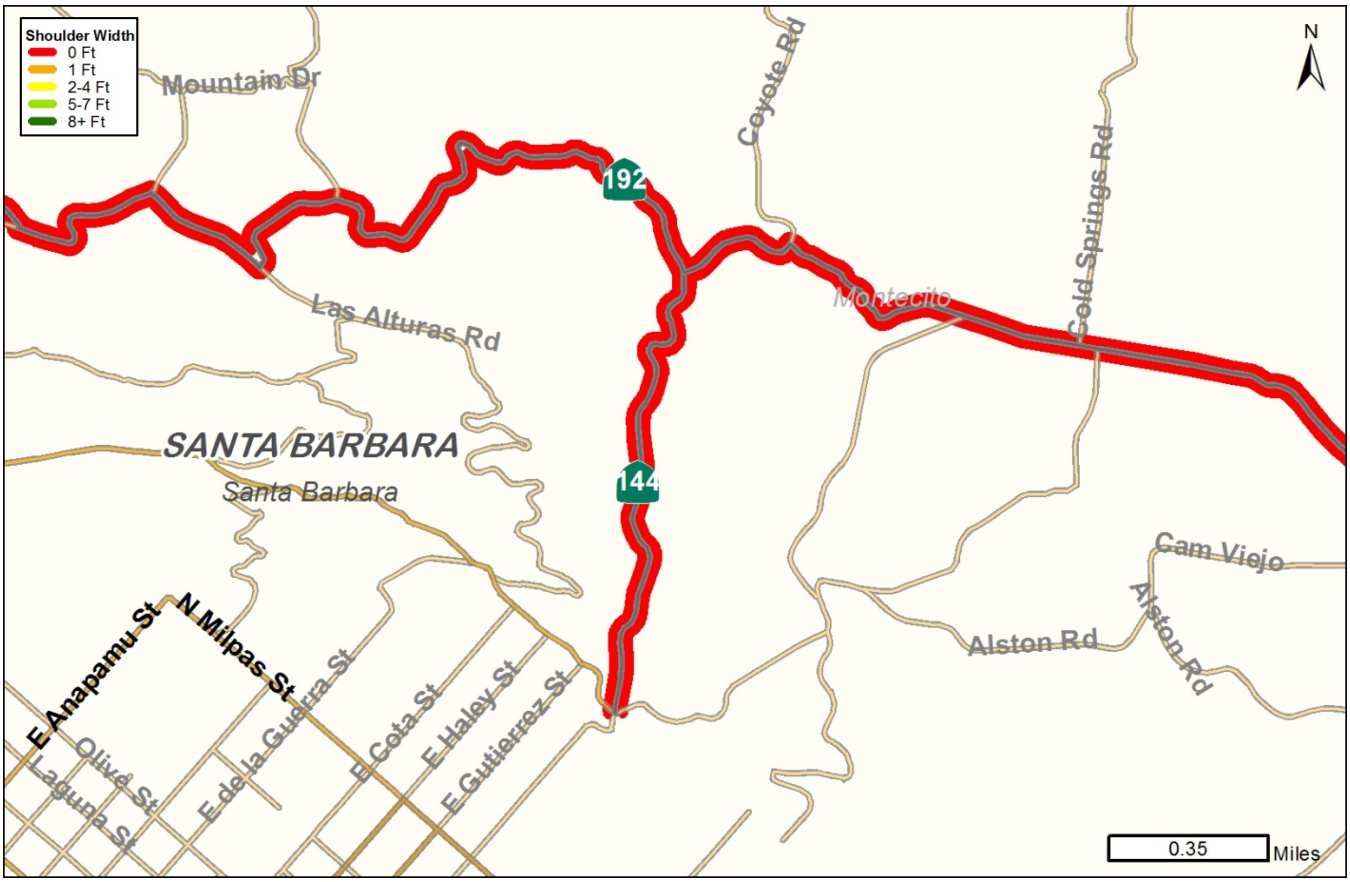

Figure 5: State Route 144 Shoulder Width

TRANSIT FACILITY

Public transit does not serve SR 144.

FREIGHT

SR 144 is predominantly surrounded by low-density residential neighborhoods which generally do not require frequent truck access. Approximately 1% of traffic is made up of trucks. U.S. 101, located within the region, is a major freight corridor through the city of Santa Barbara. SR 144 is classified as "Advisory" since the kingpin-to-rearmost-axle distance (KPRA) posted length is less than 30 feet. California Legal Trucks are allowed on SR 144. *Figure 6* shows the regional truck network designations for SR 144 and the surrounding area.

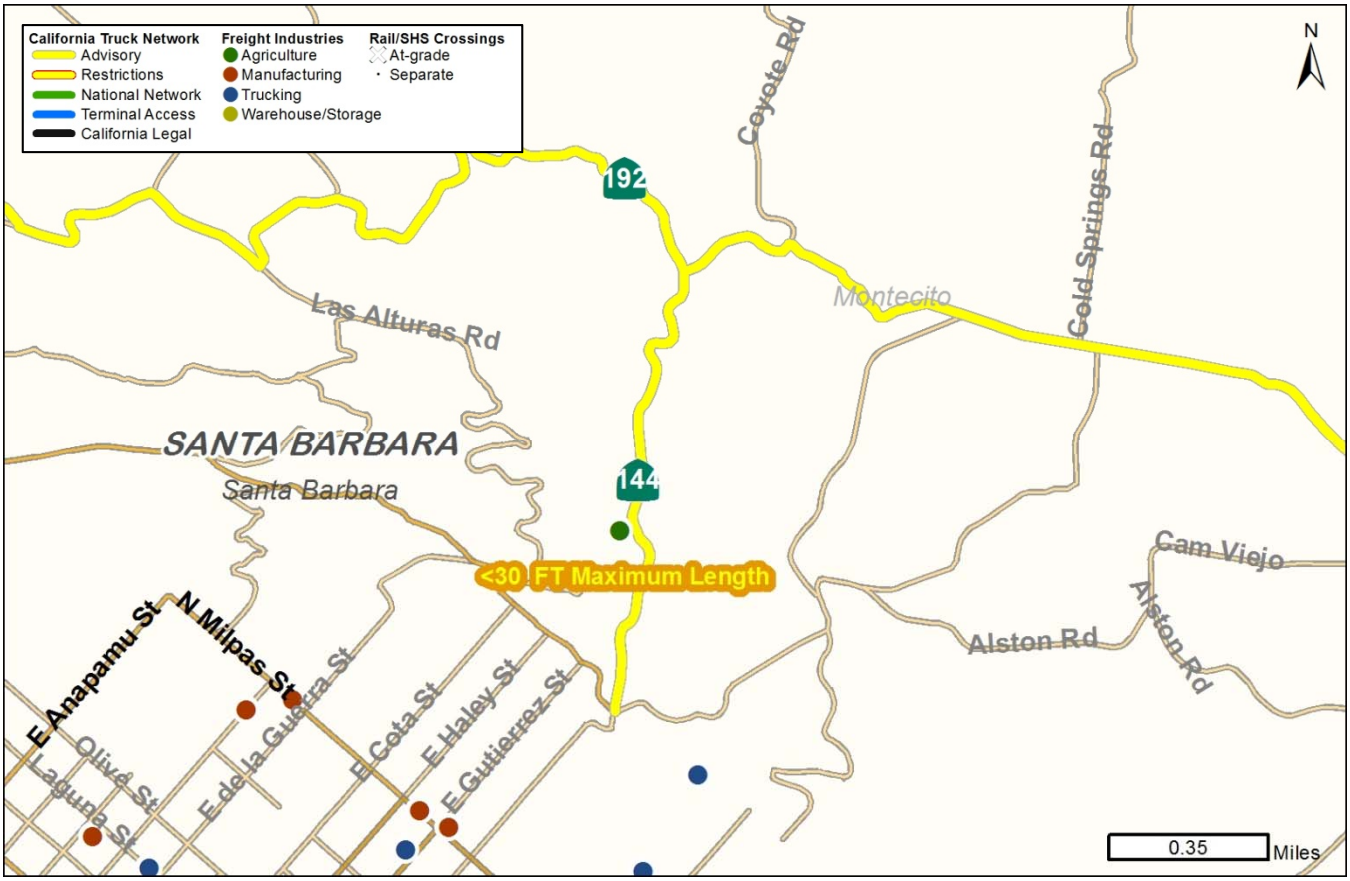

Figure 6: State Route 144 Truck Network

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

ALAMEDA PADRE SERRA TO SR-192 (SB PM 0.890-1.953)

System Characteristics:

Segment 1 starts just north of the E Montecito Street and N. Salinas Street round-about and travels northward through a mostly rural residential area for just over a mile to join SR 192. Trucks make up 1% of total traffic along Segment 1.

System Operations:

2012 Annual Average Daily Traffic (AADT) segment volume is 3,600 vehicles per day (Table 8). Historic AADT data indicates no growth in volumes between 1992 and 2012 (*Figure 7).* According to the SBCAG regional model (corrected with counts), the segment volume is 3,800 vehicles per day by 2040.

PM Peak Hour Data:

In the base year and horizon year, congestion is low along the entire segment. Demand reaches 25% of capacity in 2040 (Appendix A).

Bottlenecks:

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

Table 8: State Route 144 Segment 1 Daily System Operations

AADT Base Year 2012	3,600
AADT Horizon Year 2040	3,800
AADT: Growth Rate (Vehicles/Year)	10
VMT Base Year 2012	3,800
VMT Horizon Year 2040	4,000

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

Additional information about the technical methodology and performance measures can be found in Appendix A.

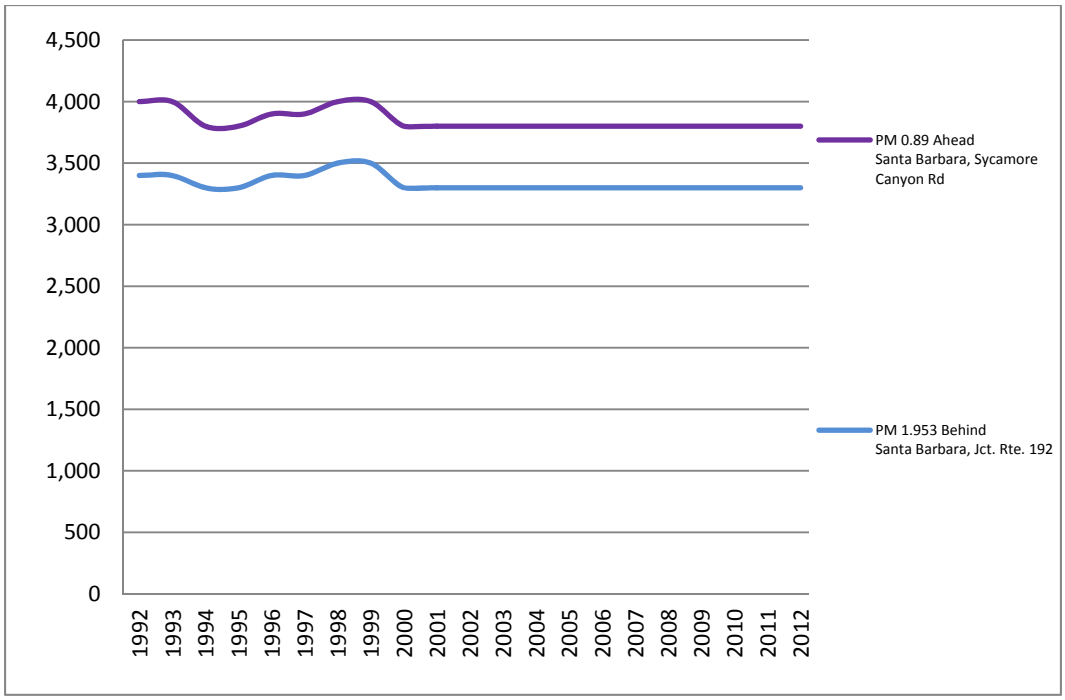

Figure 7: State Route 144 Segment 1 Historical AADT by Year

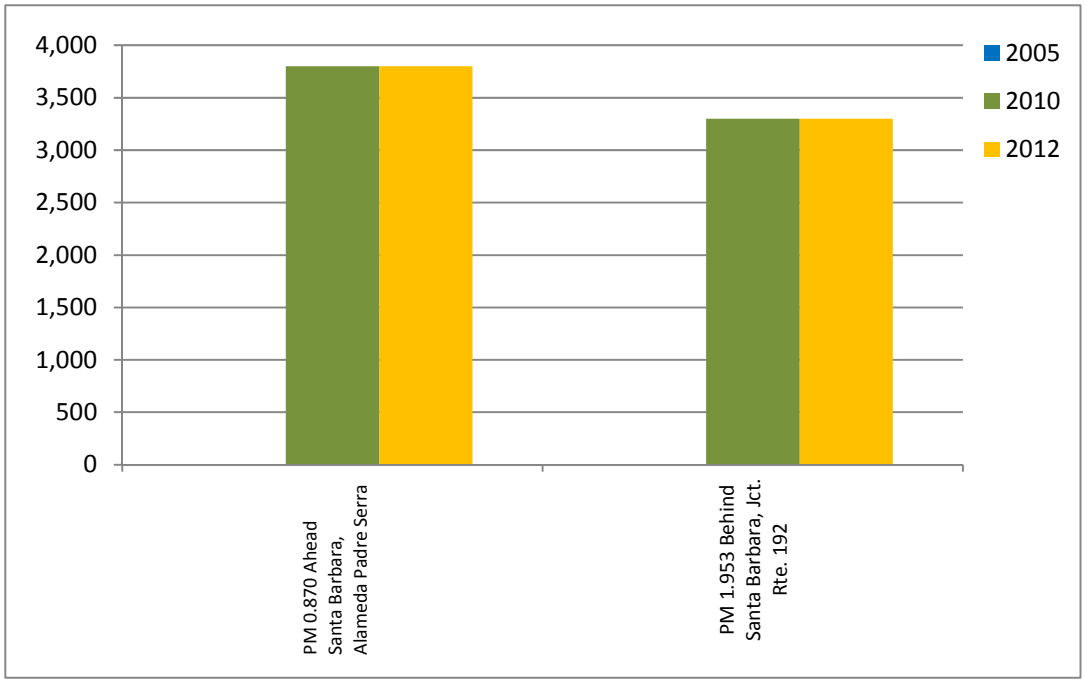

Figure 8: State Route 144 Segment 1 Historical AADT by Location

Table 9: Segment 1-Peak Hour Traffic Data

	Eastbound	Westbound
Segment Length (Miles)	1.063	
PM Peak Hour	5:00 - 6:00 PM	
PM Peak Hour Directional Split Base Year 2012	50.1%	49.9%
PM Peak Hour Directional Split Horizon Year 2040	48.7%	51.3%
PM Peak Hour Volume Base Year 2012	400	
	200	200
PM Peak Hour Volume Horizon Year 2040	400	
	200	200
PM Peak Hour Growth Rate (vehicles/year)	0	
PM Peak Hour VMT Base Year 2012	200	200
PM Peak Hour VMT Horizon Year 2040	200	200
PM Peak Hour Model VHT Base Year 2012	5	5
PM Peak Hour Model VHT Horizon Year 2040	5	5
PM Peak Hour V/C Base Year 2012	0.237	0.236
PM Peak Hour V/C Horizon Year 2040	0.235	0.248
PM Model Speed (mph) Base Year 2012	40.0 mph	40.0 mph
PM Model Speed (mph) Horizon Year 2040	40.0 mph	40.0 mph

CORRIDOR CONCEPT

CONCEPT RATIONALE

The primary purpose of the SR 144 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 at or under capacity through 2040. The concept for SR 144 is a **conventional highway with two lanes at capacity**. The concept for the route is physically and functionally similar to the route as it exists today. This concept is based on preserving and managing the existing facility in the most efficient way possible.

The following tables identify management strategies that should be pursued to manage SR 144.

Table 10: Projects and Strategies to Achieve Route Concept

Segment	Route Concept
At intersection of Alameda Padre Serra, E Montecito, N Salinas Street, and SR 144/Sycamore Canyon Road (PM 0.870) to SR 192 (PM 1.953).	Maintain two-lane conventional highway.
Multimodal Improvements	
• Support collaboration with the city of Santa Barbara and SBCAG in future multimodal planning of SR 144.	
Maintenance and Preservation	
• Maintain two lane conventional highway. • Promote preventative maintenance and rehabilitation of aging transportation infrastructure to prevent project deferrals, which can lead to more expensive, full-scale replacements.	

Note: There are no planned and programmed projects within the SR 144 corridor.

RESOURCES

LIST OF PREPARERS

The following people contributed directly and significantly to the production of this document and the project in general and were instrumental in managing the project through to the preparation of this document.

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Fifteen years of experience in preparing TCRs, CSMPs, and environmental documents for CEQA/NEPA. Responsible for supervision and review of this document.

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Streder, Melissa – Associate Transportation Planner

Six years of experience in transportation planning. Facilitated final review and approval of TCR.

Coles, Charlie – Student Assistant

Master of City and Regional Planning and Civil Engineering Candidate in Transportation Planning at California Polytechnic, San Luis Obispo. Responsible for preparation of TCR.

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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 144 Data Sheet

Appendix B: About the TCR