



STATE ROUTE-94 RURAL TRANSPORTATION CONCEPT SUMMARY

This Transportation Concept Summary (TCS) for rural portions of State Route 94 in District 11 serves as an analysis tool and conceptual long-range guide for future investment decisions in the transportation corridor.

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 TCS is subject to modification as conditions change and new information is obtained. Although planning information is dynamic and ever-changing, the District 11 Planning Division makes every effort to ensure the accuracy and timeliness of the information contained in the TCS. The information in the TCS does not constitute a standard, specification, or regulation, nor is it intended to address design policies and procedures. If you encounter information that you deem to be inaccurate or unreliable, please contact Kim.Sturmer@dot.ca.gov or at 619-688-6967.



CALIFORNIA DEPARTMENT OF TRANSPORTATION
PLANNING DIVISION
Planning Leads To Superior Solutions

Caltrans
DISTRICT 11

Rural SR 94 Transportation Concept Summary May 2011

CORRIDOR PURPOSE

This document discusses transportation issues on State Route 94 (SR-94) east of Avocado Boulevard. A separate document on the urban portion of SR-94 has been developed. However, in some sections of this report, transportation issues that affect the entire route are included.

SR-94 is a principal east-west route which carries interregional, intraregional, and to a lesser extent international travel. The western portion of the route (P.M. SD 1.4- P.M. 14.9) serves as a major commuter route. The remainder of the route serves outlying rural communities located in the southeastern portion of San Diego County. It also provides access to SR-188 (P.M. SD 38.1) which allows for vehicular travel to the International Border at Tecate, Mexico. SR-94 traverses the cities of San Diego, Lemon Grove, and La Mesa, and the communities of Spring Valley, Casa De Oro, Rancho San Diego, Jamul, and other small rural communities to the east. SR-94 intersects most of the major north-south metropolitan routes, including Interstate 5 (I-5), I-15, I-805, State Route 125 (SR-125), and SR-54. State routes parallel to SR-94 include I-8 and a portion of SR-54.

CORRIDOR NEEDS

Portions of the SR-94 corridor east of Avocado Boulevard currently operate at unacceptable levels of service during the morning and afternoon peak periods, and this congestion is expected to increase in the future if no improvements are made.

There are currently very limited travel choices in the SR-94 corridor. There is limited or non-existent regional transit service on SR-94 to major job centers. Existing transit routes on local streets operate at or near capacity. These local transit trips are very slow and usually require multiple transfers.

In the eastern portion of the SR-94 corridor beyond Melody Road, there are portions of the roadway where sight distance is limited and there are very few opportunities for passing slower moving vehicles. In addition, maneuverability for trucks and vehicular traffic is limited due to non-standard lane and shoulder widths. Slow moving commercial vehicle traffic causes traffic flow to slow down and form queues behind these slow moving vehicles. Improvements are needed in this portion of SR-94 to increase sight distance, reduce delays and improve travel times.

CORRIDOR ANALYSIS

Improvements will be needed in the SR-94 corridor to improve highway operations while maintaining current capacity. SR-94 is the main highway that provides access

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from the San Diego urban area to the southeastern communities of San Diego County and to the Tecate Port of Entry (POE). Travel demands along SR-94 have increased due to growth in the corridor, surrounding land use changes, and the growth in international trade and travel between the United States and Mexico. The corridor also provides access to recreational areas and users both on a seasonal and weekend basis.

CORRIDOR TRAFFIC

SR-94 will be experiencing an increase in traffic in the future. This increased traffic will lead to higher levels of congestion unless corridor improvements are developed. The following table shows existing and future traffic conditions for SR-94.

Existing and Future Average Weekday Traffic

LOCATION	2009 AWDT¹	2009 LOS²	2030 AWDT³	2030 LOS²
Avocado Blvd to Jamacha Blvd	45,900	C	76,900	E
Jamacha Blvd to Jamacha Rd/Route 54	67,000	E	82,900	F
Jamacha Rd/Route 54 to Steele Canyon Rd	17,700	D	39,700	F
Steele Canyon Rd to Lyons Valley Rd	18,400	D	35,700	F
Lyons Valley Rd to Honey Springs Rd	11,400	C	19,800	F
Honey Springs Rd to Otay Lakes Rd	6,800	B	12,300	D
Otay Lakes Rd to Dulzura	7,100	B	15,800	D
Dulzura to Route 188/Tecate Rd	5,800	B	12,300	C
Route 188/Tecate Rd to Buckman Springs Rd	2,100	B	3,200	B
Buckman Springs Rd to Old Highway 80	2,300	B	3,300	B
Old Highway 80 to Ribbonwood Rd	1,600	B	2,000	B
Ribbonwood Rd to Interstate 8	1,300	B	2,000	B

¹ 2009 AWDTs derived from Caltrans District 11 Traffic Census Branch AADT's

² Level of Service (LOS) is based on sketch level planning analysis and is not to be used for design purposes. LOS may differ based on other factors such as slow moving trucks, limited site distance, and non-standard lanes and shoulder widths.

³ 2030 AWDTs are from the SANDAG Regional Transportation Model.

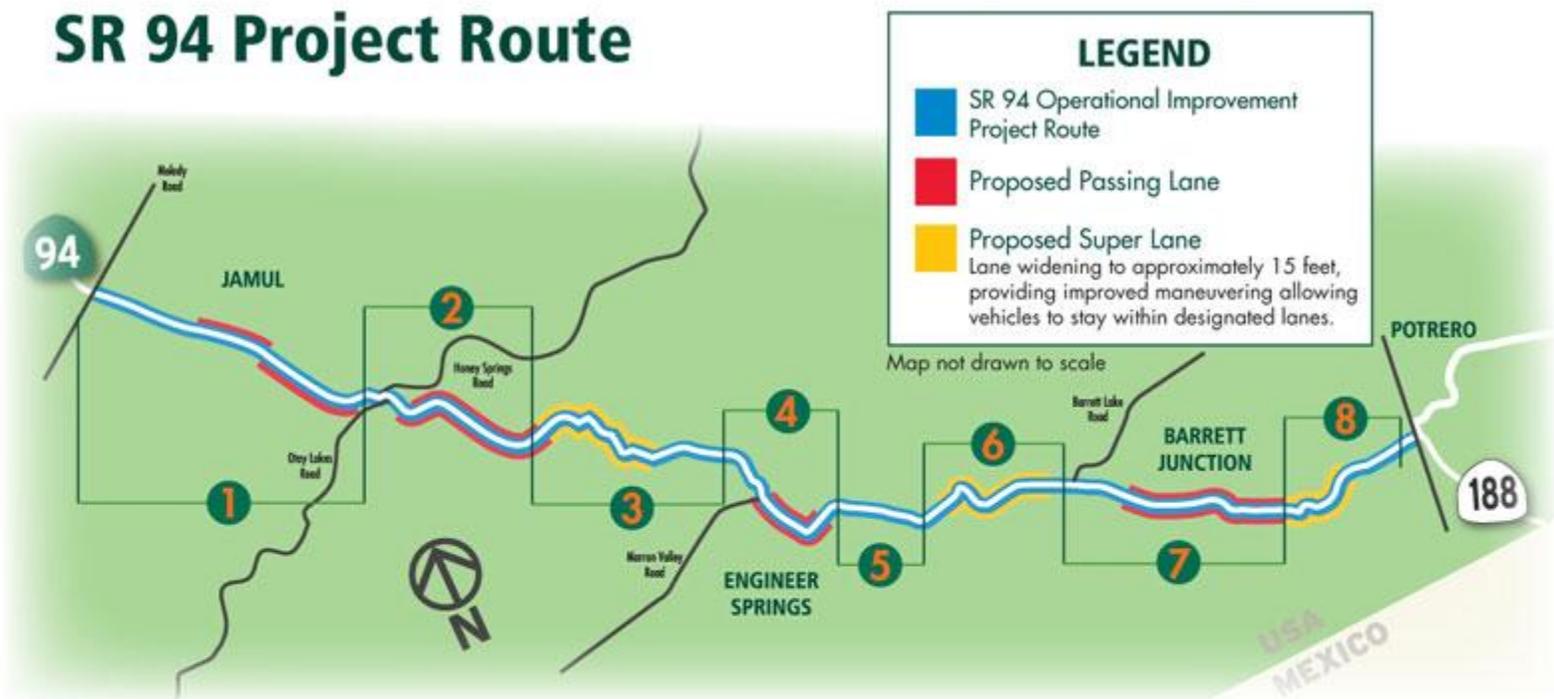
RECOMMENDED CORRIDOR IMPROVEMENTS

Traffic operations and travel speeds vary along the SR 94 project corridor. In most areas, traffic operations are adequate with appropriate travel speeds and a low accident history. However, portions of SR-94 from Melody Road to SR-188 suffer from poor traffic operations and reduced travel speeds. These areas are potentially hazardous due to the existing highway geometrics and terrain. In order to address these issues, a series of transportation improvements collectively known as the "SR-94 Operational Improvement Project" have been developed.

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Five different types of improvements are included in this project. The improvements are realignment of deficient curves, installation of passing lanes, widening of the traveled way, installation of standard 8-foot shoulders, and adding/improving turn pockets. Within the project area, deficient curves are identified as State Transportation Assistance Act (STAA)-deficient curves (referred to as STAA curves), where trucks have off-tracking and/or passing problems, and non-standard curves for a design speed of 40 mph (under 550 ft in radius). Within the project limits, twenty-eight curves were identified as STAA curves, while eighteen curves were identified as non-standard. Passing lanes were determined to be feasible at five locations, and four locations were identified for widening.

The following graphic shows these proposed improvements.



Proposed Improvements Along the Route

LOCATION 1 Miles 20.5 – 24.4

- Add new eastbound and westbound passing lanes
- Pavement widening at select locations
- Realign deficient curves

LOCATION 2 Miles 24.4 – 26.9

- Add new eastbound and westbound passing lanes
- Pavement widening at select locations
- Realign deficient curves

LOCATION 3 Miles 26.9 – 29.2

- Realign deficient curves
- Widen lanes to 15 feet
- Add 8-foot-wide shoulders

LOCATION 4 Miles 29.2 – 30.9

- Add a new westbound passing lane and extend eastbound passing lane
- Realign deficient curves
- Pavement widening at select locations

LOCATION 5 Miles 30.9 – 32.1

- Realign deficient curves
- Pavement widening at select locations

LOCATION 6 Miles 32.1 – 35.0

- Add new eastbound passing lane
- Realign deficient curves
- Widen westbound lane to 15 feet
- Add 8-foot-wide shoulders

LOCATION 7 Miles 35.0 – 37.0

- Add new eastbound and westbound passing lanes
- Realign deficient curves

LOCATION 8 Miles 37.0 – 40.0

- Realign deficient curves
- Widen lanes to 15 feet
- Add 8-foot-wide shoulders
- Pavement widening at select locations

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In addition to the aforementioned improvements, a new alternative called the “bypass alignment” is now being considered. The bypass alignment alternative is an option for improving two segments of the corridor where multiple curves within a short distance make maneuverability of the route a challenge. The bypass alignment would create a smoother, more direct path that would avoid or “bypass” the multiple curves. The two areas where the bypass alternative is being considered are at Postmile 27.2 – 28.7 near Dulzura and Postmile 37.0 – 38.5 just west of SR-188.

More information regarding the Melody Road to SR-188 Operational Improvement Projects can be found on the following website:

<http://rural94.com/>

There are additional improvements planned for other portions of the SR-94 corridor. These improvements are from the 2008 State Transportation Improvement Program (STIP), the 2008 State Highway Operation and Protection Plan (SHOPP), the District 11 Project Information Reporting System (PIRS), and the District 11 2007 Ten-Year SHOPP Needs Plan, the most recent Status of Projects, and the District 11 Planning Division.

The following table shows 2008 STIP, 2010 SHOPP, PIRS and 2007 RTP (Regional Transportation Plan) projects for SR-94 east of Avocado Boulevard.

POST MILE	LOCATION	IMPROVEMENT DESCRIPTION	SOURCE/ PHASE
14.9 – 20.7	Jamacha Rd/SR-54 to Melody Road	Upgrade from 2 lane conventional highway to 4 lane conventional highway	2007 RTP Unconstrained scenario
14.9 – 30.0	From Route 54 to 0.2 Miles east of Marron Valley Road	Roadway Rehabilitation	2010 SHOPP-FY13/14
32.8 – 40.3	0.7 mile east of Summit Rd to 0.9 mile east of Emery Rd	Upgrade End Treatments and Reconstruct Guardrail	2010 SHOPP-FY13/14
52.9 – 65.0	East Campo Railroad Crossing to Ribbonwood Rd	Place Rubberized AC Overlay	PIRS/PSE

PSR = Project Study Report

PSE = Plans, Specifications and Estimates

The following table shows 2009 10-Year SHOPP Needs Plan Projects for SR-94 east of Avocado Boulevard.

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POST MILE	LOCATION	IMPROVEMENT DESCRIPTION	CATEGORY/FISCAL YEAR
14.9 – 30.0	SR-54 to Dulzura Creek Bridge	Rehabilitate Roadway	Roadway 2011/12
15.2 – 65.3	Route 94 Corridor	Install Centerline Rumble Strip, Upgrade End Treatments	Collision 2010/11
19.4	Lyons Valley Rd	Install New Signal and Add Lane	Mobility 2015/16
22.8 – 34.9	Jamul Creek to Cottonwood Creek	Bridge Rail Upgrade & Deck Rehab	Bridge 2017/18
40.0 – 40.3	0.03 mile east of SR-188 to 0.06 mile east of SR-188	Curve Realignment, Shoulder Widening	Mobility 2013/14

In the early 1980's, a large land developer in the Rancho San Diego area dedicated land south of the existing SR-94 between Avocado Boulevard and just east of the Sweetwater River for a potential future SR-94 freeway alignment. This alignment traverses a capped landfill, a sensitive endangered species habitat, and steep slopes. There has historically been minimal interest in constructing a new freeway on this alignment. Recently, the County of San Diego has proposed deletion of this alignment from its upcoming GP2020 General Plan Circulation Element. However, a County of San Diego Supervisor has requested that the Caltrans owned parcels within the alignment corridor be retained. Additional studies are needed to determine the viability and feasibility of constructing this potential SR-94 freeway alignment.

Transit Improvements

Current transit service around the SR-94 corridor consists of Metropolitan Transit System (MTS) bus service Routes 962, 816, 856, and 894. Route 894 operates one peak our trip each way from Campo to El Cajon daily plus one extra trip from Campo to El Cajon in the morning peak and one from El Cajon to Campo in the afternoon peak, Route 856 operates at 30 minute headways, and 962 operates at 60 minute headways.

Urban Area Transit Strategy

As part of the development of the 2050 Regional Transportation Plan, SANDAG is preparing an "Urban Area Transit Strategy" which will serve as the basis of the regional transit network to be included in the 2050 RTP. Through the planning process, SANDAG staff is developing and testing three transit network alternatives with a focus on the urban areas of the San Diego region. Ultimately, one of the networks (or a combination or variation of) will be incorporated into the 2050 RTP and its Sustainable Communities Strategy (SCS). The overarching goal is to create a world-class transit system for the San Diego region in 2050 that significantly increases the use of transit, walking, and

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biking in the urbanized areas of the region, makes transit time competitive with the car, maximizes the use of transit during peak periods, and reduces greenhouse gas emissions and vehicle miles traveled in the region.

The transit alternatives under study are grouped into these three themes:

- “Transit Propensity” (expanding transit in the most urbanized areas);
- “Commuter Point-to-Point” (emphasizing quick access to work); and
- “Many Centers” (connecting local smart growth areas and activity centers).

Additional transit information will be provided in the next update of this TCS which will occur sometime after the completion and adoption of the SANDAG 2050 RTP.

Complete Streets

Under the guidance of Deputy Directive 64-R1, Caltrans develops integrated multimodal projects in balance with community goals, plans, and values. Addressing the safety and mobility needs of bicyclists, pedestrians, and transit users in all projects, regardless of funding, is implicit in these objectives. Bicycle, pedestrian, and transit travel is facilitated by creating "complete streets" beginning early in system planning and continuing through project delivery, maintenance, and operations. Transit options and safe pedestrian crossings are some examples of efforts to meet these goals.

Bicycle riders and pedestrians have a legal right to access most public roads in California as specified in California Vehicle Code (CVC) (Sections 21200-21212), and Streets and Highways Code (Sections 890 – 894.2). Bicyclists, pedestrians, and non-motorized traffic are permitted on all State facilities, unless prohibited (CVC, section 21960).

Bicyclists are permitted to ride on the outside shoulders of SR-94 between via Mercado and SR-54. Although bicycle usage is permitted on the shoulders of SR-94 between Jamacha Road and the end of SR-94 at Interstate-8 (I-8), bicycle riding is not advised due to very narrow or non-existing shoulders and the speed differential between bicycles and motor vehicles. Transit buses that use SR-94 as part of its normal routing also have the capacity to hold up to two bicycles.

The safety and mobility needs of all who have legal access to the transportation system must be addressed including requirements under the Americans With Disabilities Act of 1990 (ADA).

Other Transportation Improvements

Supplementary modal option improvements such as park and ride, transportation demand management, and transportation system management should also be developed for the rural portion of the SR-94 corridor. Additional corridor mobility management strategies and Intelligent Transportation Systems (ITS) that can reduce daily vehicle hours of recurrent delay on SR-94 include continuing implementation of the Transportation Management System (TMS) and Traffic Operations Strategies (TOPS). TMS is the “wiring” needed to provide real-time corridor detection and performance

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information, and TOPS includes a variety of near-term corridor improvements such as the provision of intelligent infrastructure and auxiliary lanes where appropriate or feasible.

PROJECT INITIATION DOCUMENT INFORMATION - CORRIDOR AND SYSTEM COORDINATION

Some of the following information pertains to both the urban and rural portions of the SR-94 corridor.

The western terminus of SR-94 is in San Diego at the junction with I-5, (P.M. SD 1.4). Originally, the one way couplet (F & G Streets) in the downtown San Diego area, from P.M. SD 0.0 - 1.4, was included as part of SR-94 but was relinquished to the City of San Diego. SR-94 extends 63.4 miles east to the junction with Interstate 8 (I-8) near Boulevard (P.M. SD 65.4).

SR-94 was added to the State Highway System as Route 200 in 1933. The portion from I-5 (P.M. SD 1.4) to State Route 54 (SR-54) near Jamacha Boulevard (P.M. SD 14.1) was added to the Freeway and Expressway (F&E) System in 1959.

From Avocado Boulevard to the Sweetwater River, SR-94 has a functional classification of "Other Freeway or Expressway-Urban". From the Sweetwater River to Lyons Valley Road, the functional classification is "Other Principal Arterial-Rural". From Lyons Valley Road to Melody Road, the classification is "Other Freeway or Expressway-Urban". From Melody Road to SR-188, SR-94 is functionally classified as "Other Principal Arterial-Rural", and from SR-188 to I-8, the route is classified as "Minor Arterial-Rural".

California Senate Bill 300, enacted in 1989, created an Interregional Road System. Subsequently, Section 164.3 of the California Streets and Highways Code directed Caltrans to develop and submit to the Legislature an Interregional Road System (IRRS) Plan by February 1, 1990. In accordance with this plan, the IRRS is a series of interregional state highway routes outside the urbanized areas that provides access to, and links between, the state's economic centers, major recreational areas, and urban and rural regions. The rural portion of SR-94 east of the Sweetwater River is included as part of the IRRS.

From Avocado Boulevard to Otay Lakes Road, SR-94 is designated as a State Highway Terminal Access Route connecting to the National Network for Surface Transportation Assistance Act (STAA) trucks. From Otay Lakes Road to Tierra Del Sol Road 2 miles west of I-8, the kingpin-to-rear-axle length advised for this portion of SR-94 is less than 30 feet, but is posted as 30 feet. The remaining segment of SR-94 from Tierra Del Sol Road to I-8 is designated as a State Highway Terminal Access Route.

The Caltrans District 11 designated International Border Trade Corridor (IBTC) system consists of transportation corridors which link ports of entry and international border regions to the existing transportation system. These corridors will be the principle conduits for movement of people and goods as the overall demand for transportation

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increases in and out of California and the United States. All of SR-94 is included in the IBTC system.

Many state highways are located in areas of outstanding natural beauty. California's Scenic Highway Program was created by the Legislature in 1963. Its purpose is to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. These highways are identified in Section 263 of the Streets and Highways Code. SR-94 east of SR-125 to the end of the route at I-8 is eligible to be designated as a State Scenic Highway.

SANDAG's 2030 Regional Transportation Plan (November 2007) includes the following corridor improvements for the rural portions of SR-94 under the Revenue Constrained Plan, the Reasonably Expected Revenue scenario, and the Unconstrained Needs Network. This information will be updated in the future to reflect any changes established in the SANDAG 2050 RTP, which is scheduled to be approved and adopted in Fall 2011.

LOCATION	REVENUE CONSTRAINED	REASONABLY EXPECTED	UNCONSTRAINED
Avocado Boulevard to Jamacha Road	4C ¹	4C ¹	6C
Jamacha Road to Melody Road	2C	2C	4C
Melody Road to I-8	2C	2C	2C

¹ The freeway portion of SR-94 ends at Via Mercado. A portion of this segment from east of Via Mercado to Jamacha Road was upgraded to 6 lanes with some turn pockets in 2007. Specifically, in the Eastbound direction from Avocado Blvd to Jamacha Blvd, SR-94 is 2 lanes until just west of Jamacha Blvd, then 3 through lanes plus 2 left turns approaching the intersection into Skyline Church. From Jamacha Blvd to Jamacha Rd/SR-54, SR-94 is 3 through lanes, plus one right turn lane to SR-94 East and one left turn lane into Plaza Rancho San Diego shopping center.

In the westbound direction from Jamacha Rd/SR-54 to Jamacha Blvd, SR-94 is 3 through lanes plus one right turn lane into Skyline Church and 2 left turn lanes to Jamacha Blvd. From Jamacha Boulevard to Avocado Blvd, SR-94 is 3 through lanes until about 0.1 mile east of Via Mercado, then 2 through lanes to Avocado Blvd.

DEVELOPMENT REVIEW

Caltrans District 11 Development Review staff in the Planning Division review federal, state, and local planning or proposed development activity that has the potential to impact state transportation facilities or other resources under Caltrans' jurisdiction, and to recommend conditions of project approval that eliminate those impacts or reduce them to a level of insignificance. Typically, this involves the review of development proposals in which Caltrans is either a responsible (permitting) or commenting (reviewing) agency, but has no discretionary approval power over the project other than permit authority. Development Review staff work cooperatively with local lead agencies and developers in determining the type and level of mitigation needed to offset project impacts. They are also responsible for identifying other functional areas within District

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11 that are affected by the proposal, and coordinating the circulation of appropriate documents with other functional areas for review and comment.

Based on the Caltrans Traffic Impact Study (TIS) guidelines, a 1,000 Average Daily Traffic (ADT) threshold size triggers the need for developers to prepare a traffic study for their project. The following information generally includes projects for which an Environmental Document, a Specific Plan or a Master Plan has been or will be prepared. There are nine potential major development projects within and adjacent to the SR-94 corridor between Avocado Blvd and the end of the route at the SR-94/I-8 junction. Total cumulative projected ADT from these developments is expected to be approximately 27,000. There may be an additional number of smaller development projects that may have additional cumulative impacts on traffic in the corridor. Some of the listed developments may either be under construction or completed. Because of uncertainties associated with future demographic, socioeconomic, and political climates, the scale of development may be subject to change. The development application and approval process is also subject to change. Changes in land use prompting rapid housing and commercial development growth will need to be monitored closely by all impacted jurisdictions and agencies. Appropriate traffic studies for proposed developments will need to be conducted and reviewed carefully by Caltrans staff. Land development and local capital improvement projects should also be coordinated with Caltrans projects. Further information regarding specific development projects in the SR-94 corridor can be obtained from the Caltrans District 11 Development Review Branch.

The table below shows the major development projects in the SR-94 corridor east of Avocado Boulevard:

POST MILE	PROJECT NAME	DESCRIPTION	ADT
19.43	Jamul Highlands Project	Residential Development of 23 large acre homes	2,400
20.00	Simpson Farm Project	97 residential units	7,690
20.90	Jamul Casino & Hotel	Casino and hotel	9,442
20.94	Peaceful Valley	Residential Development	750
21.76	Rancho Jamul Estates	120 unit residential subdivision	1,440
52.13	Star Ranch Residential Development Project	Residential Development	5,520
52.15	Campo Solid Waste Landfill	Landfill	
64.23	Ribbonwood	Gas Station and Mini-Mart	600

The table below shows projects listed in the 2010 District 11 Project Sponsor List for the SR-94 corridor east of Avocado Boulevard:

POST MILE	PROJECT NAME	Mitigation Project	Permit
14.89	San Miguel Training Center	Direct: Access improvements to existing driveway	Encroachment
59.60	Campo Regional Landfill	Realign SR-94 at Church Road	PEER