

**RTIP ID#** *(required)* 4351

**TCWG Consideration Date:** July 27, 2010

**Project Description** *(clearly describe project)*

The proposed project would realign and widen a 9.3-mile segment of State Route 58 (SR-58) from PM 21.8 (KP 35.1) to PM 31.1 (KP 50.1) in an unincorporated area of the County, west of the City of Barstow near the community of Hinkley, from a two lane conventional highway to a four-lane expressway/ freeway. Three Build Alternatives, as well as the No-Build Alternative, are being considered to carry out the proposed project. The project location is shown in Figure 1. Proposed alignment drawings are provided in Figures 2 and 3.

Under Build Alternative 1 (Project Alternative 2), a portion of the current SR-58 alignment will remain as a two-lane roadway to be relinquished to the County following completion of the new SR-58 alignment.

SR-58 would be realigned and widened from a two-lane conventional highway to a four-lane expressway/freeway with full-control access. A 23.7-m median would separate the new eastbound and westbound roadbeds, which would sit on new fill sections. The entrance and exit ramps for the interchange proposed at Lenwood Road would be developed with standard shoulder and traveled way widths. A concrete curb would separate the roadbeds between the westbound exit ramp and westbound loop entrance ramp. The local crossings at Valley View Road, Summerset Road, and Hinkley Road would consist of full standard shoulder and traveled way widths. These local roadways would have two-lanes with the exception of Hinkley and Summerset Road which will also have a left-turn pocket lane. To facilitate the flow of traffic and reduce rear-end collisions, left-turn and right-turn pocket lanes would be designed for traffic existing the expressway to enter local crossings.

A partial cloverleaf with partial diamond type interchange is proposed for Lenwood Road. The westbound and eastbound exit ramps would be single-lane at the beginning and double-lane at the end of each ramp. The westbound entrance ramp would be a loop radius type with single lane throughout. The existing SR-58 that converges at the junction of Lenwood Road and the westbound exit ramp would be two lanes and have a left-turn pocket lane. HQ Structure Design shows planning studies for a three-lane bridge structure to carry traffic over the mainline and over the Burlington Northern Santa Fe (BNSF) railroad tracks.

Access to the expressway would be provided at Hinkley Road, Summerset Road, Valley View Road, and the Lenwood Road interchange. Any other roads that currently cross the existing SR-58 would be converted to cul-de-sacs. Traffic signals are being proposed for Hinkley Road and Summerset Road. For the Valley View Road, as well as the westbound and eastbound exit ramps, two-way stop signs would be installed.

Drainage facilities would be provided for on-sight drainage. These drainage facilities would also be provided to allow water in its natural course to cross the new SR-58 alignment. Two detention/retention basins are being proposed. One would be located west of Valley View Road, south of the new SR-58 alignment. The other basin would be located just west of Lenwood Road, between the realigned portion of the existing SR-58 and the new realigned portion of SR-58.

Desert Tortoise fencing would be provided to protect this endanger species. Drainage facilities would serve a dual purpose, as they would allow for water and small wildlife crossings underneath the new SR-58 alignment. It is anticipated that nine crossing locations are necessary, which would be designed as box culverts measuring 1.0 x 1.7 meter.

Typical cross section drawings for Build Alternative 1 (Alternative 2) are provided in Figure 4 through Figure 8.

PM Conformity Hot Spot Analysis – Project Summary for Interagency Consultation

Build Alternative 2 (Alternative 3) would be the same as Build Alternative 2, except for the following modifications:

Frontage road would be constructed north and south of the proposed realigned and widened SR-58, from Valley View Road to Summerset Road, to provide access to adjacent property. The existing SR-58 alignment from Fairview Road to Lenwood Road would be remained and serve as frontage road. Typical cross section drawings for Build Alternative 2 (Alternative 3) are provided in Figure 9 and Figure 10.

Build Alternative 3 (Alternative 4) would be the same as Build Alternative 1, except for the following modifications:

The existing SR-58 alignment would remain as a two-lane roadway. In some locations, the existing SR-58 would be realigned to serve as a frontage road to provide standard separation between local intersections and the expressway. After completion of the new SR-58 alignment, the existing SR-58 alignment would be relinquished to the County. In addition, a frontage road would be constructed north of the proposed new SR-58 alignment from Valley View Road to Fairview Road.

Typical cross section drawings for Build Alternative 3 (Alternative 4) are provided in Figure 9 and Figure 10.

**Type of Project** (use Table 1 on instruction sheet)  
Change to existing state highway; Roadway realignment

<b>County</b> San Bernardino	<b>Narrative Location/Route &amp; Postmiles:</b> SR-58 in San Bernardino County, from PM 21.8 (KP 35.1) to PM 31.1 (KP 50.1). <b>Caltrans Projects – EA#</b> 043510		
<b>Lead Agency:</b> Caltrans			
<b>Contact Person</b> Tony Louka	<b>Phone#</b> 909-383-6385	<b>Fax#</b> 909-383-5975	<b>Email</b> tony_louka@dot.ca.gov
<b>Hot Spot Pollutant of Concern</b> (check one or both) <b>PM2.5</b> <b>PM10</b> <input checked="" type="checkbox"/>			
<b>Federal Action for which Project-Level PM Conformity is Needed</b> (check appropriate box)			
<b>Categorical Exclusion (NEPA)</b>	<input checked="" type="checkbox"/> <b>EA or Draft EIS</b>	<b>FONSI or Final EIS</b>	<b>PS&amp;E or Construction</b>
<b>Other</b>			
<b>Scheduled Date of Federal Action:</b>			
<b>NEPA Delegation – Project Type</b> (check appropriate box)			
<b>Exempt</b>	<b>Section 6004 – Categorical Exemption</b>	<input checked="" type="checkbox"/> <b>Section 6005 – Non-Categorical Exemption</b>	
<b>Current Programming Dates</b> (as appropriate)			
	<b>PE/Environmental</b>	<b>ENG</b>	<b>ROW</b>
<b>Start</b>	--	--	--
<b>End</b>	December 2011	January 2014	May 2014
			<b>CON</b>
			June 2014
			December 2016

**Project Purpose and Need (Summary):** *(attach additional sheets as necessary)*

The purpose of the proposed project is to increase roadway capacity, improve roadway safety features, maintain route continuity, and improve pavement structural integrity. A detail discussion of each of these elements is provided below:

- **Increase Roadway Capacity.** The existing roadway has insufficient capacity to handle existing and predicted future travel demand. Travel on the two-lane facility is forecasted to more than double from approximately 11,900 vehicles per day (2007) to 27,500 (2040 estimate). Since SR-58 remains the main east-west corridor for interregional travelers within the project vicinity, no other viable alternatives for travel exist. The Department projects the Level of Service (LOS) to deteriorate from the current level D (2007) to F (2040) under the no build condition. With construction of the proposed project, the roadway would operate at LOS B during the project design year (2040).
- **Improve Safety Features.** The existing two-lane highway has numerous driveways and intersecting cross-streets, which present numerous conflict points affecting the operation of the highway. The new four-lane expressway would improve safety with the following design features: 1) upgrading from two to four lanes to allow for better passing and increased sight-distance; 2) eliminating current driveways and replacing them with three at-grade crossings and an interchange; 3) installing a separated median to reduce the risk of head-on collisions; and 4) installing a clearance zone (clear recovery zone) from the edge of the traveled roadway to allow for errant drivers to regain control.
- **Maintain Route Continuity.** SR-58 is classified as a “High Emphasis Focus Route” under the Interregional Road System (IRRS), which requires a minimum facility standard of a four-lane expressway. The existing SR-58 within the proposed project limits PM 21.8 (KP 35.1) to PM 31.1 (KP 50.1) consists of only two lanes. The east and west ends adjacent to the proposed project are four lanes. As such, the proposed project would close this gap in lane continuity and remove the current bottleneck condition.
- **Improve Pavement Structural Integrity.** Within the proposed project limits of SR-58, the existing pavement section is inadequate to handle the high movement of truck volumes, which are contributing to rising maintenance costs. It is anticipated that SR-58 will continue to carry high truck volumes (39% in 2040), since the route is designated for extra-legal and oversized loads, SHELL (Subsystem of Highway for the Movement of Extra Legal Permit Loads) and STAA (Surface Transportation Assistance Act). SR-58 also serves as the major connection point between the I-5 freeway in Bakersfield and the I-15 and I-40 freeways in Barstow. Current traffic movement carries a high volume of interstate truck traffic transporting agricultural and commercial commodities. A new pavement design would meet standards for carrying truckloads and reduce future maintenance costs.

**Surrounding Land Use/Traffic Generators** *(especially effect on diesel traffic)*

Adjacent land uses along the project limits of SR-58 (PM 21.8 to PM 31.1) consists primarily of rural and suburban residential, with some commercial and agricultural uses. Development is generally sparse throughout the project limits. There are no land uses present within the project vicinity that are associated with a substantial amount of truck trip generation (i.e., no truck stops or warehouse-distribution centers present).

<b>Opening Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility</b>		
Traffic Data/Roadway Segment	No Build Forecast Opening Year 2016	Build Alternatives Forecast Opening Year 2016
Average Daily Traffic (ADT)	14,200	14,200
Truck ADT	5,680	5,680
Percent Truck Traffic in ADT	40	40
Level of Service (LOS) AM/PM	D/D	A/A
Source: Caltrans System Metrics Group, Inc., February 2010; and Caltrans Memorandum, June 2010.		
<b>RTP Horizon Year / Design Year: Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility</b>		
Traffic Data/Roadway Segment	No Build Forecast Horizon Year 2040	Build Alternatives Forecast Horizon Year 2040
Average Daily Traffic (ADT)	27,054	27,054
Truck ADT	10,822	10,822
Percent Truck Traffic in ADT	40	40
Level of Service (LOS) AM/PM	D/D	A/A
Source: System Metrics Group, Inc., February 2010; and Caltrans Memorandum, June 2010.		
<b>Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT</b>		
<p>As shown in attached Table 10, the ten intersections currently present within the project limits are projected to operate as LOS B or C under the No Build Alternative at Opening Year 2016. Under proposed Build Alternatives, SR-58 would be realigned, with the existing facility relinquished to the County and maintained as a local access road within most of the project limits. As a result, LOS is projected improve at all current intersection locations under Build Alternatives. As shown in attached Table 12 and Table 13, the two interchange facilities that would be constructed under proposed Build Alternatives would operate at LOS A. AADT volumes would remain constant at 14,200, and truck traffic percentage would remain at 40% (5,680), similar to No-Build. The proposed project is projected to have no material effect on cross-street AADT or truck traffic volumes.</p>		
<b>RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT</b>		
<p>As shown in attached Table 14, the ten intersections currently present within the project limits are projected to operate as LOS B through F under the No Build Alternative at Horizon Year 2040. Under proposed Build Alternatives, SR-58 would be realigned, with the existing facility relinquished to the County and maintained as a local access road within most of the project limits. As a result, LOS is projected improve at all current intersection locations under Build Alternatives. As shown in attached Table 16 and Table 17, the two interchange facilities that would be constructed under proposed Build Alternatives would operate at LOS A/D. AADT volumes would remain constant at 27,054, and truck traffic percentage would remain at 40% (10,822), similar to No-Build. The proposed project is projected to have no material effect on cross-street AADT or truck traffic volumes.</p>		
<b>Describe potential traffic redistribution effects of congestion relief (impact on other facilities)</b>		
<p>Facility improvements are not anticipated to result in any meaningful traffic redistribution effects, as no practicable alternative roads exist that run parallel to the project alignment for the improved facility to attract traffic from. Facility improvements would relieve congestion when compared to the no-build alternative. LOS would improve from D to A during horizon year 2040.</p>		

**Comments/Explanation/Details** (attach additional sheets as necessary)

The EPA's March 2006 guidance document *Transportation Guidance for Qualitative Hot-spot Analysis in PM2.5 and PM10 Nonattainment and Maintenance Areas* references a two step criteria to identify "a significant volume of diesel truck traffic." The first criterion is facilities with greater than 125,000 AADT volumes. If the first criterion is met, the second criterion is that 8 percent or more of said traffic volumes (i.e., 10,000 vehicles or more) are diesel truck traffic volumes. With respect to traffic volumes along the project limits of SR-58, both opening year (2016) and horizon year (2040) AADT volumes are forecast to be below the above-mentioned screening-level threshold criteria of 125,000 total AADT traffic volumes.

While truck AADT volumes are anticipated to exceed 10,000 at horizon year 2040, there would be no change in truck AADT volumes under the Build Alternatives when compared to No-Build. As shown in attached Figures 3a and 3b (Existing Land Uses), the North and Center Re-alignment Alternatives would result in no material change when compared to No-Build; and the South Re-alignment Alternative would move traffic volumes closer to some residential land uses, but away from others. Overall, the presence of residential land uses within the project vicinity is low density and limited.

According to the Transportation Conformity Guidance for Qualitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas, this project is not a project of air quality concern under 40 CFR 93.123(b)(1)(I) and (ii):

The project site is not in or affecting an area or location identified in any PM10 implementation plan. The immediate project area is not considered to be a site of violation or possible violation.

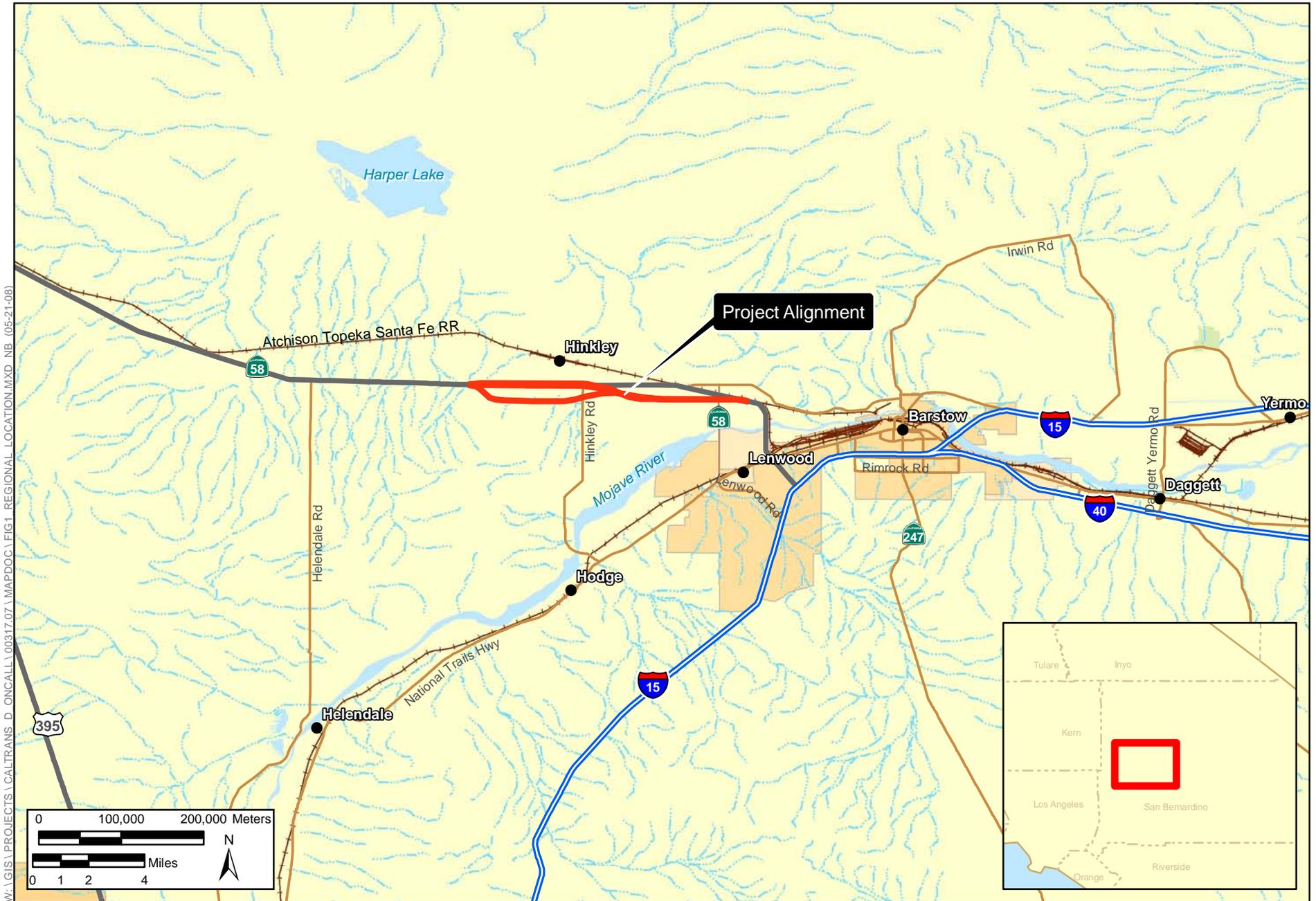
Project site is within the Mojave Desert Air Basin (MDAB) which is classified as Attainment/Unclassified for PM2.5 Federal Ambient Air Quality Standards.

**References**

Federal Highway Administration and U.S. Environmental Protection Agency. 2006. *Transportation conformity guidance for qualitative hot-spot analyses in PM2.5 and PM10 nonattainment and maintenance areas*. Washington, D.C.

California Department of Transportation. 2010. Traffic Data Memorandum. June. Prepared by Gary Green, Office Chief, District 8 Office of Forecasting and Traffic Analysis

System Metrics Group, Inc. 2010. *Traffic Study Report, SR-58 Realignment and Widening Project*. February.



W:\GIS\PROJECTS\CALTRANS\ONCALL\00317.07\MAPDOC\FIG1 REGIONAL LOCATION.MXD.NB (05-21-08)

SOURCE: ESRI Streetmap USA (2007)

**Figure 1**  
**Regional Location**  
**State Route 58 Hinkley Expressway Project**

INDEX OF SHEETS

STATE OF CALIFORNIA  
DEPARTMENT OF TRANSPORTATION  
PROJECT PLANS FOR CONSTRUCTION ON  
STATE HIGHWAY

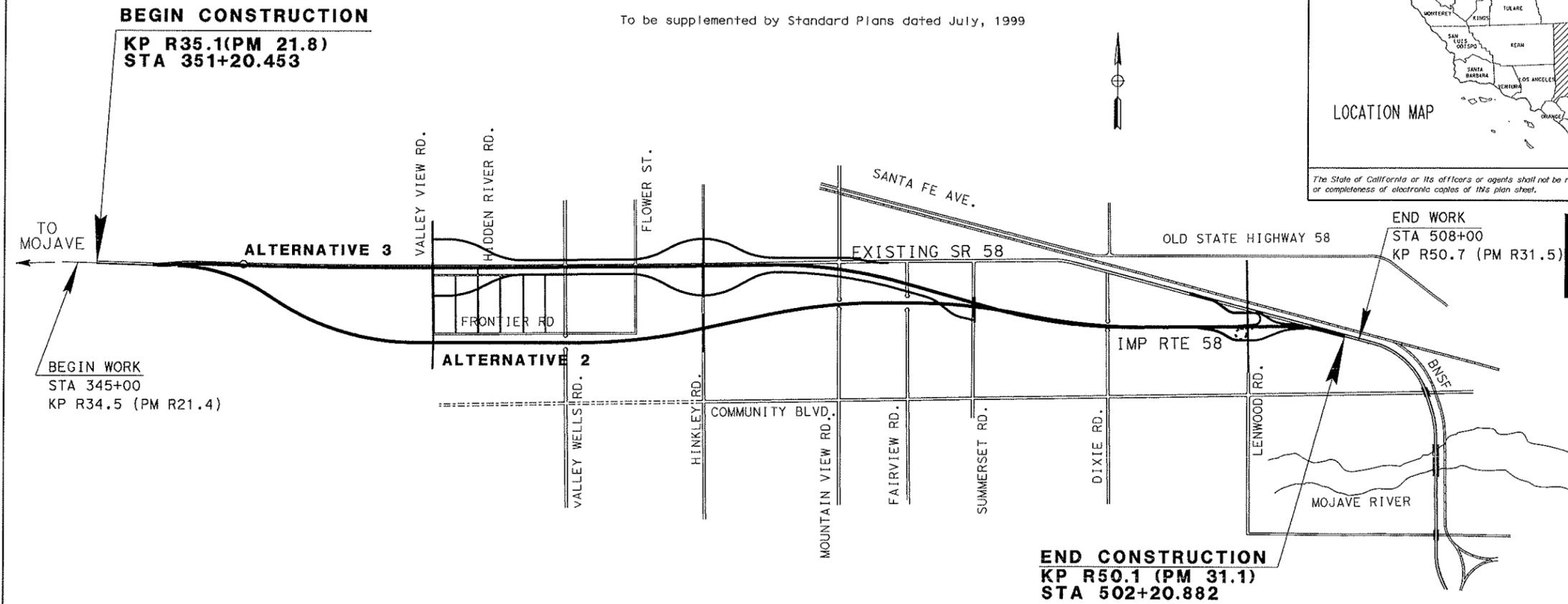
IN SAN BERNARDINO COUNTY AT HINKLEY  
FROM 4.6 KM WEST OF HIDDEN RIVER ROAD  
TO 1.2 KM EAST OF LENWOOD ROAD

To be supplemented by Standard Plans dated July, 1999

DIST	COUNTY	ROUTE	KILOMETER POST TOTAL PROJECT	SHEET NO	TOTAL SHEETS
08	SBD	58	R35.1/R50.1		



The State of California or its officers or agents shall not be responsible for the accuracy or completeness of electronic copies of this plan sheet.



BEGIN WORK  
STA 345+00  
KP R34.5 (PM R21.4)

BEGIN CONSTRUCTION  
KP R35.1(PM 21.8)  
STA 351+20.453

END WORK  
STA 508+00  
KP R50.7 (PM R31.5)

END CONSTRUCTION  
KP R50.1 (PM 31.1)  
STA 502+20.882

PROJECT ENGINEER	DATE	PROJECT MANAGER	DATE

The Contractor shall possess the Class (or classes) of license as specified in the "Notice to Contractors".



Project Engineer Date  
Registered Civil Engineer  
Plans Approval Date

Contract No. 08-043514

FOR REDUCED PLANS ORIGINAL 0 20 40 60 80

W:\GIS\PROJECTS\CALTRANS\_D\_ONCALL\00317\07\MAPDOC\FIG2A1.NB (05-21-08)

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Figure 2  
Build Alternatives 2 and 3  
State Route 58 Hinkley Expressway Project

**Table 10**  
**2020 Alternative 1 (No Build) Intersection Level of Service**

<b>Intersection</b>	<b>Midday</b>		<b>PM</b>	
	<b>Delay (s/veh)</b>	<b>LOS</b>	<b>Delay (s/veh)</b>	<b>LOS</b>
Valley View Rd	13.2/18.8	B/C	17.9/16.6	C/C
Hidden River Rd	12.3	B	11.5	B
Valley Wells Rd	11.7	B	11.7/17.5	B/C
Flower St	12.8/13.2	B/B	19.8/21.5	C/C
Hinkley Rd	22.4/23.3	C/C	21.7/19.8	C/C
Mountain View Rd	16.9/18.7	C/C	17.0/15.6	C/C
Fairview Rd	11.5	B	11.4	B
Summerset Rd	9.1	A	17.2	C
Dixie Rd	12.1	B	11.9	B
Lenwood Rd	24.0	C	19.8	B

**Table 12**  
**2020 Alternative 2 Level of Service**

Location	Directional No. of Lanes	Midday		PM	
		Density/Delay	LOS	Density/Delay	LOS
<b>Hinkley</b>					
EB Off-ramp	1	5.5	A	6.2	A
EB On-ramp	1	8.2	A	8.7	A
WB Off-ramp	1	4.7	A	4.2	A
WB On-ramp	1	7.0	A	6.6	A
Mainline	2	5.6	A	6.2	A
Intersection North	**	7.9	A	7.6	A
Intersection South	**	8.1	A	7.7	A
<b>Lenwood</b>					
EB Off-ramp	1	5.3	A	4.8	A
EB On-ramp	1	7.8	A	7.5	A
WB Off-ramp	1	4.3	A	4.4	A
WB On-ramp	1	6.9	A	7.0	A
Mainline	2	5.4	A	4.9	A
Intersection North	**	7.8	A	8.0	A
Intersection South	**	7.7	A	7.8	A

\* Ramp and Mainline LOS reported as density; intersection LOS reported as delay

\*\* Intersection analyzed with one through-lane and right/left-turn pockets.

**Table 13**  
**2020 Alternatives 3 and 4 Level of Service**

Location	Directional No. of Lanes	Midday		PM	
		Density/Delay	LOS	Density/Delay	LOS
<b>Hinkley</b>					
EB Off-ramp	1	5.5	A	6.2	A
EB On-ramp	1	8.2	A	8.7	A
WB Off-ramp	1	4.7	A	4.2	A
WB On-ramp	1	7.0	A	6.6	A
Mainline	2	5.6	A	6.2	A
Intersection North	**	7.6	A	7.4	A
Intersection South	**	7.6	A	7.5	A
Frontage Rd #1	**	7.3	A	7.1	A
Frontage Rd #2	**	7.2	A	7.2	A
<b>Lenwood</b>					
EB Off-ramp	1	5.3	A	4.8	A
EB On-ramp	1	7.8	A	7.5	A
WB Off-ramp	1	4.3	A	4.4	A
WB On-ramp	1	6.9	A	7.0	A
Mainline	2	5.4	A	4.9	A
Intersection North	**	7.8	A	8.0	A
Intersection South	**	7.7	A	7.8	A

\* Ramp and Mainline LOS reported as density; intersection LOS reported as delay

\*\* Intersection analyzed with one through-lane and right/left-turn pockets.

**Table 14**  
**2040 Alternative 1 (No Build) Intersection Level of Service**

Intersection	Midday		PM	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Valley View Rd	19.3 / 32.7	C / D	28.8 / 25.3	D / D
Hidden River Rd	16.8	C	14.2	B
Valley Wells Rd	14.6	B	14.7 / 27.8	B / D
Flower St	18.1 / 20.3	C / C	35.0 / 42.9	D / E
Hinkley Rd	55.8 / 90.8	F / F	49.0 / 51.9	E / F
Mountain View Rd	25.6 / 31.5	D / D	28.4 / 25.7	D / D
Fairview Rd	14.0	B	13.9	B
Summerset Rd	10.2	B	28.4	D
Dixie Rd	15.3	C	15.0	B
Lenwood Rd	51.5	D	41.0	D

**Table 16**  
**2040 Alternative 2 Level of Service**

Location	Directional No. of Lanes	Midday		PM	
		Density/Delay	LOS	Density/Delay	LOS
<b>Hinkley</b>					
EB Off-ramp	1	8.4	A	9.4	A
EB On-ramp	1	11.2	B	11.9	B
WB Off-ramp	1	7.2	A	6.4	A
WB On-ramp	1	9.3	A	8.8	A
Mainline	2	8.3	A	9.3	A
Intersection North	**	8.6	A	8.0	A
Intersection South	**	8.6	A	8.0	A
<b>Lenwood</b>					
EB Off-ramp	1	8.0	A	7.3	A
EB On-ramp	1	10.6	B	10.2	B
WB Off-ramp	1	6.5	A	6.8	A
WB On-ramp	1	9.3	A	9.4	A
Mainline	2	8.0	A	7.3	A
Intersection North	**	8.4	A	8.7	A
Intersection South	**	8.0	A	8.2	A

\* Ramp and Mainline LOS reported as density; intersection LOS reported as delay

\*\* Intersection analyzed with one through-lane and right/left-turn pockets.

**Table 17**  
**2040 Alternatives 3 and 4 Level of Service**

Location	Directional No. of Lanes	Midday		PM	
		Density/Delay	LOS	Density/Delay	LOS
<b>Hinkley</b>					
EB Off-ramp	1	8.4	A	9.4	A
EB On-ramp	1	11.2	B	11.8	B
WB Off-ramp	1	7.2	A	6.4	A
WB On-ramp	1	9.3	A	8.8	A
Mainline	2	8.3	A	9.3	A
Intersection North	**	8.0	A	7.9	A
Intersection South	**	8.0	A	7.8	A
Frontage Rd #1	**	7.6	A	7.2	A
Frontage Rd #2	**	7.4	A	7.5	A
<b>Lenwood</b>					
EB Off-ramp	1	8.0	A	7.3	A
EB On-ramp	1	10.6	B	10.2	B
WB Off-ramp	1	6.5	A	6.8	A
WB On-ramp	1	9.3	A	9.4	A
Mainline	2	8.0	A	7.3	A
Intersection North	**	8.4	A	8.7	A
Intersection South	**	8.0	A	8.2	A

\* Ramp and Mainline LOS reported as density; intersection LOS reported as delay

\*\* Intersection analyzed with one through-lane and right/left-turn pockets.