

## PM<sub>2.5</sub> Project Assessment Form for Interagency Consultation

### Application of Criteria for a Project of Air Quality Concern

**Project Title: State Route (SR) 4/Bailey Road Interchange Project**

**Project Summary for Air Quality Conformity Task Force Meeting: (April 24, 2015)**

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#### Description

- The primary purpose of this project is to provide safer access to pedestrians and bicycles on Bailey Road through the State Route (SR) 4/Bailey Road interchange zone.
- Project will remove westbound SR 4 loop off-ramp by obliterating existing bridge structure to the base. A portion of structure footings would be abandoned in place.
- Pedestrian tunnel on the northwest side of the Interchange to be would be abandoned in place and covered by fill.
- Inclusion of 12-foot-wide sidewalk on southbound and a 5-foot-wide sidewalk on the northbound Bailey Road through the interchange area.
- To accommodate the traffic headed toward southbound Bailey Road that would be displaced by the removal of the westbound SR 4 loop off-ramp, the existing westbound diagonal off-ramp would be signalized and widened to two lanes by adding an additional 355-foot-long lane approaching the intersection.
- Retaining wall 230-feet-long to be built on north side of westbound diagonal off-ramp
- Bailey Road would be widened along the southbound side, from the intersection of Canal Road to the existing westbound SR 4 loop off-ramp, to accommodate extension of a third southbound lane along Bailey Road.
- The eastbound SR 4 loop off-ramp to Bailey Road would be modified to have controlled right-turn movements by squaring off the ramp terminus and introducing a traffic signal.
- The free right-turn movement from southbound Bailey Road onto the BART station access road would be controlled at the existing signal.
- The project would include utility relocations, as necessary, to construct the above-described improvements

#### Background

- NEPA process for Categorical Exclusion (CE) is underway
- Public review is not anticipated
- Seeking air quality conformity determination on or before (May 1, 2015)
- Schedule based on deadline for STIP funding allocation

#### **Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))**

*(i) New or expanded highway projects with significant number/increase in diesel vehicles?*

- Not a new or expanded highway project
- Interchange reconfiguration - no additional lanes on SR 4
- No change in traffic volume or truck percentages on SR 4

*(ii) Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?*

- No project changes to land use that would affect diesel traffic percentage

*(iii) New bus and rail terminals and transfer points?*

- Not Applicable

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(iv) *Expanded bus and rail terminals and transfer points?*

- Not Applicable

(v) *Affects areas identified in PM<sub>10</sub> or PM<sub>2.5</sub> implementation plan as site of violation?*

- No state implementation plan for PM<sub>2.5</sub>, On January 13, 2013 the Environmental Protection Agency issued a final rule to determine that the Bay Area now attains the 24-hour PM<sub>2.5</sub> national standard. This rule suspends key SIP requirements as long as monitoring data continues to show that the Bay Area attains the standard.
- Therefore, not identified in plan as an area of potential violation
- Nearest PM<sub>10</sub> or PM<sub>2.5</sub> violations in 2013 in Concord, 6 miles southwest

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RTIP ID# 21225

TIP ID# CC-130001

Air Quality Conformity Task Force Consideration Date:  
April 24, 2015

**Description**

Contra Costa County (the County) prepared the Bailey Road Pedestrian and Bicycle Improvement Plan (the "Plan") in 2010, which identifies a number of challenges for pedestrian and bicycle travel along Bailey Road. The Plan includes several improvements along the Bailey Road corridor geared towards creating a more pedestrian and bicycle friendly environment. The proposed project includes elements of those planned improvements, and would modify the pedestrian and bicycle access through the State Route 4 (SR 4)/Bailey Road interchange (see **Figures 1 and 2**).

The project primarily includes the removal of the westbound SR 4 loop off-ramp. Removal of the loop ramp would allow the pedestrian tunnel on the northwest side of the interchange to be closed. This tunnel was built to prevent pedestrian and bicyclist conflicts with the free turning vehicles from the westbound SR 4 loop off-ramp. Pedestrians and bicyclists seldom use the tunnel because of security concerns. With the removal of the loop ramp, pedestrians can have a direct connection from Canal Road to Bart Access Road. The project would include a 12-foot-wide sidewalk on southbound and a 5-foot-wide sidewalk on the northbound Bailey Road along with 6' wide bicycle lanes in both directions through the interchange area, which would be designed to improve accommodations pedestrian and bicyclist traffic through the area.

The structure for existing bridge on the westbound loop off-ramp would be removed. A portion of the structure footings would be abandoned in place. The existing pedestrian undercrossing would also be removed and a portion of the undercrossing structure would be left in place and covered in fill. The existing pavement of the westbound loop off-ramp would also be removed (maximum excavation depth 3 feet below ground surface). In order to accommodate the traffic headed toward southbound Bailey Road that would be displaced by the removal of the westbound SR 4 loop off-ramp, the existing westbound diagonal off-ramp would be widened to accommodate left and right turning movements by adding an additional approximately 355-foot-long turning lane approaching the intersection. The westbound diagonal off-ramp would be signalized, and would require the construction of a retaining wall on the north side of the ramp, approximately 232 feet long and 8 feet high at its tallest.

Bailey Road would be widened along the southbound side, from the intersection of Canal Road to the existing westbound SR 4 loop off-ramp. The widening would accommodate the extension of a third southbound lane along Bailey Road.

The eastbound SR 4 loop off-ramp to Bailey Road would be modified to have controlled right-turn movements by squaring off the ramp terminus and introducing a traffic signal. The free right-turn movement from southbound Bailey Road onto the BART station access road would be controlled through the existing signal.

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<b>Type of Project:</b> Reconfigure existing interchange to improve bicycle and pedestrian access					
<b>County</b> Contra Costa	<b>Narrative Location/Route &amp; Post miles</b> The project proposes to modify the SR-4/Bailey Road interchange to better accommodate bicycles and pedestrians. <b>Caltrans Projects – EA#</b> 04-3G840				
<b>Lead Agency:</b> Contra Costa County Public Works Department					
<b>Contact Person</b> Angela Villar	<b>Phone#</b> (925) 313-2016	<b>Fax#</b> (925) 313-2333	<b>Email</b> avill@pw.cccounty.us		
<b>Federal Action for which Project-Level PM Conformity is Needed</b>					
X	<b>Categorical Exclusion (NEPA)</b>	<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> July 2015					
<b>NEPA Delegation – Project Type</b> <i>(check appropriate box)</i>					
Exempt	X	<b>Section 6004 – Categorical Exemption</b>	<b>Section 6005 – Non-Categorical Exemption</b>		
<b>Current Programming Dates</b>					
	<b>PE/Environmental</b>	<b>ENG</b>	<b>ROW</b>	<b>CON</b>	
<b>Start</b>	December 2014	December 2015	n/a	January 2018	
<b>End</b>	July 2015	December 2016	n/a	December 2018	
<b>Project Purpose and Need (Summary):</b> Contra Costa County (the County) prepared the <i>Bailey Road Pedestrian and Bicycle Improvement Plan</i> (the “Plan”) in 2010, which identifies a number of challenges for pedestrian and bicycle travel along Bailey Road. The Plan includes several improvements along the Bailey Road corridor geared towards creating a more pedestrian and bicycle friendly environment. The proposed project includes elements of those planned improvements, and would modify the State Route 4 (SR 4)/Bailey Road interchange zone for safer pedestrian and bicycle access along Bailey Road..					

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

The project is located in the north easterly part of Contra Costa County, in the unincorporated community of Bay Point.

Land uses near the SR4/Bailey Road intersection include, an elementary school, retail, residential, industrial, and commercial.

### **Brief summary of assumptions and methodology used for conducting analysis**

The AADT and truck percentages are taken from the Caltrans web page.<sup>1</sup> The project forecasts were prepared using data prepared for the I680/SR4 project, the model runs used the Contra Costa Transportation Authority Travel Demand Forecasting Model.<sup>2</sup>

#### References Cited:

<sup>1</sup>Truck AADT is from 2013 Annual Average Daily Truck Traffic on the California State Highway System.

(<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2013final.pdf>).

<sup>2</sup>Traffic Forecast for PM 2.5 Analysis. Prepared for I680/SR4 Project by Fehr & Peers. November 21, 2014

### **Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**

Not applicable; see below for highway interchange.

### **RTP Horizon Year / Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility**

Not applicable; see below for highway interchange.

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**Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT**

Roadway	Existing		
	Total AADT	% Trucks	Truck AADT
SR 4	130,781	4.6%	6,016

**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**

Roadway	2020 No Build			2020 Build Alternative		
	Total AADT	% Trucks	Truck AADT	Total AADT	% Trucks	Truck AADT
SR 4	135,877	4.6%	6,250	135,877	4.6%	6,250

Roadway	2040 No Build			2040 Build Alternative		
	Total AADT	% Trucks	Truck AADT	Total AADT	% Trucks	Truck AADT
SR 4	156,261	4.6%	7,188	156,261	4.6%	7,188

**Opening Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses**

Not Applicable; see above for highway interchange.

**RTP Horizon Year / Design Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses**

Not Applicable; see above for highway interchange.

**Describe potential traffic redistribution effects of congestion relief**

There would be no change to the traffic on SR 4. The project will remove the north-side westbound SR 4 loop off-ramp. Traffic from the closed westbound SR 4 loop off-ramp would be diverted to the existing westbound diagonal off-ramp, which would be widened to accommodate two turning lanes (one left and one right), and has adequate capacity to for the diverted traffic. The westbound diagonal off-ramp would be signalized.

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### Comments/Explanation/Details

The proposed project is within a nonattainment area for federal PM<sub>2.5</sub> standards. Therefore, according to 40 CFR Part 93, a hotspot analysis is required for conformity purposes. However, EPA does not require hotspot analyses, qualitative or quantitative, for projects that are not listed in Section 93.123(b)(1) as a project of air quality concern (POAQC). Five types or categories of projects qualify as a POAQC. The following discussion evaluates whether the proposed project falls into any of these five POAQC categories.

The project does qualify as a POAQC for the following reasons:

1. The project would not have a significant number of or increase in the number of diesel vehicles (40 CFR Section 93.123(b)(1)).

- ❖ The Transportation conformity guidance coauthored by the EPA and FHWA defines a significant volume of diesel truck traffic as facilities with greater than 125,000 annual average daily traffic (AADT) and 8 percent or more of such AADT as diesel truck traffic or approximately 10,000 trucks. The latest truck counts for SR 4 in the project vicinity show that truck traffic constitutes 4.6 percent of the total AADT, which is 128,000 AADT<sup>1</sup>. The average daily number of trucks would be 5,888, well below the approximate 10,000 trucks stated above.
- ❖ The percentage of trucks will remain the same with the project as without the project. The traffic volumes will increase due growth in the area, but there will be no change in the truck percentages, and therefore, would not result in a significant increase in the number of diesel vehicles.

2. The maximum percentage of diesel vehicles in the project area is 4.6 percent and would not increase as a result of the project (40 CFR 93.123(b)(1)(ii)).

- ❖ As described above under the "Purpose and Need" section, the project would improve pedestrian and bicycle access and not have any effect on the SR 4 traffic operations. The project would not result in substantial redistribution of traffic or changes in the percentage of truck trips through the site.

3. The project is not a new bus or rail terminal or transfer point (40 CFR Section 93.123(b)(1)(iii)).

- ❖ N/A

4. The project is not an expansion of an existing bus or rail terminal or transfer point (40 CFR Section 93.123(b)(1)(iv)).

- ❖ N/A

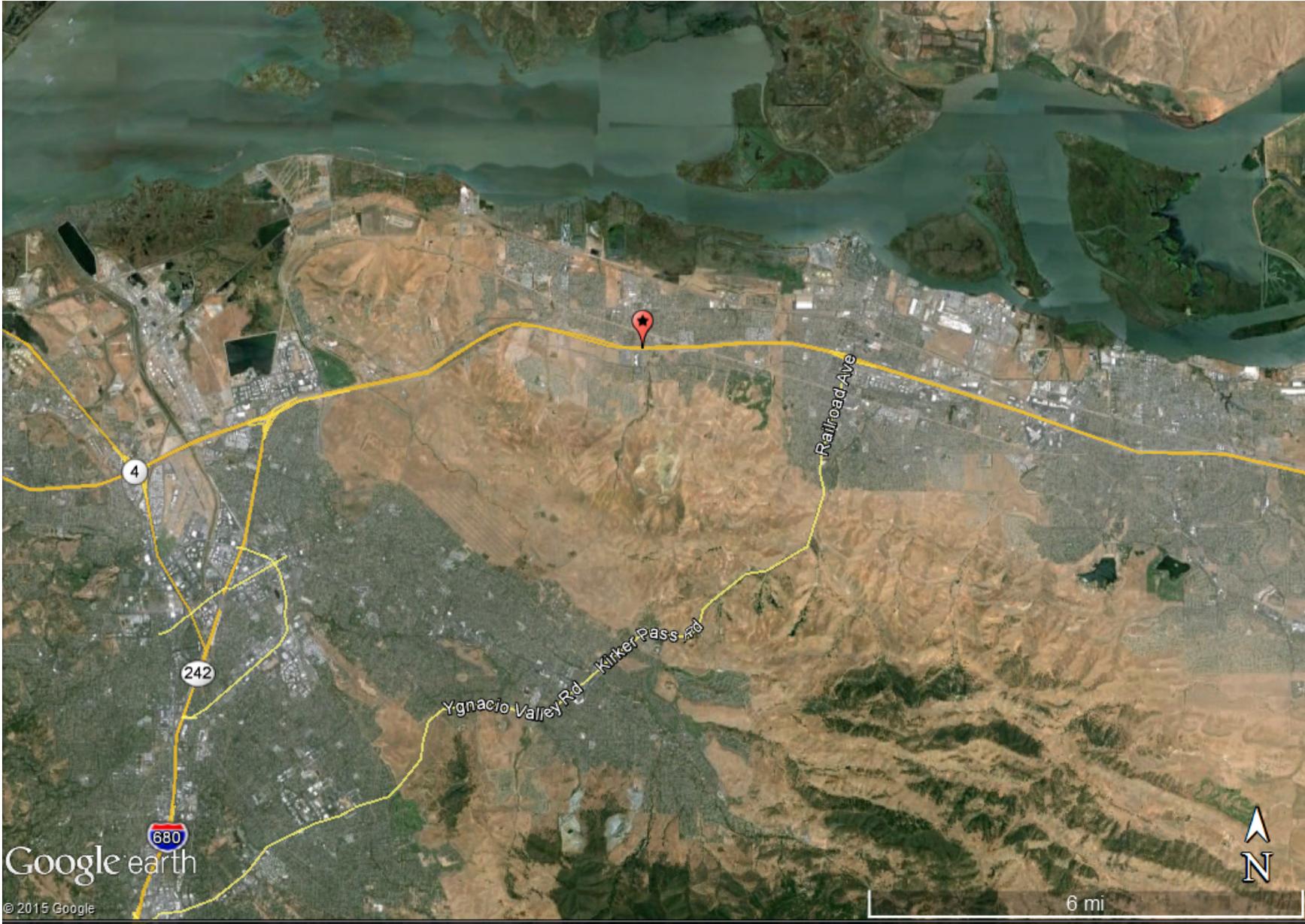
5. There is no state implementation plan for PM<sub>2.5</sub>, and therefore, the project is not identified in an implementation plan as an area of potential violation (40 CFR Section 93.123(b)(1)(v)).

- ❖ On January 9, 2013, the U.S. EPA issued a final rule to determine that the San Francisco Bay Area has attained the 24-hour PM<sub>2.5</sub> National Ambient Air Quality Standard (NAAQS). This action suspends the federal State Implementation Plan (SIP) provisions that apply to preparing an attainment plan to demonstrate how the Bay Area will attain the standard.

Therefore, the proposed project meets the Clean Air Act requirements and 40 CFR 93.116 without any explicit hotspot analysis. The proposed project would not create a new, or worsen an existing, PM<sub>2.5</sub> violation.

### References Cited:

<sup>1</sup> Truck AADT is from 2013 Annual Average Daily Truck Traffic on the California State Highway System. (<http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2013final.pdf>).

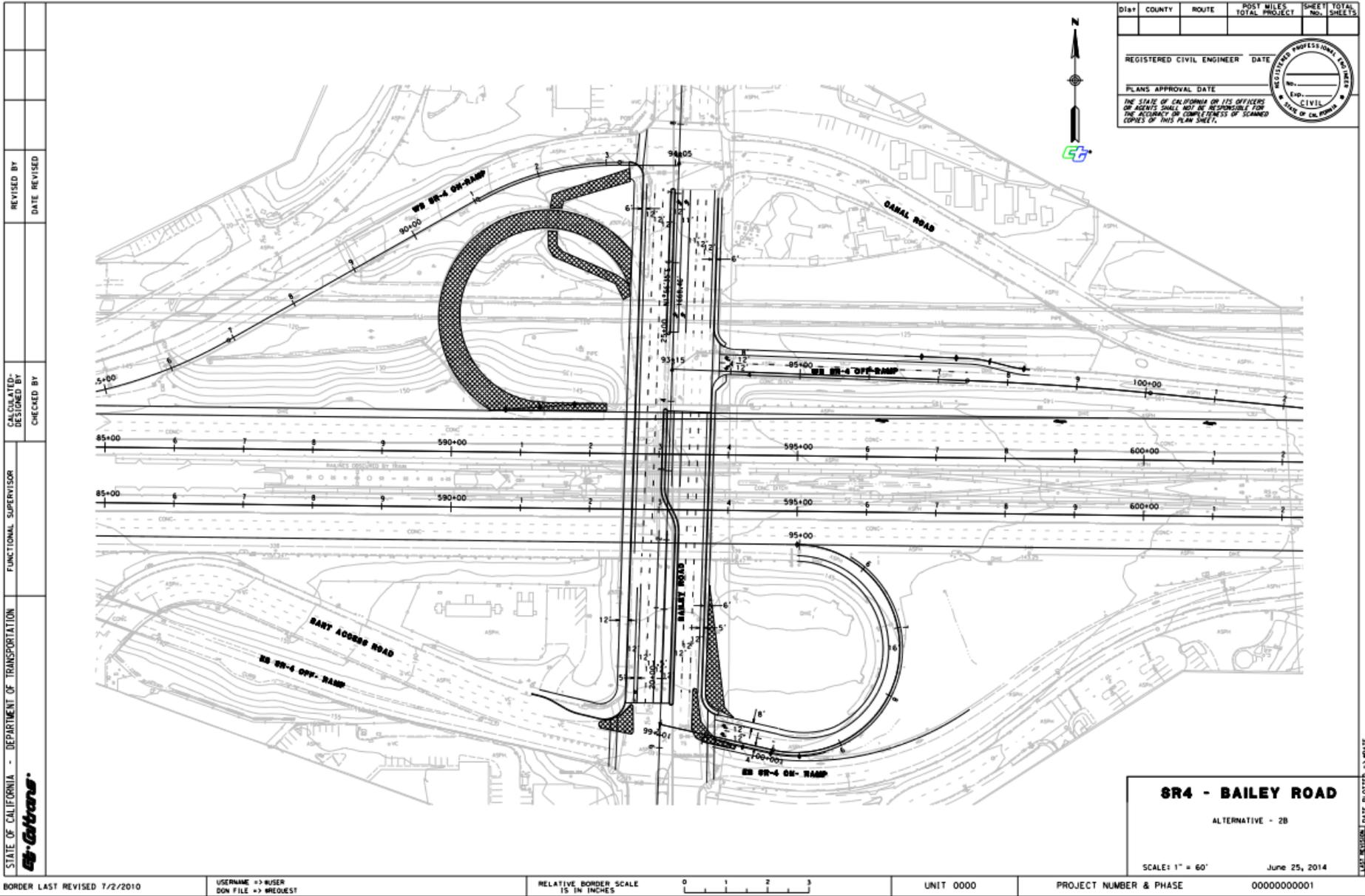


 Project

Project Location

Figure

SR 4/Bailey Road Pedestrian and Bicycle Access Improvement Project



Project Layout

Figure