

Project Information

Project Name: **I-80/Central Ave Interchange Modification**
Sponsor: **Richmond** TIP ID: **CC-050076** RTP ID: **94048**
Agency: **Contra Costa Transportation Authority** Mode: **STATE HIGHWAY** Sub Mode:
Project Type: **FREEWAY I/C** Trans. System: **STATE HWY** Purpose: **EXPANSION** County: **Contra Costa**
Proj. Desc.: **At I-80/Central Ave; Modifications and reconfiguration to interchange (Ph 1, federal funded) and connecting Pierce & San Mateo streets south of Central Ave. (Ph 2, local funded) plus some traffic improvements on Central Ave. to ease traffic congestion.**
RTP Title: **Improve interchanges and parallel arterials to I-80**

Step 1: Project Identification

- 1: Does this project have any federal funding? **Yes**
- 2: Does this project (or any phases of the project) require any federal action (such as federal authorization or approval for funding or environmental review) after December 14, 2010? **Yes**
- 3: Is the project exempt from both regional and project-level air quality conformity under 40 CFR 93.126?
Project Type Selected: **None Applies** **No**
- 4: Is the project exempt from regional air quality conformity under 40 CFR 93.127?
Project Type Selected: **Intersection signalization projects at individual intersections.** **Yes**
- 5: Is the project exempt from regional air quality conformity under 40 CFR 93.128?
Project Type Selected: **None Applies** **No**
- 6: Does this project meet the definition of a "project of air quality concern" under 40 CFR 93.123(b)(1)?
Project Type Selected: **None Applies** **No**

Dates for Interagency Consultation

Requested Date of Interagency Consultation: **APR-JUN, 2011**
Meeting Date of PM2.5 consultation via Air Quality Conformity Task Force to determine POAQC:
Action Date of PM2.5 consultation via Air Quality Conformity Task Force to determine POAQC:

Dates for PM2.5 Hot-Spot Analysis

Meeting Date of PM2.5 consultation via Air Quality Conformity Task Force to determine review hot-spot analysis:
Action Date of PM2.5 consultation via Air Quality Conformity Task Force to determine review hot-spot analysis:

**PM_{2.5} Project Assessment Form for Interagency Consultation
I-80/CENTRAL AVENUE OPERATIONAL IMPROVEMENT PROJECT**

RTIP ID# <i>(required)</i> 94048									
TIP ID# <i>(required)</i> CC-050076									
Air Quality Conformity Task Force Consideration Date June 23, 2011									
<p>Project Description <i>(clearly describe project)</i> The project is an operational improvement project on Central Avenue that closes the WB I-80 on-ramp during weekend peak hours (11 AM to 3 PM) and redirects traffic to the EB I-580 on-ramp (about 0.3 miles away) via changeable message signs placed at key locations between San Mateo Street and Rydin Road. Traffic on the eastbound I-580 on-ramp merges downstream with westbound I-80 traffic about one mile south of the Central Avenue. Thus, the project would redirect traffic on Central Avenue but would not prohibit access to the traveler's ultimate destination. The proposed project would not require any roadway expansion nor would it increase overall traffic volumes in the project area.</p> <p>The project also includes modifying the traffic control at the Central Avenue/I-580 ramps from all-way stop control to traffic signal control. The traffic signals would be interconnected (synchronized) with the Central Avenue/I-80 ramps to minimize the number of stops and delay for traffic on Central Avenue.</p>									
Type of Project: Intersection signalization									
County Contra Costa	Narrative Location/Route & Postmiles The proposed project extends from San Mateo St in El Cerrito to approx. 650 ft west of Rydin Rd in Richmond, along Central Avenue.								
Caltrans Projects – EA# 2G2500									
Lead Agency: Caltrans									
Contact Person Amin AbuAmara	Phone# 925-256-4740	Fax# 925-256-4701	Email AAbuAmara@ccta.net						
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>									
<input checked="" type="checkbox"/>	Categorical Exclusion (NEPA)	<input type="checkbox"/>	EA or Draft EIS	<input type="checkbox"/>	FONSI or Final EIS	<input type="checkbox"/>	PS&E or Construction	<input type="checkbox"/>	Other
Scheduled Date of Federal Action: July 2011									
NEPA Delegation – Project Type <i>(check appropriate box)</i>									
<input type="checkbox"/>	Exempt	<input checked="" type="checkbox"/>	Section 6004 – Categorical Exemption	<input type="checkbox"/>	Section 6005 – Non-Categorical Exemption				
Current Programming Dates <i>(as appropriate)</i>									
	PE/Environmental	ENG	ROW	CON					
Start	January 2011	August 2011	N/A	Nov 2011					
End	July 2011	October 2011	N/A	June 2012					

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Project Purpose and Need (Summary): *(please be brief)*

The purpose of the proposed project is to:

- Improve traffic operations at the Central Avenue/I-80 Westbound Ramps intersection
- Reduce vehicle queue spillback impacts from the Central Avenue/I-80 Westbound Ramps intersection

The heavy congestion experienced on Central Avenue is associated with unacceptable (LOS F) traffic operations at the Central Avenue/I-80 Westbound Ramps intersection. Based on field observations the westbound left-turn movement is the primary source of the congestion. Additionally, vehicle queues from the Central Avenue/I-80 Westbound Ramps intersection impact operations on adjacent intersections and on the freeway (westbound I-80). The project is needed to address these issues.

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

Commercial retail and residential

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Brief summary of assumptions and methodology used for conducting analysis *(please keep this concise – specifics may include date of when traffic counts were conducted, studies where truck percentages were derived)*

The Existing conditions analysis was based on weekend peak period volumes and twenty-four hour tube counts collected on Central Ave in 2006 and 2007. Trucks represent about 2% of the traffic on Central Avenue. The existing conditions analysis was performed using the SimTraffic microsimulation software.

Existing Plus Project volumes were determined by manually redistributing the westbound I-80 on-ramp volume to the eastbound I-580 on-ramp. A microsimulation analysis was also performed using these adjusted volumes and the traffic operations results were compared to Existing Conditions. Since the project is an operational improvement project there is no need to perform a future year analysis.

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

EXISTING VERSUS EXISTING PLUS PROJECT INTERSECTION LOS		
Intersection	Existing	Existing Plus Project
1. Central Avenue / I-580 Eastbound Ramps	10/B	15/B
2. Central Avenue / I-580 Westbound Ramps	12/B	18/B
3/4. Central Avenue / Jacuzzi Street/I-80 Westbound Ramps ²	> 100/F	41/D
5. Central Avenue / I-80 Eastbound Ramps	17/B	17/B
6. Central Avenue / San Luis Street	74/E	47/D
7. Central Avenue / San Mateo Street	39/E	21/C
8. Central Avenue / Belmont Avenue	22/C	3/A
9. Central Avenue / Santa Clara Avenue	12/B	2/A
10. Central Avenue / Carlson Boulevard	40/D	35/D
11. Central Avenue / San Pablo Avenue	53/D	48/D
Note: XX/YY = Intersection delay/LOS Source: Fehr & Peers, 2011.		

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. This is an existing facility to which operational improvements only are proposed.

**PM_{2.5} Project Assessment Form for Interagency Consultation
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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

The project results in a minor redistribution of traffic in the project area. Trucks represent about 2% of the traffic on Central Avenue.

AVERAGE DAILY TRAFFIC VOLUMES		
Location	Existing	Existing Plus Project
Central Avenue west of I-80	16,000 (320)	19,900 (398)
Central Avenue east of I-80	22,600 (452)	22,600 (452)
Note: XX (YY) = Total ADT (Truck ADT)		
Source: Fehr & Peers and Caltrans.		

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

Not applicable. This is an existing facility to which operational improvements only are proposed.

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.

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.

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Describe potential traffic redistribution effects of congestion relief (impact on other facilities)

The project would not result in adverse traffic effects elsewhere in the transportation network.

The traffic analysis shows the following key project benefits:

- 1) Under Existing conditions, the Central Avenue/ I-80 Westbound Ramps/ Jacuzzi Street intersection operates at LOS F during the weekend peak hour. As a result, the westbound off-ramp vehicle queue extends back onto the mainline so that vehicles getting off the freeway are at a complete stop on the mainline as they wait to exit the freeway. This condition creates a substantial speed differential between stopped vehicles on the freeway waiting to exit and vehicles traveling through. The speed differential increases the potential for speed-related accidents.
 - ***The project would improve the intersection operations to LOS D conditions. Furthermore, the westbound off-ramp vehicle queue is reduced so that it no longer extends back to the mainline and impact mainline operations.***
- 2) Under Existing conditions, the westbound vehicle queue on Central Avenue approaching the I-80/ Central Avenue interchange has been observed to extend past Santa Clara Avenue and impact traffic operations at Pierce Street, San Mateo Street, Belmont Avenue, and Santa Clara Avenue.
 - ***The project would reduce the westbound vehicle queue at the I-80/Central Avenue interchange such that vehicle queuing impacts on the adjacent intersections would be reduced. The project would result in a delay reduction of about 100 vehicle hours and improve overall travel speeds on Central Avenue from about 8 mph to 10 mph.***
- 3) Under Existing conditions, the westbound left-turn movement at the I-80/Central Avenue intersection experiences high levels of congestion and travel time.
 - ***Although the project would increase the travel distance for this movement the congestion relief associated with the project would reduce the travel time (between Carlson Boulevard and I-80/I-580 connection) for this movement by about 53 seconds. The reduction in travel time would result in an increase in average travel speed for this movement from about 13 mph to 20 mph.***

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Comments/Explanation/Details *(please be brief)*

Status of environmental documentation

- NEPA process complete by mid-July 2011
- Seeking air quality conformity determination on or before June 2011

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
- Intersection improvements — no additional lanes on I-80, I-580, or Central Avenue
- No significant change in traffic volume or truck percentages

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

- Intersections at LOS D, E, or F would improve with project
- No project changes to land use that would affect diesel traffic percentage

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

Not Applicable

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

Not Applicable

(v) Affects areas identified in PM₁₀ or PM_{2.5} implementation plan as site of violation?

- No state implementation plan for PM_{2.5} (due by December 2012)
- Therefore, not identified in plan as an area of potential violation.

Final Note: The proposed project would improve travel speeds on Central Avenue from about 8 mph to 10 mph. This projected increase in travel speed is likely to result in a reduction of PM_{2.5} emissions.

Attachments

Location Map

Weekday Sign Plan/Project Footprint

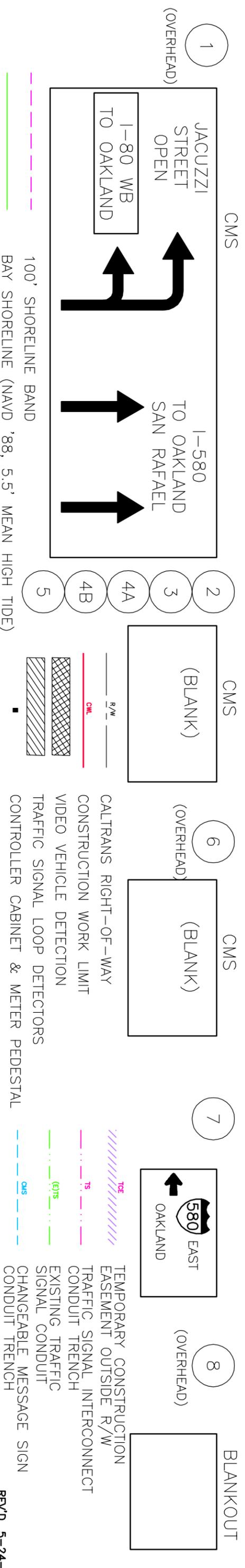
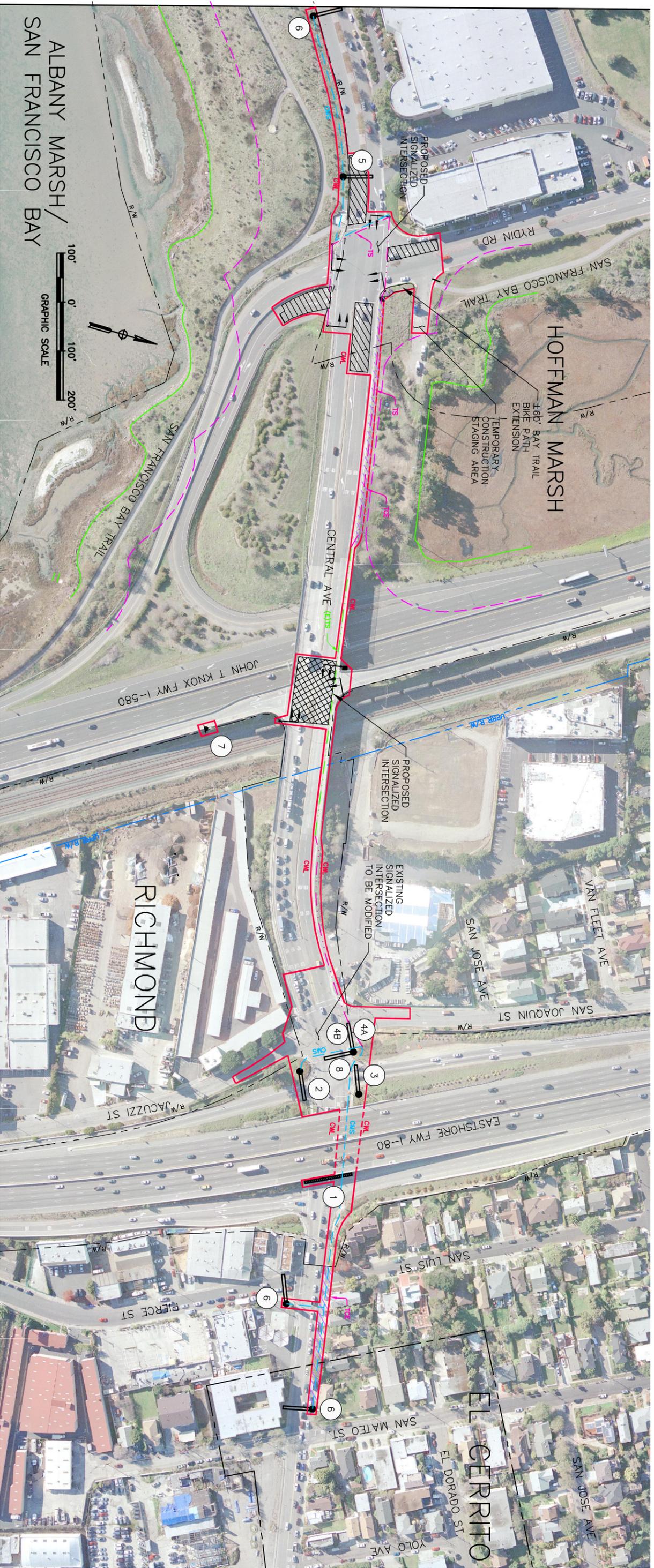
Weekend Sign Plan/Project Footprint

FIGURE 1
PROJECT VICINITY MAP



**PROJECT
LOCATION**

WC11-2823_1_ProjVic



REV'D. 5-24-11



I-80/CENTRAL AVE. OPERATIONAL IMPROVEMENTS PROJECT



WEEKDAY SIGN PLAN
PROJECT FOOTPRINT

