

Project Assessment Form for PM_{2.5} Interagency Consultation

RTIP ID# <i>(required)</i> 22353 (RTP) [CTIPS ID: 20600003388 (2011 TIP) / 106-0000-1977 (2012 STIP)]				
TIP ID# <i>(required)</i> CC-050028 [CCTA Project Number 8001; Caltrans PPNO 0222E]				
Air Quality Conformity Task Force Consideration Date 12/6/2012				
Project Description <i>(clearly describe project)</i> The project, located in central Contra Costa County (see Attachment 1 showing project corridor in a statewide context), proposes to close the existing gap in the southbound High-Occupancy Vehicle (HOV) lane system along southbound Interstate 680 (I-680) by adding a median HOV lane from 0.6 mile north of the Livorna Road interchange to 0.2 mile north of Geary Road, a distance of 5.4 miles. Currently, in the absence of a dedicated HOV lane, express buses and qualifying vehicles share the mixed-flow lanes with other traffic during both morning and afternoon peak commute periods. To accommodate the new southbound HOV lane, the proposed improvements would widen southbound I-680 from 0.6 miles north of Livorna Road to 0.4 miles north of South Main Street, and restripe the existing southbound mainline from north of South Main Street to 0.4 miles north of North Main Street. The project will also require widening the bridge at South Main Street (PM 13.08). No right-of-way acquisitions are required. However, temporary construction easements (TCE's) are required with this Build Alternative. Other improvements include modification of the existing fiber optical cable (FOC) system and elements of the traffic operations system (TOS), upgrade of the existing median barrier, installation of ramp metering systems (which will not be made operational as part of this project), and modification of the existing storm water retention and drainage systems.				
Type of Project: Change to existing State highway				
County Contra Costa		Narrative Location/Route & Postmiles I-680 Southbound from 0.6 mile north of the Livorna Road interchange to 0.2 mile north of Geary Road; PM 11.2/16.6 Caltrans Projects – EA# 04-3A5800		
Lead Agency: Contra Costa Transportation Authority				
Contact Person Leo Scott		Phone# (925) 937-0980	Fax# (925) 947-3177	Email leo@gray-bowen.com
Federal Action for which Project-Level PM Conformity is Needed <i>(check appropriate box)</i>				
Categorical Exclusion (NEPA)	X	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction
Other				
Scheduled Date of Federal Action: 2/18/2013				
NEPA Delegation – Project Type <i>(check appropriate box)</i>				
Exempt		Section 6004 – Categorical Exemption	X Section 6005 – Non-Categorical Exemption	
Current Programming Dates <i>(as appropriate)</i>				
	PE/Environmental	ENG	ROW	CON
Start	June 2011	Dec 2013	Dec 2014	Mar 2016
End	Dec 2013	Dec 2015	Mar 2016	Mar 2018
Project Purpose and Need (Summary): <i>(please be brief)</i> The I-680 Corridor has operational deficiencies that (without improvements) will be exacerbated as traffic demand increases in the future. The proposed project would achieve the following goals: <ul style="list-style-type: none"> • Improve HOV traffic flow by closing the Southbound HOV gap in the current I-680 system and by providing a continuous HOV lane without interruption within Contra Costa County. • Improve the overall operations of Southbound I-680 from PM 11.2 to PM 16.6. A Caltrans Preliminary Traffic Operations Analysis (PSR phase) predicted reductions of 8 to 14 minutes in commute times for eligible vehicles using the southbound HOV lanes within the study corridor.				

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

Attachment 2 (“Land Use in the Project Study Area”) depicts the geographic distribution of existing land use types along the corridor. From the northern project limit to the I-680/SR 24 interchange, existing land uses are commercial and residential. Offices and commercial uses dominate the area around the I-680/SR 24 interchange. After I-680 crosses Las Trampas Creek, land use transitions to residential. No substantial diesel vehicle e.g., heavy truck) traffic generators were identified or are anticipated along or near the project corridor.

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 following Level of Service (LOS) data are excerpted from the *Draft Traffic Operations Report for the Southbound I-680 HOV Gap Closure PA/ED* prepared for CCTA and Caltrans by Fehr & Peers in October 2012. In that month Fehr & Peers also provided predicted AADTs from which the AADTs presented below are extracted. As part of their project-related traffic studies, Fehr & Peers performed extensive data collection efforts in May 2011 to determine existing peak period travel times, mainline queuing characteristics, traffic volumes, vehicle occupancies and truck percentages within study area boundaries. The principles presented in Chapter 2 (Causes of Congestion) in the manual entitled *A Short Course on Freeway Operations Analysis*, prepared by Caltrans District 4, were used to estimate demand volumes from the AM and PM traffic counts. The most recent available version of the CCTA Transportation Model (consistent with the corresponding MTC model) was validated to 2010 conditions within the study area and then used to develop future year peak period traffic forecasts for the study corridor. Appendix 1 (Projects by County) in the *Transportation 2035 Plan for the San Francisco Bay Area* (April 2009) prepared by MTC is the primary source for determining which interstate and state route improvements to assume in the future. The freeway mainline segments, weaving areas, and ramp junction operations were analyzed using *FREQ* macroscopic modeling software. Truck percentages were derived from Caltrans’ *2011 Annual Average Daily Truck Traffic* dataset.

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

PREDICTED I-680 SB PEAK HOUR LEVEL OF SERVICE (LOS) & ANNUAL AVERAGE DAILY TRAFFIC (ADT): OPENING YEAR (2016)										
Segment	Assigned Segment Length	Peak Hour LOS: AM (PM)				AADT				
		HOV Lanes		Mixed Flow Lanes		All Lanes		Proportion of Trucks to Total	Trucks	
		No Build	Build	No Build	Build	Total	Build		No Build	Build
		No Build	Build	No Build	Build	No Build	Build	Total	No Build	Build
Concord Ave. On-Ramp to SR 242 On-Ramp	1.15	B (A)	B (A)	F (C)	C (C)	67,100 to 79,100	67,100 to 79,100	3.9%	3,149 to 3,712	3,149 to 3,712
SR 242 On-Ramp to Monument Blvd. On-Ramp	1.01	B (B)	B (B)	F (C)	C (C)	119,800	119,800	3.2%	5,623	5,623
Contra Costa Blvd. On-Ramp to Sunnyvale Ave./N Main St. Off-Ramp	0.81	B (A)	C (B)	F (C)	C (C)	122,900 to 137,400	122,900 to 137,400	3.2%	5,768 to 6,449	5,768 to 6,449
Sunnyvale Ave./N Main St. Off-Ramp to Treat Blvd. On-Ramp	0.49	N/A	C (B)	F (C)	C (C)	138,000	138,000	3.2%	6,477	6,477
Treat Blvd. On-Ramp to San Luis Rd./N Main St. Off-Ramp	0.80		C (B)	F (C)	F (C)	127,600 to 141,400	128,200 to 141,400	3.2%	5,989 to 6,636	6,017 to 6,636
San Luis Rd./N Main St. On-Ramp to SR 24 Off-Ramp	0.48		C (B)	F (F)	F (C)	125,400 to 132,000	126,200 to 132,800	4.0%	5,886 to 6,195	5,923 to 6,233
SR 24 Off-Ramp to Olympic Blvd. Off-Ramp	1.35		B (B)	F (F)	F (C)	75,500 to 90,400	76,300 to 91,200	5.8%	3,544 to 4,243	3,581 to 4,280
SR 24 On-Ramp to S Main St. Off-Ramp	0.69		B (C)	F (F)	F (F)	102,200 to 107,200	102,500 to 107,500	5.8%	4,797 to 5,031	4,811 to 5,045
S Main St. Off-Ramp to Rudgear Rd. On-Ramp	0.47	B (C)	B (C)	F (F)	F (F)	95,900 to 99,600	96,100 to 99,800	5.8%	4,501 to 4,675	4,510 to 4,684
Rudgear Road On-Ramp to Livorna Rd. Off-Ramp	1.33	B (C)	B (C)	F (F)	E (F)	105,800	106,000	5.8%	4,966	4,975
Livorna Rd. On-Ramp to Stone Valley Rd. Off-Ramp	0.91	B (C)	B (C)	F (E)	F (E)	105,100	105,200	5.8%	4,933	4,937
Stone Valley Rd. Off-Ramp to El Pintado Rd. Off-Ramp	1.62	B (C)	B (C)	F (E)	E (E)	98,400 to 105,200	98,500 to 105,300	5.8%	4,618 to 4,937	4,623 to 4,942

SOURCES: Caltrans, 2012; Fehr & Peers, 2012a, 2012b

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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

PREDICTED I-680 SB PEAK HOUR LEVEL OF SERVICE (LOS) & ANNUAL AVERAGE DAILY TRAFFIC (ADT): YEAR 2040*										
Segment	Assigned Segment Length	Peak Hour LOS: AM (PM)				AADT				
		HOV Lanes		Mixed Flow Lanes		Total		All Lanes		
		No Build	Build	No Build	Build	No Build	Build	Proportion of Trucks to Total	Trucks	
						No Build	Build		No Build	Build
Concord Ave. On-Ramp to Willow Pass Rd. Off-Ramp	0.62	F (A)	F (A)	F (F)	F (F)	91,000	91,000	3.9%	4,271	4,271
Willow Pass Rd. On-Ramp to Gregory Lane Off-Ramp	0.09	F (B)	F (B)	F (F)	F (F)	84,200 91,200	84,200 91,200	3.9%	3,952 to 4,280	3,952 to 4,280
Gregory Lane Off-Ramp to SR 242 On-Ramp	0.44	F (A)	F (A)	F (F)	F (F)	76,500	76,500	3.9%	3,590	3,590
SR 242 On-Ramp to Monument Blvd. On-Ramp	1.01	F (B)	F (B)	F (F)	F (F)	142,900	142,900	3.2%	6,707	6,707
Contra Costa Blvd. On-Ramp to Sunnyvale Ave./N Main St. Off-Ramp	0.81	F (B)	E (C)	F (F)	F (F)	164,200	164,200	3.2%	7,707	7,707
Sunnyvale Ave./N Main St. On-Ramp to Treat Blvd. On-Ramp	0.49	N/A	F (C)	F (F)	F (F)	161,200	161,200	3.2%	7,566	7,566
Treat Blvd. On-Ramp to San Luis Rd./N Main St. Off-Ramp	0.80		E (C)	F (F)	F (F)	149,700 164,700	153,300 164,700	3.2%	7,026 to 7,730	7,195 to 7,730
San Luis Rd./N Main St. On-Ramp to SR 24 Off-Ramp	0.48		D (C)	F (F)	F (F)	156,800	161,400	4.0%	7,359	7,575
SR 24 Off-Ramp to Ygnacio Valley Rd. On-Ramp	0.28		B (B)	F (F)	F (F)	88,300	92,900	5.8%	4,144	4,360
Ygnacio Valley Rd. On-Ramp to Olympic Blvd. Off-Ramp	1.07		F (B)	F (F)	F (F)	105,500	110,100	5.8%	4,952	5,167
SR 24 On-Ramp to Olympic Blvd. On-Ramp	0.49		F (C)	F (F)	F (F)	131,900	133,300	5.8%	6,191	6,256
Olympic Blvd. On-Ramp to S Main St. Off-Ramp	0.20		F (C)	F (F)	F (F)	137,200	138,600	5.8%	6,439	6,505
S Main St. Off-Ramp to Rudgear Rd. On-Ramp	0.47		F (F)	F (F)	F (F)	F (F)	125,300 131,300	125,900 131,900	5.8%	5,881 to 6,162
Rudgear Road On-Ramp to Livorna Rd. Off-Ramp	1.33	F (F)	F (F)	F (F)	F (F)	138,600	139,200	5.8%	6,505	6,533
Livorna Rd. On-Ramp to Stone Valley Rd. Off-Ramp	0.91	E (E)	E (F)	E (F)	E (F)	144,700	144,700	5.8%	6,791	6,791
Stone Valley Rd. Off-Ramp to El Pintado Rd. Off-Ramp	1.62	E (E)	E (E)	E (E)	E (E)	133,000 140,200	133,000 140,200	5.8%	6,242 to 6,580	6,242 to 6,580

Note: * Horizon Year for currently-adopted MTC RTP is 2035.

SOURCES: Caltrans, 2012; Fehr & Peers, 2012a, 2012b

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

N/A

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

N/A

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

N/A

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

N/A

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

The project closes a gap in the HOV system in the center of the study corridor, but does not change the capacity of the freeway at either the beginning or end of the corridor, so it does not result in a significant change in the overall demand for traffic entering the study area. This is illustrated by comparing predicted No Build and corresponding Build AADTs shown in the tables above. Accordingly, changes to demand along potential alternate travel routes outside of the study corridor would also be expected to be minor.

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

Background

- The Administrative Draft Initial Study/Environmental Assessment (IS/EA) is currently scheduled for completion in mid-December 2012. Accordingly, CCTA and its environmental process would greatly benefit from consideration of the project at the December 6 AQCTF Meeting.
- The Draft IS/EA is scheduled to be circulated in mid-February 2013
- CCTA is seeking a final project-level air quality conformity determination by mid-November 2013, the currently-planned date for Caltrans approval of a FONSI as appropriate.

Lead Agency Determination Regarding Whether or Not the Project is a Project of Air Quality Concern (POAQC) [40 CFR 93.123(b)(1)]

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

- As the preceding tables show, proportions of Caltrans-identified trucks (a reasonable representation of “diesel vehicles”) are estimated to vary from about 3 to 6 percent along the project study corridor with or without the project. This compares with 8 percent (based on 125,000 total vehicles) for a “...project on a new highway or expressway...” from the first example of a POAQC presented in the EPA’s *Quantitative Hot-spot* guidance document. Most importantly, the current project would not be “...on a new highway or expressway...”
- Predicted project-generated increases in total I-680 AADT are negligible where such increases are predicted at all. Assuming that those increases are proportionally distributed among trucks and other on-road vehicles, project-related increases in trucks would also be negligible.

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

- As demonstrated above, the project is expected to result in only very minor redistributions of traffic. Predicted redistributions would have a very minor influence on the function of nearby roadway intersections, with negligible implications for near-intersection PM_{2.5} concentrations.
- As discussed under (i), truck percentages along I-680 within the study corridor are relatively low in the context of the range of truck percentages along state highways.
- As discussed in the response provided in the “Surrounding Land Use/Traffic Generators” field of this form, no nearby, substantial truck-generating land uses – either existing, planned, or proposed -- were identified within or immediately adjacent to the study area.

(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?

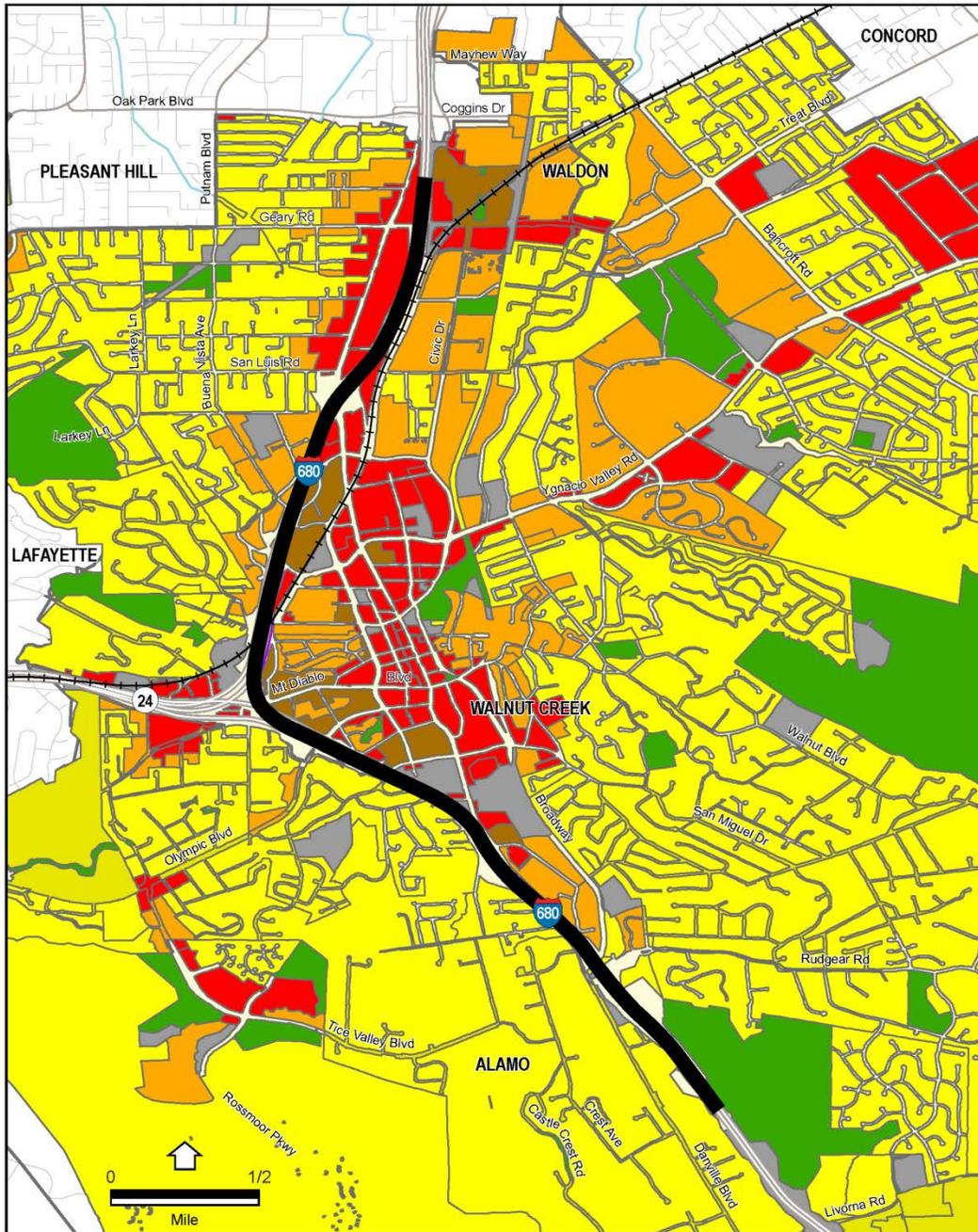
- Per 77 FR 65521- 65526 (October 29, 2012): “EPA is proposing to determine that the San Francisco Bay Area...has attained the 2006 24-hour .PM_{2.5}...(NAAQS).” This proposed determination is based on 2009-2011 monitoring data that demonstrate no violations.
- The most recent BAAQMD air quality plan that identified potential violations of the 2006 PM_{2.5} NAAQS was the *Bay Area 2010 Clean Air Plan*. It reported a 2008 design value for PM_{2.5} of 36 µg/m³, 1 µg/m³ over the NAAQS. That value represented the Vallejo monitoring station, over 15 miles from the project study corridor; no other monitoring station in the San Francisco Bay Area was found to be in violation at that time.

For these reasons, CCTA has concluded that the project is not a POAQC.

ATTACHMENT 1



ATTACHMENT 2



I-680 Southbound HOV Gap Closure Project

LEGEND

- Interstate Roads
- Major Roads
- +— Railroad
- Project Limits

Land Use

- Commercial/Office
- Public
- Multi-Family Residential
- Mixed Use
- Open Space - Agriculture
- Open Space - Recreation
- Single-Family Residential

**LAND USE
IN THE PROJECT
STUDY AREA**

Figure XX-X