

Hot Spot Analysis (HSA) Summary

I-580 Westbound High Occupancy Vehicle (HOV) Lane Widening Project

Purpose

- Obtain Task Force determination on project at February 23, 2012, meeting.
- Determination is needed to proceed with public review of HSA and request for FHWA conformity determination in time to meet funding deadline.

Background

- PM_{2.5} Assessment Form submitted in early February 2012 identified project as not a Project of Air Quality Concern (POAQC).
- Total and truck AADT exceed FHWA/EPA thresholds (125,000 AADT, 8% trucks) with and without project.
- Qualitative HSA submitted on February 16, 2012, under assumption that high total and truck AADT might constitute a POAQC trigger.

Actions Considered in HSA

- I-580 Westbound HOV Lane Widening Project (RTP 230665, TIP ALA-070018). Project includes remaining unconstructed scope from I-580 Westbound Auxiliary Lanes Project (RTP 21456, TIP ALA-050011)
- Concurrent State Highway Operation and Protection Program (SHOPP) improvements for project corridor (RTP 230713, TIP MTC-050009) (exempt under 40 CFR 93.126).

Existing Traffic Conditions

- Truck percentages in corridor range from 4.55% to 12.20% (Caltrans 2010 Truck Counts).
- Trucks with 5+ axles account for well over 60% of all trucks (Caltrans 2010 Truck Counts).

Project Factors That Influence PM_{2.5} Emissions

- Project would not increase diesel truck capacity since most diesel trucks cannot use HOV lanes.
- Project would increase peak-hour speeds in the project corridor in both 2015 and 2035.
- In 2035, project would reduce vehicle hours of delay during peak travel hour by 1,250 hours.
- In 2035, travel time savings through corridor would average 13.2 minutes in mixed-flow lanes and 31 minutes in HOV lane.

PM_{2.5} Trends from Local Monitoring Data

- Annual average PM_{2.5} concentrations have not exceeded the national standard in the past four years (2007–2010).
- 24-hour average PM_{2.5} concentrations have exceeded the national standard nine times in 2007, twice in 2008, four times in 2009, and zero times in 2010, indicating that 24-hour PM_{2.5} concentrations are likely decreasing.

Project-Level Effects on PM_{2.5} Emissions

- Modeling of PM_{2.5} emissions shows decrease with 2015 and 2035 Build conditions compared to No Build conditions.
- Modeling of project emissions does not account for California Truck and Bus Regulation, advances in engine technology, and continued retirement of older, higher-emitting vehicles.
- Project would not contribute to National Ambient Air Quality Standards violations or conflict with state and local measures to improve regional air quality.