UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

July 17, 2012

Smita Deshpande
Caltrans-District 12
Attn: 405
2201 Dupont Drive, Suite 200
Irvine, California 92612

Subject: Comments on the Draft Environmental Impact Statement for the San Diego Freeway (Interstate 405) Improvement Project between State Route 73 and Interstate 605 in Orange County, California (CEQ #20120152)

Dear Ms. Deschpande:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (Draft EIS) for the Interstate 405 (I-405) Improvement Project between State Route 73 (SR-73) and Interstate 605 (I-605) in Orange County, California. Our enclosed detailed comments were prepared pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality regulations (40 CFR Parts 1500-1508) and our NEPA review authority under Section 309 of the Clean Air Act. The State of California has assumed responsibilities under NEPA for this project pursuant to the Memorandum of Understanding between the Federal Highway Administration (FHWA) and the California Department of Transportation (Caltrans) Concerning the State of California's Participation in the Surface Transportation Project Delivery Pilot Program.

As described in the Draft EIS, this project aims to relieve congestion and improve operational efficiency on I-405 between SR 73 and I-605 through a combination of additional lanes and interchange enhancements. Three alternatives for I-405 improvement are presented. Alternatives 1 and 2 would add 1 and 2 general purpose lanes, respectively. Alternative 3 would add 1 general purpose lane and one express lane adjacent to the existing HOV lane to create a two-lane combined express HOV and toll facility. The Draft EIS does not identify a preferred alternative.

Based on our review, we have rated the Draft EIS as Environmental Concerns-Insufficient Information (EC-2; see enclosed Summary of EPA Rating Definitions) due to potential air quality impacts and a need to assess induced travel demand. EPA recommends an analysis of induced travel demand in order to disclose and quantify the reduced benefits to congestion relief that may occur in the future. An analysis of induced travel demand resulting from highway expansion will allow decision makers and the public to better understand when congestion will return to existing levels and potentially worsen. EPA is particularly concerned with adverse air

quality impacts that could result at a future point when congestion returns. In addition, EPA recommends implementing more stringent Transportation Demand Management (TDM) measures and integrating increased transit options throughout the project corridor to reduce air quality impacts. EPA supports the assessment of options such as increased high occupancy vehicle and tolling lanes, as in Alternative 3, to meet long-term transportation needs while reducing emissions from single occupancy vehicles. Proceeding without such measures, as is proposed in Alternatives 1 and 2, may result in worsened long-term air quality impacts due to emissions from a higher number of single occupancy vehicles.

We appreciate the opportunity to review this Draft EIS. When the Final EIS is released for public review, please send one hard copy and one copy on disc to the address above (mail code: CED-2). If you have any questions, please contact me at 415-947-4161 or Clifton Meek, the lead reviewer for this project. Clifton can be reached at 415-972-3370 or meek.clifton@epa.gov.

Sincerely,

/s/

Connell Dunning, Transportation Team Supervisor
Environmental Review Office

Enclosures: EPA's Detailed Comments
Summary of EPA Rating Definitions

Cc via email: John Chisholm, Caltrans
Ron Kosinski, Caltrans District 7
Rich Macias, SCAG

Induced Travel Demand

Induced travel demand has been widely studied and has been acknowledged by the Transportation Research Board as far back as 1947[1]. Today it is widely accepted by transportation practitioners, and yet there is no analysis of induced travel demand in the Draft EIS. Relieving a bottleneck on a congested roadway or system can induce demand for use of that facility, generating more Vehicle Miles Traveled (VMT), and ultimately causing congestion issues similar to pre-project levels. Absent an analysis of induced demand, there is no way to determine at what point in time the air quality benefits described will no longer be realized. With the exception of the HOV/toll lanes in Alternative 3, there are no Transportation Demand Management (TDM) measures proposed in the Draft EIS that are guaranteed to maintain mobility through the project corridor. Without these robust TDM measures, it is not possible to reduce congestion to accommodate existing and projected future demand without also inducing new demand[2]; the capacity created can be used equally by "planned" motorists and unplanned motorists.

Recommendations:

- Add a background discussion and analysis of induced travel demand in the Final EIS explaining induced travel demand as it relates to this project, and particularly addressing how induced demand could affect each alternative's ability to meet the project purpose and need. Identify the future time when congestion will return to current levels and/or worsen due to induced travel demand and identify further measures to reduce this future increase in congestion.
- Include a discussion of the connection between induced travel demand and TDM measures and identify specific TDM measures for each alternative that, if implemented, would reduce effects of induced travel demand.

Air Quality

The project is located in the South Coast Air Basin, which is classified as extreme nonattainment for ozone, serious nonattainment for particulate matter less than 10 microns in diameter (PM10), and nonattainment for particulate matter less than 2.5 microns in diameter (PM2.5). As such, it is vital that the project reduce emissions of these compounds to the greatest extent possible. Without an analysis of induced travel demand, as recommended above, EPA questions the conclusion that air quality will be improved by the proposed project. Further, the reliance on road capacity expansion to ease traffic congestion, without integration of transit or other

[1] Jorgensen, R.E. "Influence of Expressways in Diverting Traffic from Alternate Routes and in Generating New Traffic." Proc. Highway Research Board, Volume 27. 1947. pp. 322-330.

[2] Litman, T.L. "Generated Traffic and Induced Travel Implications for Transport Planning". ITE Journal, Vol. 71, No. 4, Institute of Transportation Engineers, April 2001, pp. 38-47. An updated 2011 version of this paper is available at http://www.vtpi.org/gentraf.pdf.

alternatives to single occupancy vehicle travel, may hinder attainment of air quality standards in the South Coast Air Basin. As illustrated in the Draft EIS (page 3.1.6-23), Lane Density, Level of Service, and Volume to Capacity Ratios show only minor improvements between the existing and projected future project conditions (with the exception of Alternative 3). As such, small changes in model assumptions could easily eliminate any projected air quality benefits. If congestion is not significantly improved by the project, there is likely to be an increase in emissions due to the greater number of vehicles on an expanded highway.

EPA strongly advocates implementation of more stringent TDM measures throughout the project corridor. These measures can be implemented more quickly and at minimal cost to the environment. We believe these transportation tools should be aggressively implemented before development of costly highway construction projects, with those components which maximize congestion relief and provide the greatest reduction in VMT being given implementation priority. We also recommend Caltrans further discuss integration of mass transit components (e.g., light rail, Bus Rapid Transit) which can accommodate future transportation demand while reducing VMT and associated air emissions. As stated in the project's FAQ sheet (http://www.octa.net/pdf/405/faq.pdf), it has been estimated that the width of the I-405 would need to be doubled from the existing ten lanes to an unfeasible twenty lanes to serve the traffic demand in this corridor. As such, transportation demand in the project area will never be met by freeway expansion alone. If any true congestion relief is to be realized on the I-405, alternatives to freeway expansion (e.g. light rail, bus rapid transit) must become viable alternatives to the private automobile, and single occupancy vehicles must become a minority during peak periods.

Recommendations for the Final EIS:

- Provide commitments for more aggressive implementation of TDMs in order to achieve permanent long-term reduction in traffic congestion and improvement in air quality. We urge expanded use of HOV and bus-only lanes, conversion of general purpose lanes to HOV and bus-only lanes during peak hours, pricing measures such as those proposed in Alternative 3, and additional transit options.

Tolled Express Lanes (Alternative 3)

While EPA is supportive of TDM measures such as the toll lanes proposed in Alternative 3, the DEIS states that prior authority from FHWA is required to operate a toll facility on the Interstate Highway System (page 1-19). It is therefore unclear whether Alternative 3 can be considered a feasible alternative. Also, it is unclear how effective the proposed tolled express lanes would be if they were to terminate into a heavily congested freeway corridor in Los Angeles County, or further south in Orange County. The Final EIS should describe in detail how traffic flow will be managed north and south of the I-405 improvement project corridor, and should provide a vision of how these tolled express lanes might be tied into a much broader network of tolled lanes throughout the SCAG planning area.

Additionally, no concession is made in Alternative 3 for low-income individuals who might be unable to afford the full cost of the tolled express lanes. In similar toll lane projects currently being implemented on Interstate 10 and Interstate 110 in Los Angeles, a subsidy for low-income

drivers is being provided in the form of a $25 credit at the time of account initiation. This credit can then be applied to either the transponder deposit or pre-paid toll deposit, with the monthly $3 account maintenance fee being waived (http://www.metro.net/projects_studies/expresslanes/images/ExpressLanes_Factsheet_Toll_Credit_Program.pdf). In order to develop a more equitable transportation strategy to accompany a potential toll road in the future, a program offering a subsidy for low-income drivers should be instituted on the I-405.

Recommendations for the Final EIS:

- Provide assurance that FHWA has agreed to grant the authority to operate a toll facility on I-405.
- Provide additional details of studies being conducted or changes that are planned for the HOV lanes north and south of the project corridor in order to maintain efficient speeds for those who opt to pay the toll or commit to HOV 3+ status. Provide details of any coordination with the Los Angeles County Metropolitan Transportation Authority (LACMTA) and Caltrans District 7 regarding this issue.
- Commit to implementing a program that would provide subsidies to low-income motorists who use the tolled express lanes. If such a program is determined to be unsuitable for the I-405 improvement project, provide a discussion of alternatives that would ensure that the tolled lanes would be accessible to motorists at all income levels.

Transportation Control Measures

The document indicates that the proposed project qualifies as a Transportation Control Measure (TCM) in the Air Quality Management Plan and justifies this by stating that the project has TCM components, such as "...auxiliary lanes, ramp metering, traffic signal timing optimization, and other traffic flow improvements." However, the 2008 SCAG Regional Transportation Plan (RTP) describes the project as follows: "construct one additional all purpose lane in each direction on I-405 and provide additional capital improvements from SR 73 through the LA County line." The goal of a TCM should be to adjust trip patterns or modify vehicle use in ways that reduce air pollutant emissions. The project as identified in the RTP, described as adding all purpose lanes, does not appear to meet that goal.

Recommendations:

- Consult with SCAG to discuss the applicability of the project as a TCM. Should it be confirmed that this project does indeed qualify as a TCM, provide additional information in the Final EIS to support this claim.

Project Alternatives

A main component of the project purpose and need is to reduce congestion and improve mobility through the project corridor. As such, solely adding capacity through the construction of general purpose lanes, as described in Alternatives 1 and 2, without integrating additional congestion-relieving strategies or measure to improve mobility, may not meet the project purpose and need. Furthermore, the Draft EIS does not provide sufficient information on the relative transportation benefits of other project components, such as improving auxiliary lanes, ramp metering, and other transportation system management (TSM) measures. For example, the Draft EIS doesn't provide any information on how much could be improved by solely addressing ramp and interchange deficiencies so that traffic queues don't extend onto the freeway. The Final EIS should demonstrate if these project components alone could provide some improved mobility through the project corridor without the extensive cost and impact of adding new general purpose lanes. According to the analysis provided in the Draft EIS, the only alternative that guarantees any significant mobility increase through the project corridor is Alternative 3, with the implementation of TDM strategies that have been proven effective on other California freeways.

Recommendations for the Final EIS:

- Provide sufficient information on the relative transportation benefits of each project component such as TSM measures, addition of general purpose lanes, and implementation of TDM measures. We recommend the Final EIS provide data which describes the percent contribution of each project component towards meeting the project purpose and need. For example, clearly describe the level of congestion relief (e.g., Level of Service improvement, Volume to Capacity Ratios) achieved and how long this relief will last by implementing a particular project component. Compare different project components by providing a table showing how much each component contributes to achieving short and long-term transportation needs.

- Provide further explanation and rationale regarding why light-rail, bus rapid transit, or other mass transit alternatives are not considered feasible alternatives to meet travel demand in the I-405 corridor. As stated in Chapter 2 of the Draft EIS, the primary reason these alternatives were dismissed relates to their inability to reduce congestion in general purpose lanes, which appears also to be a weakness for alternatives 1, 2 and 3. Given the extensive current and future expansion of the Los Angeles Metro rail system, there will be an increased number of options for passengers on Orange County transit to make connections and access areas in almost any part of the greater Los Angeles metropolitan area. As such, mass transit could be a feasible alternative to much private automobile use by the time this project is projected to be complete in 2020 if additional transit options were available within Orange County.