Transportation Solutions Defense and Education Fund

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November 18, 2016
e-mail to: sm101scoping
@dot.ca.gov

Yolanda Rivas
Caltrans Office of Environmental Analysis
P.O. Box 23660
Oakland, CA 94623-0660

Re: SM 101 Managed Lanes Project Scoping comments

Dear Ms. Rivas:

The Transportation Solutions Defense and Education Fund, TRANSDEF, is an environmental organization focused on reducing the climate impacts of transportation. Because of that focus, it is our duty to inform you that the proposed SM 101 Managed Lanes Project ("Project") is inconsistent with the State of California's climate policies to reduce greenhouse gas emissions.

With motor vehicles contributing about half of the state's emissions (when fuel production, vehicle manufacture and tailpipe emissions are all counted), the California Transportation Plan 2040 recognized the need to move away from this type of project, precisely because they do not offer long-term solutions. (See the attached Excerpts of CTP 2040.)

> Data tell us that we must look at solving congestion in a more holistic way. Simply adding more lanes and roads will not be enough. It must be coupled with new approaches that look less at specific projects and more at improving corridors; that look less at analyzing how many cars we can squeeze through a segment of highway and instead look at how we can reliably move people to their destinations. Highway and road investment alone will neither solve our congestion problems nor provide the mobility options Californians want. (CTP, page 8.)

<u>The Fundamental Problem</u>
The genesis of this project, and all others like it, is the universality of the expectation that it should be possible to drive alone during commute periods. When looked at from the standpoint of transportation around the world, this is nothing short of a mass fantasy. It will never be possible to provide enough capacity to accommodate user

demand for single-occupant vehicle (SOV) peak period travel. The cost and environmental impacts would be overwhelming. A supply-side approach to highway capacity is thus bound to fail. "You can't build your way out of congestion." There is no point to even trying to meet demand. The only viable option is a demand-side approach.

While the Project Meeting Notice is correct that "finding a solution to the growing congestion and associated delay has become a high priority," there is no long-term solution to be found amongst projects like the Managed Lanes Project. Los Angeles has already thoroughly tested the supply-side approach and found only endless congestion. **It is thus certain that the proposed Project will fail to meet the project goal to "Reduce congestion in the corridor."** Los Angeles, sharing that same goal, has shifted the focus of its infrastructure investments to rail.

There are already far too many solo drivers clogging the roadways. **The root cause of congestion is too many solo drivers. The Project would thus make the problem worse, because Managed Lanes encourage drivers to continue to drive solo** (because the principal outcome of Managed Lanes is increased capacity for solo driving). The Project signals social support for continued solo driving, at the very time when a change in societal expectations is desperately needed.

It is time to acknowledge that drive-alone cannot continue to be the primary mode of commuting in large metropolitan regions. The only realistic way to meet the needs of large numbers of people that seek to travel at the same time is with mass transit.

The only long-term "solution" for the 101 Corridor would be a doubling or tripling of the capacity of Caltrain. Unfortunately, Caltrain's management has not recognized the need to do so, and is distracted by an extremely expensive electrification project that will do little to increase capacity. The electrification EIR shows Caltrain completely out of capacity by 2040. TRANSDEF joined a challenge of that EIR for that reason.

Induced Demand

Research done for the California Air Resources Board provides a basis for estimating of the impacts of road expansion projects on future VMT and GHG. Susan Handy and Marlon Boarnet reviewed the literature on induced travel and concluded: "Thus, the best estimate for the long-run effect of highway capacity on VMT is an elasticity close to 1.0, implying that in congested metropolitan areas, adding new capacity to the existing system of limited-access highways is unlikely to reduce congestion or associated GHG in the long-run."
http://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf

By building new Express Lanes on US 101 between Whipple Road and the I-380 interchange, the Project will definitely increase VMT and GHG emissions. This is contrary to Executive Order B-30-15, which commands Caltrans, as a state agency, to give "Priority [] to actions that both build climate preparedness and reduce GHG emissions." Along these same lines, CTP 2040 said:

> Today's environmental objectives, in the era of climate change, are more challenging than they have been in the past. While the transportation system must continue to meet demand for reliable travel, it must do so while achieving quantifiable reductions in greenhouse gas (GHG) emissions.

The EIR/EIS should evaluate consistency with CTP 2040, and whether the Project will impede the attainment of the state's emissions reduction goals of reducing GHGs by 40% by 2030 and 80% by 2050. Evaluate whether proceeding with a highway-oriented solution will encourage future auto-oriented development vs. the alternatives suggested below, and whether the latter encourage transit-oriented development.

Norman Marshall of Smart Mobility Inc. studied the latest travel demand models for ARB and concluded that:

> Demonstration that the Travel Demand Model properly accounts for induced demand is of the utmost importance in proper accounting of roadway performance metrics and GHG. This requirement is more critical than many of the other [Regional Transportation Plan Guidelines] recommendations including the recommendation for Activity-Based Models (ABMs).
>
> In my detailed review of the California ABMs done for the Air Resources Board, I found that the current ABMs fail to account for induced travel any better than the older trip-based models. ...
>
> The large increases in population forecast throughout California cause the future static assignment models to forecast impossibly high traffic volumes, especially on freeways. This problem makes all future estimates of VMT, VHT and GHG invalid. Added freeway capacity always shows benefits in static assignment models even though research has shown that there likely are no benefits. Replacing static assignment with dynamic traffic assignment (DTA) or microsimulation is recommended.
>
> The long-term goal of modelers has been to marry ABM with microsimulation. Microsimulation likely is still impractical (at least in the larger regions), and the travel demand models are still relying on a 50-year old algorithm implemented when computers were much less powerful. DTA offers a practical middle ground for much more realistic estimation of induced travel and roadway metrics that can be implemented today.

Caltrans is now on notice of serious shortcomings in its travel model. Past generations of models produced outputs that convinced the state to expend hundreds of billions of dollars on highway expansion projects like the proposed Project. After short respites from congestion, each of these roadways soon filled up again, clearly indicating serious flaws in the traffic projections.

These flawed traffic model projections led to massive roadway investments that provided no long-term benefits. Now that the academic research can explain the source of the modeling failure, it is incumbent on Caltrans to change its modeling to be consistent with current research. Unless induced demand is accurately captured, modeling will provide the same wrong answers, wasted investments, and a public that continues to think that driving alone is how transportation is supposed to work.

Clean Air Act

As a region in nonattainment of the federal ozone standard, discuss the legal constraints imposed by the Clean Air Act, and subsequent amendments, on allowing single-occupant vehicles into an HOV lane, and on building new mixed flow lanes. (A so-called Managed Lane is legally a mixed flow lane.)

Caltrain Alternative

Model an alternative with three times the number of seats per peak hour as are currently being provided. Assume the shifting of the proposed Project's funding into Caltrain operations funding. To have the proper "color of money," swap the funds with a sales tax agency engaged in federally eligible projects. Please focus the EIR/EIS analysis on the air quality, climate change and transportation impacts. Do not expend effort on designing the infrastructure needed to deliver that level of service.

TDM/HOV Alternative

TRANSDEF is unaware of any serious effort ever having been made by Caltrans to operate its HOV lanes to encourage carpooling. As part of the EIR/EIS Existing Conditions analysis, include a discussion of the DOT evaluation of Highway 101 compliance with HOV lane minimum speed requirements.

TRANSDEF proposes that the EIR/EIS study a Transportation Demand Management/ HOV (TDM/HOV) Alternative that would encourage carpooling. This Alternative would include the following elements: rigorous and ongoing enforcement of HOV occupancy rules; HOV operational hours that cover all routinely congested time periods; and heavy promotion of smartphone apps that connect potential carpool partners in real time.

In place of the proposed newly constructed lanes, model the conversion of a mixed flow lane to create a continuous HOV lane throughout San Mateo, San Francisco and Santa Clara Counties. In addition, include the conversion of a mixed flow lane into HOV-2 for the entire length of I-280 in the three counties. This alternative will test the potential for a very large mode shift to carpooling and transit.

For purposes of studying this alternative, assume that the laws and regulations governing such conversions have been amended to permit it. It is only after the potential

benefits of conversions have been demonstrated that it will be possible to change the laws. (This project prerequisite would be identified in the Statement of Overriding Considerations as the responsibility of another agency, the Legislature.)

Conclusion

TRANSDEF recognizes the difficulties faced by Caltrans in entering an era that requires low-carbon lifestyles. We appreciate this opportunity to comment on the scope of environmental review for this project, and on its policy context. We would be pleased to assist in the preparation of the suggested alternatives.

Sincerely,

/s/ DAVID SCHONBRUNN

David Schonbrunn,
President
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Attachments:
Excerpts from CTP 2040

CC:
Bijan Sartipi, Caltrans
Ken Kirkey, MTC
San Mateo Board of Supervisors
Sandy Wong, C/CAG
Jim Hartnett, SMCTA

Excerpts from CTP 2040

The following key quotes from the CTP capture the essential points of the systemic change it seeks to catalyze. TRANSDEF is strongly supportive of this direction.

Page 8: Today's environmental objectives, in the era of climate change, are more challenging than they have been in the past. While the transportation system must continue to meet demand for reliable travel, it must do so while achieving quantifiable reductions in greenhouse gas (GHG) emissions. ...

While local, state and federal governments have poured billions of dollars into improving our roads and freeways to accommodate growth, congestion remains as vexing a problem in California today as it was decades ago. It is time to pursue new strategies to combat this problem.

Data tell us that we must look at solving congestion in a more holistic way. Simply adding more lanes and roads will not be enough. It must be coupled with new approaches that look less at specific projects and more at improving corridors; that look less at analyzing how many cars we can squeeze through a segment of highway and instead look at how we can reliably move people to their destinations. Highway and road investment alone will neither solve our congestion problems nor provide the mobility options Californians want.

Page 9: [AB 32 and SB 375] represent a shift in long-term planning away from simply a list of transportation projects and toward a strategy for sustainable growth.

Page 11: The CTP recommendations provide a framework and guiding principles for transportation decision makers at all levels of government and the private sector.

Page 25: Sustainable practices will help achieve the ambitious goal of stabilizing climate as well as meeting the requirements of the Federal Clean Air Act, but will require a fundamental, holistic transformation of the transportation system. ...

- Increase a shift to more sustainable transportation modes (mode shift) to reduce per capita vehicle miles traveled (VMT) ...
- Reduce the number of petroleum powered vehicles from California roads, and replace with zero- to near-zero equipment and modes of travel throughout the State

Page 27: ...and utilize a variety of adaptation strategies [to sea level rise], including managed retreat and other nature-based approaches ... To achieve adaptation strategies, SLR impacts must be addressed at all project planning stages, not just at final project delivery.

Page 28: ... CTP 2040, a guide to transportation decision-making in this era of climate change.

Page 39: This history lingers with us today, even as we seek to transition to a more sustainable, efficient and healthy transportation system. VMT remain high, SOV commuters remain too numerous, and the state's shift to using public transit has been too sluggish.

Page 42: ... congestion pricing and other intelligent transportation systems (ITS) technologies that can greatly increase existing highway capacity without adding lanes to California's SHS. ... We simply must be smarter in how we invest in roadway expansion.

Page 91: It is imperative that SOV trips are reduced or minimized to help achieve the GHG emissions reduction goals set forth by the State and federal government, as well as reducing congestion and limiting attrition of our existing infrastructure.

Page 100: We must collectively get more sophisticated at setting performance targets, assessing current condition and performance, identifying the most cost-effective investments, and developing LRPs for all types of infrastructures.

Page 114: Implement pricing strategies that better reflect the total cost for each mode, including health and environmental costs, while not economically over-burdening low-income system users. Support regional and local government planning for efficient land use that improve jobs-housing proximity.