January 10, 2024

Tony Tavares
Director
California Department of Transportation (Caltrans)
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Dear Director Tavares,

Thank you for the opportunity to provide comments on the Draft Environmental Impact Report (DEIR) for the Yolo 80 Corridor Improvements Project (Yolo 80, or project). We appreciate the opportunities that we have had to collaborate with Caltrans to support the success of California's *2022 Scoping Plan for Achieving Carbon Neutrality*. As the agency entrusted with environmental review of our largest transportation infrastructure investments, Caltrans' decisions carry unparalleled weight. The need to improve travel through the Yolo 80 Corridor presents an opportunity to advance the State's climate, air quality, and equity goals, and be a model for effectively managing the state highway system.

CARB staff have identified that the Yolo 80 proposal adds substantial new roadway capacity. This can increase vehicle miles traveled (VMT) and greenhouse gas (GHG) emissions. The DEIR omits project alternatives that could better meet the project's objectives with less environmental impact. Specifically, it only examines alternatives that add lanes and no project alternatives that convert existing lanes to priced lanes, even though converting an existing lane is in the Sacramento region's current sustainable communities strategy for achieving its GHG reduction target. In addition, the DEIR uses a traffic assessment approach that is expected to underestimate the project's impacts and exaggerate its benefits. This could lead to inaccurate DEIR significance determinations on GHG emissions, air quality, energy, noise, and safety, as well as influence whether the project achieves its objectives. Finally, the DEIR's proposal to mitigate less than half of its induced travel impact is inadequate, when additional mitigation is feasible.

Taken as a whole, the project would substantially increase VMT and GHGs, more so than the DEIR discloses, hampering achievement of the State's climate and air quality goals. Several State documents, including the Scoping Plan, CARB's *Progress Report on Implementation of the Sustainable Communities and Climate Protection Act*, and the *Climate Action Plan for Transportation Infrastructure*, call for reimagining or deprioritizing roadway projects that increase VMT to create a more sustainable transportation system. Reducing VMT also benefits health, traffic safety, equity, and the environment. By expanding capacity while

improperly assessing and insufficiently mitigating impacts, the Yolo I-80 project is inconsistent with these State plans.

Procedurally, CARB had previously requested that Caltrans extend the public review period for this DEIR due to the current comment period being effectively truncated by several major holidays and because Caltrans has not posted the technical appendices to its website or otherwise made them available through the full comment period. I appreciate that Caltrans extended the deadline by one week. You may wish to consider further extension to mitigate concerns we are hearing from some stakeholders. Specifically, while Caltrans has committed to making the technical appendices available upon request, we are aware that these documents were not made immediately available to some members of the public who had requested them, leaving members of the public without adequate information and without the full time to evaluate and comment on the DEIR.

Thank you for the opportunity to comment. The attachment to this letter describes our comments in more detail and offers recommendations on how to address the DEIR's inadequacies. We would welcome the opportunity to work together to strengthen the project in ways that achieve its intended purpose while also addressing our shared climate and air quality goals.

If you have any questions, please feel free to contact me or Dr. Jennifer Gress, Chief of the Sustainable Transportation and Communities Division, at (916) 764-0747 or *jennifer.gress@arb.ca.gov*.

Sincerely,

Steven S. Cliff, Ph.D., Executive Officer

Attachment

cc: See next page.

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Attachment: CARB's detailed comments on the Yolo 80 Corridor Improvements Project

Background

The 2022 Scoping Plan[1] charts a path to achieving carbon neutrality by 2045 and describes why significant vehicle miles travelled (VMT) reduction is needed to achieve the State's greenhouse gas (GHG) emissions reduction targets. California's infrastructure investment choices play a central role in achieving those reductions.[2] Adding highway capacity leads to substantial increases in VMT, generally in proportion to the amount of capacity added,[3,4,5,6] moving California in the opposite direction from its climate and air quality goals. The induced VMT caused by highway expansion also has serious impacts on human health[7] and the natural environment.[8] Further, such investments lead to dispersed land use patterns, which move destinations further apart and exclude non-drivers (including people who are too old or young to drive, who cannot afford a car, or who are not physically able to drive) from economic and social opportunities. Exacerbating such land use and transportation patterns by expanding roadways rather than better managing the existing system and

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[1] *2022 Scoping Plan for Achieving Carbon Neutrality*, available at *https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents*

[2] *AB 32 2022 Scoping Plan*. Page 194. Available at: https://ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf

[3] *The Fundamental Law of Road Congestion: Evidence from US Cities*. Duranton and Turner, 2011. Available at: https://pubs.aeaweb.org/doi/pdfplus/10.1257/aer.101.6.2616

[4] *If you build it, they will drive: Measuring induced demand for vehicle travel in urban areas*. Hymel, 2019. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0967070X18301720

[5] *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions: Policy Brief*. Handy and Boarnet, 2014. Available at: https://ww2.arb.ca.gov/sites/default/files/2020-06/Impact_of_Highway_Capacity_and_Induced_Travel_on_Passenger_Vehicle_Use_and_Greenhouse_Gas_Emissions_Policy_Brief.pdf

[6] *Updating the Induced Travel Calculator*. Volker, 2022. Available at: https://ncst.ucdavis.edu/research-product/updating-induced-travel-calculator

[7] *Increasing Walking, Cycling, and Transit: Improving Californians' Health, Saving Costs, and Reducing Greenhouse Gases*. Maizlish, 2016. Available at: https://www.cdph.ca.gov/Programs/OHE/CDPH%20Document%20Library/Maizlish-2016-Increasing-Walking-Cycling-Transit-Technical-Report-rev8-17-ADA.pdf

[8] *Cutting Greenhouse Gas Emissions Is Only the Beginning: A Literature Review of the Co-Benefits of Reducing Vehicle Miles Traveled*. Fang et al., NCST, 2017. Available at: https://rosap.ntl.bts.gov/view/dot/32254

investing public funds to provide more housing and transportation options that reduce the need to drive moves us further away from building an equitable and just society.

Meanwhile, pricing alone, without expansion, can relieve congestion while improving equity,[9] with less induced travel and reduced impact on the environment. Congestion often reduces vehicle flows by a third to a half, and congestion pricing can relieve congestion and return facilities to their full capacity flow. For this reason, pricing can obviate the need for expansion.

Several State documents, including the Scoping Plan, CARB's Progress Report on implementation of the Sustainable Communities and Climate Protection Act,[10] and the Climate Action Plan for Transportation Infrastructure,[11] call for reimagining or deprioritizing roadway projects that increase VMT to create a more sustainable transportation system. Most of the DEIR's proposed alternatives are out of alignment with these State goals, but that is obscured by issues with the analysis. Continuing on this path will not achieve our GHG emissions reduction targets.

This attachment provides CARB's comments on the proposed project in greater detail and offers recommendations for resolving the issues identified in those comments.

I. DEIR omits key project alternatives

The DEIR omits key alternatives that could better address congestion, have less impact on the environment, and in some cases cost less to build.

The SACOG 2020 Metropolitan Transportation Plan / Sustainable Communities Strategy (MTP/SCS), the region's blueprint for transportation infrastructure investment, is designed to achieve the region's transportation GHG emissions reduction goals. It specifies two express lanes for the corridor, one added and the other converted from an existing lane. In the travel demand model SACOG used to assess passenger vehicle GHG per capita reduction in its regional plan, the corridor was specified as follows:

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[9] Pricing can improve access to opportunity for low-income populations by funding improved transit (and, with income-based pricing, improved auto-mobility), and it can reduce environmental, health, and safety burdens by reducing traffic volumes and relieving congestion in neighborhoods near major roadways. See *Pricing Roads, Advancing Equity*. Transform, 2019. Available at: https://drive.google.com/file/d/1cnuJVoDfiKa04I9PhxjktOt4Er03RMuf/view

[10] *2022 Progress Report: California's Sustainable Communities and Climate Protection Act*, available at https://ww2.arb.ca.gov/sites/default/files/2023-05/2022-SB150-MainReport-FINAL-ADA.pdf

[11] *Climate Action Plan for Transportation Infrastructure*, available at https://calsta.ca.gov/-/media/calsta-media/documents/capti-july-2021-a11y.pdf

> Dual express lane each direction. SOVs tolled. One lane added, one converted from GP lane during peak hours (7am-10am and 3pm-6pm).

The Yolo County Transportation District also requested that Caltrans evaluate this configuration, showing further regional support for this alternative.

However, Caltrans declined to include this configuration in the DEIR as an alternative. None of the alternatives Caltrans included in the DEIR feature pricing of more than a single lane. Without the revenue a second priced lane would generate, the DEIR claims funds are unavailable to fully mitigate VMT impacts. Without that mitigation, the project would undermine the region's VMT and GHG emissions reduction efforts. Also, pricing only a single lane reduces congestion substantially less, and would therefore be less effective in achieving the project's purpose (as stated on DEIR page summary-2) to:

1. Ease congestion and improve overall person throughput
2. Improve freeway operation on the mainline, ramps, and at system interchanges
3. Support reliable transport of goods and services throughout the region
4. Improve modality and travel time reliability
5. Provide expedited traveler information and monitoring systems

The DEIR could focus on alternatives that achieve more greenhouse gas emissions reduction and cause less environmental impact while achieving the project's objectives. For example, Caltrans could study an alternative that adds congestion pricing on existing lanes. Pricing all three existing lanes in each direction without adding a lane could address traffic congestion and improve vehicle throughput to a similar extent as building a new priced lane,[12] cause less impact to the environment, greatly reduce cost, and generate more revenue to fully mitigate the harms of the project and provide additional benefits to the region. All-lane tolling has been considered elsewhere in California, including recently in District 4 for Highway 37, is feasible given the features of the corridor, and should be considered and studied as an alternative here, too.

Furthermore, consideration of additional project alternatives is likely needed, given that the DEIR's traffic assessment fails to assess travel patterns resulting from the project with reasonable accuracy (as discussed in the next section) throwing into doubt whether the

[12] Congestion typically reduces vehicle flows to 1000-1400 vehicles per hour per lane. A lane operating at free flow lane can carry 1700-1900 vehicles per hour. Therefore, addressing congestion with pricing can adjust vehicle flows during peak periods by roughly +600 vehicles per lane. Because relieving congestion with pricing can increase vehicle flows by 600 vehicles per hour per lane, adding congestion pricing to two congested lanes can add as much to flow as adding one lane that congests (+600 vehicles per hour per lane x 2 lanes = +1200 vehicles per hour). Adding congestion pricing to three congested lanes can add as much to vehicle flow as a lane priced to maintain free flow travel (+600 vehicles per hour per lane x 3 lanes = +1800 vehicles per hour).

project alternatives presented would achieve the project's stated purpose and need. Before building a project of this expense and impact, Caltrans should have better evidence that the project will accomplish what is intended.

II. DEIR uses a traffic assessment that underestimates impacts

A. Caltrans chose to assess traffic impacts using a travel demand modeling approach that does not accurately capture the impacts of this project

Despite having reportedly been advised to do so,[13] Caltrans did not apply a modeling approach that would more accurately capture the impacts of this project. As a result, the DEIR's traffic assessment likely underestimates the project's impact on VMT. Induced VMT generally manifests over the five years after delivery of a highway expansion project,[14] but the travel demand model Caltrans used for this project shows a different trajectory. On opening year (2029), the model predicts a high amount of induced VMT (about four times what the induced travel studies would predict over the long run), increasing VMT of the entire region approximately 3%. But in the long run, the model predicts the effect of the project would be to *reduce* VMT by approximately 3.5%.

The DEIR's technical appendixes note that static traffic assignment travel demand models, like the one used in the Yolo 80 DEIR, have difficulty with assessment in congested conditions:

> Another limitation of the SACSIM19 model is the use of static assignment rather than dynamic assignment of vehicle trips. With congested conditions, static assignment can result in volumes that exceed capacity for the analysis period. With dynamic assignment, trips are rerouted or shifted in time so that capacity is met. If dynamic assignment were used, VMT could be lower if trips are shifted in time to more direct routes or if trips are shifted to different destinations due to congested conditions. VMT could also be higher if longer routes must be used to avoid congested links. (Transportation Analysis Report, Interstate 80/US Highway 50 Managed Lanes, November 2023, page 78)

[13] *The Policy and Politics of Highway Expansions*, Amy Lee, 2023, Page 279. Available at: https://escholarship.org/uc/item/13x3n8zr

[14] *If you build it, they will drive: Measuring induced demand for vehicle travel in urban areas*. Hymel, 2019. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0967070X18301720

Another technical appendix corroborates the concerns raised in the Transportation Analysis Report, acknowledging that static modeling is likely to exaggerate future year traffic volumes on the facility:

> Based on the static validation and knowledge that the model relies on static assignment of vehicle trips instead of dynamic traffic assignment, the model's peak period (and peak hour) forecasts may be higher than would occur. (Interstate 80/U.S. Highway 50 Managed Lanes Travel Demand Modeling Report, p. 27)

Other appendixes raise additional issues that may be compounding the problem:

> "[The model] has a limitation from its use of static traffic assignment instead of dynamic traffic assignment (DTA). For example, the model completes all origin-destination (OD) trips during peak hours even if the congested travel time would require longer than one hour to complete the trip (see Appendix A). This is not realistic and would not occur with a DTA. Instead, trips would only travel as far as congested speeds would allow within one hour. This type of limitation may overestimate peak hour demand." (Interstate 80/U.S. Highway 50 Managed Lanes Traffic and Revenue Report, p. 8)

Assessed with a travel demand model, induced travel is the difference between VMT assessed with the project and VMT assessed without the project. Research shows that static traffic assignment modeling approaches can over-predict future congestion in congested conditions.[15] The approach used here does not model the likelihood that drivers may vary departure time in the face of existing congestion, so in the horizon year, without the project it shows drivers piling onto and jamming the congested facility. The model then shows the jammed facility pushing subsequent drivers to take a lengthy route around the project corridor (in this case, via Woodland and I-5 about 10 miles to the north), adding substantial VMT to those trips. In the horizon year with the project, the model shows the facility accommodating that traffic. Comparing scenarios with and without the project, then, building the project appears to reduce VMT.

Dynamic traffic assignment modeling approaches, meanwhile, aim to better reflect the reality that many drivers would change their departure to a less congested time and forego the longer route. As a result, they would not generate the intensity of the congestion shown in the static traffic assignment modeling approach used for the project assessment. Without that intensity of congestion, and with the ability to change departure time, less traffic would re-route around the facility, so the VMT in the no-project scenario would be lower and the

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[15] *Forecasting the impossible: The status quo of estimating traffic flows with static traffic assignment and the future of dynamic traffic assignment*. Marshall, 2018. Available at: https://www.sciencedirect.com/science/article/pii/S2210539517301232?via%3Dihub

comparison between VMT in the project and no project scenarios—the induced VMT—would be more accurate.

Meanwhile, other states are bringing dynamic traffic assignment modeling techniques into use for complex projects and projects that, like Yolo 80, have congested traffic conditions and parallel routes. The Colorado Department of Transportation offers the following guidance, which would appear to apply to a project like Yolo 80:

> DTA is useful when the analyst's study area includes a congested transportation facility as well as its parallel facilities (or parallel capacity). …[I]t may inform how much traffic redistribution to expect from one facility to another. DTA's assignment methods is more sophisticated than a traditional travel demand model as it accounts for bottlenecks. DTA also allows for temporal spreading (peak-hour spreading)[16] [i.e., changing of departure times to avoid congestion].

Caltrans did not apply a dynamic traffic assignment modeling approach that would more accurately capture the effect of the project on travel behavior and its impacts on the environment, and to have nevertheless opted for static modeling. *The Policy and Politics of Highway Expansions*[17] describes an interview with a transportation expert with knowledge of the modeling for the project:

> …a transportation expert also discussed the travel modeling analysis of HOT lanes on I-80. They discussed the various modeling approaches and scenarios that had been used to analyze the project, including scenarios to estimate long-term changes in VMT that included land use changes and used dynamic traffic assignment. Caltrans rejected these scenarios that showed long-term increases in VMT in favor of scenarios that used static traffic assignment, which showed that VMT would decrease with the highway expansion project because people would re-route off of a longer, parallel route through Woodland and back onto I-80. Caltrans 'liked' the model run using static assignment because it gave quantitative support for the expansion project. Comparisons of dynamic versus static assignment are well-documented in academic literature – generally, static assignment fails to account for the tendency of people to change their departure time as a result of travel time. But in reality, "way more people would change their departure time before they would go all the way around through Woodland." (p. 279, emphasis added)

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[16] *Traffic Analysis and Forecasting Guidelines, Colorado Department of Transportation*, 2023, Pages 129-131. Available at: https://www.codot.gov/safety/traffic-safety/assets/traffic_analysis_forecasting_guidelines/traffic_analysis_forecasting_guidelines

[17] *The Policy and Politics of Highway Expansions*, Amy Lee, 2023, available at: https://escholarship.org/uc/item/13x3n8zr

This account seems to document three important points:

1. For this project, the static trip assignment modeling approach showed exaggerated traffic congestion and VMT in the no-project scenario.
2. Applying static trip assignment modeling in this way helped justify the project and reduce the appearance of environmental impacts associated with the project's induced VMT.
3. Caltrans reportedly considered and rejected dynamic traffic assignment modeling approaches because those would have revealed the environmental impacts of the project and because static trip assignment modeling exaggerated the need for a project it preferred to build (see underlined portion of *Lee 2023* excerpt above).

For this project, using static trip assignment modeling in this way causes crucial information about the intensity of the impact to be omitted; that omitted information is necessary for an informed understanding of the project's impacts.

In addition to the limitations of this static trip assignment approach, the model used for this project appears not to be validated to meet the standard of current practice. For example, in Table 5 of the *Interstate 80/U.S. Highway 50 Managed Lanes Travel Demand Modeling Report*, the Sacramento River screen line does not meet the minimum expectation of "percent within Caltrans maximum deviation" established in the RTP Guidelines. This adds to concerns with the quality of the forecast. Further, there is no speed validation at the corridor level.

B. Caltrans omits the effects of project-caused land use changes in its assessment of the project's effect on travel patterns

Ample research has documented highway expansion changes on land use development patterns,[18] and those changes comprise a substantial portion of the overall induced travel effect of highway projects.[19] This is well understood, and Caltrans' own guidance on assessing induced travel requires that land use development effects be assessed.[20] Guidance from the Governor's Office of Planning and Research also establishes the need to assess land use effects of highway capacity projects.[21]

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[18] *Highway-Induced Development: Research Results for Metropolitan Areas.* Ewing 2008.

[19] Many induced travel studies distinguish short-term effects, generally caused by change in destination, mode, route, or number of trips, from long-term effects, generally caused by changes in land use patterns, and find the long-term component adds substantially to the short-term component.

[20] *Caltrans Transportation Analysis Framework*. 2020. Page 21. Available at: https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-taf-fnl-a11y.pdf.

[21] *Technical Advisory on Evaluating Transportation Impacts in CEQA*, Governor's Office of Planning and Research, 2018, pages 33-34. Available at: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

However, in its traffic analysis, Caltrans district staff excluded the land use effects of this project, applying the same land use scenario with and without the project:

> Caltrans district staff directed that the model land uses be maintained without changes from the MTP/SCS versions for all alternatives, including the no build alternative. (*Interstate 80/US Highway 50 Managed Lanes Transportation Analysis Report,* p. 26)

When modeling a project, applying the same land use scenario with and without the project omits the project's effect on land use from the analysis entirely. Omitting the land use effect of the project would likely lead to a substantial underestimate of the amount of induced vehicle travel, as it is generally among the largest of the components of the induced travel effect, as is stated in the Traffic and Revenue Report for the DEIR:

> The development of the SACSIM19 model to represent 2029 and 2049 conditions is documented in the I-80/US 50 Managed Lanes – Forecasts Methodology Memorandum (November 23, 2020) and the I-80/US 50 Managed Lanes – Travel Demand Modeling Report (September 2021). Reviewers should note that the model inputs for land use growth have the largest effect on future travel demand. (Interstate 80/U.S. Highway 50 Managed Lanes Traffic and Revenue Report, p. 10)

Despite its importance to the analysis, Caltrans maintained the same land use scenario across all alternatives, including no-build:

> Land use inputs were not developed for each individual alternative. Instead, the SACOG 2020 MTP/SCS land use forecasts associated with specific model years 2016, 2027, and 2040 were used without modification. Then the resulting vehicle trip tables from the SACSIM19 model were factored to produce 2029 and 2049 vehicle trip tables that were used in the final assignment. This approach limits the sensitivity of the traffic and revenue forecasts to any unique land use effects associated with each alternative. (Interstate 80/U.S. Highway 50 Managed Lanes Traffic and Revenue Report, p. 10)

Excluding land use effects resulted in the exclusion of a major source of additional vehicle travel in the assessment. Omitting land use changes from the project, and the extra vehicle travel they would cause, exaggerates the transportation benefits of the project by showing that it improves traffic more and over a longer period of time than it actually will.

Omitting land use changes also leads to understating the environmental impacts of the project related to vehicle travel. Underestimating VMT will lead to an underestimate of GHG emissions, air pollutant emissions, energy, and noise, likely mischaracterizing the directionality, magnitude, and significance of impacts.

C. Caltrans applies differing values for induced truck VMT in different parts of the DEIR in ways that minimize appearance of environmental impacts

Caltrans claims differing amounts of induced truck travel in different impact analyses in the DEIR. For VMT impacts, it discounts a large amount of induced truck travel from its assessment of induced auto travel, making that impact appear substantially smaller. Assessing other impacts, it assumes less additional truck travel, making those impacts, too, appear substantially smaller. Using truck VMT inconsistently in the manner that Caltrans does minimizes the appearance of environmental impacts of the project.

For VMT assessment under SB 743, truck travel may be either included or excluded.[22] In its VMT analysis, Caltrans chooses to exclude truck travel from induced VMT. To establish the amount of truck travel to omit, the DEIR references the Caltrans advisory *NCST Calculator Truck Adjustment*.[23] That guidance references Duranton & Turner (2011): "…we estimate that trucks account for between 19 and 29 percent of the total increase in interstate VKT [vehicle kilometers travelled],"[24] and suggests applying the maximum value in that range to reduce the amount of induced auto VMT it reports as a transportation impact.

When assessing impacts other than VMT, truck travel must be included. However, the traffic analyses feeding into these assessments report much less induced truck travel.[25] We analyzed the discrepancy between induced truck VMT, as reported in the Transportation Analysis Report for the project[26], and found it ranged from 201% and 565% across the capacity-adding alternatives (see table below).

In sum, Caltrans applies lower estimates feeding into assessment of project impacts such as GHG emissions, air pollutant emissions, energy, and noise, making those impacts appear smaller. Meanwhile, it applies higher estimates where those estimates are subtracted from

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[22] *Technical Advisory on Evaluating Transportation Impacts under CEQA*. Governor's Office of Planning and Research, 2020, pages 4-5. Available at: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

[23] *NCST Calculator Truck Adjustment: Method for adjusting NCST Calculator results to account for heavy-duty trucks*. Available at: https://dot.ca.gov/programs/esta/sb-743/resources/ncst-truck-adjustment

[24] Page 2644

[25] Further, the technical appendixes make conflicting claims about discussing air quality impacts, the DEIR states, "The project would not change the traffic mix" (p. 3-11). In its assessment of air quality, the share of trucks listed for the no build and build alternatives is the same, indicating that none of the project alternatives would affect truck volumes compared to the no-build (Table 2.2-9, Pages 2-194 – 2-195). It is not possible that 29 percent of the project's induced travel is truck travel, and also that the project does not affect the share of truck travel.

[26] (Interstate 80/US Highway 50 Managed Lanes Transportation Analysis Report, November 2023, Table 31 and Table 32, pages 81-82)

the total induced VMT, making those impacts also appear smaller. The table below shows the magnitude of the discrepancy for each alternative.

Alternative	Long-Term Induced Truck VMT (used to calculate GHG, Air Quality, Energy, and Noise Impacts) (Transportation Analysis Report, Nov. 2023, Table 35, p. 83)	Long-Term Induced Truck VMT (subtracted from VMT impacts)* (Transportation Analysis Report Nov 2023, Table 32, p. 82.)	Difference
1 (No Build)	0	-	-
2 (Add HOV)	67,500	143,600	213%
3 (Add HOT2+)	41,600	143,600	345%
4 (Add HOT3+)	25,400	143,600	565%
5 (Add Toll)	29,200	143,600	492%
6 (Add Transit)	1,200	-	-
7 (Convert HOV)	6,500	3,600	55%
8 (Add HOV with Median Ramps)	61,000	149,600	245%
9 (Add HOV without Enterprise Crossing)	71,400	143,600	201%

Induced truck travel for each alternative used to assess different impacts. (*Caltrans NCST Calculator Truck Adjustment Guidance (available at https://dot.ca.gov/programs/esta/sb-743/resources/ncst-truck-adjustment))

CEQA requires factual conclusions reached in an EIR to be supported by substantial evidence.[27] Here, using different amounts of truck travel in different sections of the document is internally inconsistent, and can therefore inaccurately – and improperly – reduce the appearance of environmental impacts. Substantial evidence under CEQA is that which includes "facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts."[28] The CEQA statute goes on to state that substantial evidence does not include unsubstantiated opinion or narrative, or evidence which is clearly inaccurate or erroneous.[29] Given the EIR is internally inconsistent in support for its key determinations regarding truck-related VMT, these determinations lack substantial evidence. Furthermore, if impacts are underestimated, they will be under-mitigated, and the environment will not be protected as the law envisions.

[27] See Cal. Pub. Resources Code § 21168.5.
[28] Cal. Pub. Resources Code § 21082.2(c).
[29] See *id.*

III. DEIR relies on the traffic assessment for its impact assessment and significance determinations, including the GHG emissions assessment

The DEIR's assessment of GHG emissions, air quality, energy, and noise are all based on the traffic assessment discussed earlier. Therefore, these impacts are likely underestimated, calling the DEIR's significance determinations into question.

CARB staff found this to be the case with the DEIR's assessment of GHG emissions. Table 8 in the Air Quality Report (August 2023) (pages 30 and 31) provides GHG emissions that it claims would result from each alternative. The DEIR's claim on p. 3-26 – 3-27 that "GHG emissions of the Build Alternatives were assessed to be less" than the no-build appears to be based on data from that table. However, data from the table appear to be based upon the output of the static trip assignment modeling approach of comparing scenarios without land use variations, discussed above.

Furthermore, the DEIR GHG assessment appears to incorrectly factor in emissions reductions from vehicle efficiency improvements to justify the project's effect on GHG emissions, stating:

> A quantitative analysis of daily CO2 emissions was performed using the Caltrans CTEMFAC2021. GHG emissions and VMT comparisons were calculated for the Build Alternatives the existing year (2019), in opening year (2029), and design year (2049). As anticipated with new fleet and electric vehicles penetration, in design year 2049, GHG emissions of the Build Alternatives were assessed to be less.

However, the decarbonization of the vehicle fleet is not what this DEIR is supposed to analyze. The DEIR is supposed to analyze the effects *of the project*,[30] which must be determined by comparing emissions with and without the project using the same year.[31] Caltrans' own guidance on assessing transportation projects under CEQA articulates the importance of focusing on the impacts of the project by comparing impacts with and without the project in the same year:

> Transportation projects are typically built years after the CEQA analysis is completed, and comparing to existing conditions would combine the project's VMT effects with other effects…in effect misleading the public and decision-makers by obscuring the impacts of the project itself. When comparing future build conditions to future no-

[30] See CEQA Guidelines § 15126.2(a).
[31] See *id*; see also § 15125(a).

build conditions, the difference is the addition of the project itself and associated changes that may occur to land use and travel behavior.[32]

For these reasons, the DEIR's claim that adding a lane will decrease GHG emissions is not supported by substantial evidence and is likely incorrect.

IV. Amount of VMT mitigation in the DEIR is inadequate

CEQA requires significant impacts to be fully mitigated where feasible. However, while the project as proposed will induce substantial amounts of new VMT, the DEIR proposes to mitigate only 43% of it.[33] Inadequate mitigation of VMT makes it harder to achieve the State's climate goals, which depend on VMT reduction.

Cost is the only reason cited for offering incomplete mitigation, but neither the DEIR nor its appendixes offer reasoning or substantial evidence for setting the ceiling of mitigation funds at 14-15% of construction cost. Also, because the DEIR omits consideration of viable, key pricing alternatives (discussed earlier) the cost of VMT mitigation should not be allowed as justification for less than full mitigation. Considering conversion of existing lanes to priced lanes would bring in more revenue that could be invested to mitigate the impacts of the project and provide additional benefits to the public, including investment in additional low-VMT housing[34] and/or capacity reduction elsewhere on the system (e.g., via road diet or conversion to transit-only lanes).

V. Recommendations

Flowing from the comments on the DEIR presented above, CARB staff have the following recommendations:

Alternatives. Pricing, not expansion, can address congestion and achieve the objectives set forth in the DEIR for this project. Pricing also generates less impact to the environment than expansion. Therefore, Caltrans should study conversions of existing lanes to priced lanes, at a minimum including:

- the configuration specified in the MTP/SCS (i.e., an addition of one express lane plus the conversion of one existing general-purpose lane to an express lane),

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[32] *See Caltrans Transportation Analysis Under CEQA*, page 17, available at https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-10-1st-edition-tac-fnl-a11y.pdf

[33] Yolo 80 Managed Lanes Project Draft VMT Mitigation Plan, October 25, 2023, p. 8.

[34] Housing generating less than 85 percent of regional average household VMT, per *Technical Advisory on Evaluating Transportation Impacts under CEQA*, Governor's Office of Planning and Research, 2020. Available at: https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

- pricing existing lanes without any lane expansion.

Caltrans should revisit the question of whether each alternative achieves the stated objectives for the project (i.e., the purpose and need).

Redo the traffic assessment. Given the three major flaws identified in the traffic assessment and given the importance of accuracy in that assessment to impact assessments and significance determinations, we recommend the travel modeling for the project be redone using a modeling approach that is more appropriate for this analysis with the project's effects on land use included, and taking care to use consistent assumptions on induced truck VMT.

Reassess impacts and significance determinations. Redoing the traffic assessment is likely to show different traffic outcomes both with and without the project than the traffic assessment currently in the DEIR. Therefore, GHG, air quality, energy, safety, and noise impact assessments and significance determinations need to be revisited. When revising the impact assessment and significance determination for GHG emissions, please only compare emissions with and without the project, removing the impact of vehicle efficiency improvements.

Provide full mitigation for induced VMT. VMT impacts of the project should be fully mitigated. Pricing of existing lanes can serve both as mitigation itself and to finance other mitigation strategies to achieve full mitigation.