



DEPARTMENT OF TRANSPORTATION TRANSPORTATION PLANNING

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TO: Board of Supervisors

FROM: Natalie K. Porter, Supervising Civil Engineer

Subject: SB 743 Vehicle Miles Traveled Workshop for Transportation Projects

PURPOSE AND SUMMARY

The Department of Transportation (Transportation) is recommending the Board receive the workshop information on Senate Bill (SB) 743 and provide direction on the County's application of the significance thresholds and potential mitigation measures for transportation projects. On October 6, 2020, the El Dorado Board of Supervisors adopted Vehicle Miles Traveled thresholds of significance for analyzing transportation impacts for land use projects under CEQA. Today's workshop will present a Vehicle Miles Traveled threshold of significance for evaluating transportation projects under CEQA. Transportation projects include but are not limited to Capital Improvement Program (CIP) projects such as road widening projects, traffic signal installation, and safety improvements.

On September 27, 2013, the Governor signed into law SB 743. SB 743 was originally enacted to address transportation issues related to the development of the Golden One Center in downtown Sacramento. The legislative intent of SB 743 was to 1) ensure that the environmental impacts of traffic, such as noise, air pollution, and safety concerns, continue to be properly addressed and mitigated through the California Environmental Quality Act; and 2) more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions.

In January 2019, the Natural Resources Agency finalized updates to the California Environmental Quality Act (CEQA) Guidelines including the incorporation of SB 743 modifications. The CEQA Guidelines changes were approved by the Office of Administrative Law and are now in effect. Specific to SB 743, Section 15064.3(c) states, "A lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide."

BACKGROUND

SB 743 changes how transportation impacts are measured under CEQA, from using vehicle level of service (LOS) to using vehicle miles traveled (VMT). The State Office of Planning and Research (OPR) have determined that the appropriate metric for the change is VMT. This change is intended to capture the impacts of driving on the environment compared to the impact on drivers. LOS or other delay metrics may still be used to evaluate the impact of projects on drivers as part of the County's land use entitlement reviews and impact fee programs. However, LOS will no longer be allowed to be used as the metric for evaluating transportation impacts under CEQA. As part of SB 734, Public Resources Code section 21099(b)(2) now provides that "level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment" for purposes of CEQA. To implement SB 743, lead agencies will need to determine appropriate VMT methodologies, thresholds, and feasible mitigation measures.

California Code of Regulations, Title 14, Chapter 3, Section 15064.7. Thresholds of Significance, section (a) states, "A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with means the effect normally will be determined to be less than significant."

At the behest of County and City of Placerville staff, the El Dorado County Transportation Commission (EDCTC) secured funding to assist the member agencies with implementation of SB 743. EDCTC contracted with the firm of Fehr & Peers to prepare the *El Dorado County and City of Placerville SB 743 Implementation Plan* (Implementation Plan) (See June 20, 2020, Legistar 20-0606, Item 36, Attachment C or Transportation's website at <https://www.edcgov.us/Government/dot/Pages/Vehicle-Miles-Traveled-and-SB-743.aspx>). The purpose of this project was to help EDCTC partner agencies understand the specific questions that need to be addressed when making these determinations and to provide research, analysis, and other evidence to support their final SB 743 implementation decisions. EDCTC has facilitated Fehr & Peers working in direct partnership with El Dorado County and the City of Placerville transportation staff and traffic engineers to review the existing General Plan policies, travel demand model metrics, and other technical elements.

DISCUSSION

Text from each technical memoranda in the plan are reproduced in whole or part in the following sections.

Metrics

VMT can be calculated using two different types of metrics: absolute metrics and efficiency metrics. An absolute metric measures a specific amount of VMT, such as total VMT on the roadway network in El Dorado County. An efficiency metric expresses VMT as a ratio or rate, such as VMT per capita. Air quality and GHG

emissions analysis for CEQA use total VMT as an input. The OPR Technical Advisory on SB 743 recommends use of absolute VMT when considering the effects of transportation projects on vehicle travel. A lead agency that uses the VMT metric to assess the transportation impacts of a transportation project may simply report that change in VMT as the impact.

Measure of Effects

Project types that would likely lead to a measurable and substantial increase in vehicle travel generally include the addition of through lanes on existing or new highways, including general purpose lanes, high occupancy vehicle (HOV) lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges.

While CEQA does not require perfection, it is important to make a reasonably accurate estimate of transportation projects' effects on vehicle travel in order to make reasonably accurate estimates of GHG emissions, air quality emissions, energy impacts, and noise impacts.

Induced travel occurs where roadway capacity is expanded in an area of present or projected future congestion. The effect typically manifests over several years. Lower travel times make the modified facility more attractive to travelers, resulting in the following trip-making changes:

- Longer trips - The ability to travel a long distance in a shorter time increases the attractiveness of destinations that are farther away, increasing trip length and vehicle travel.
- Changes in mode choice - When transportation investments are devoted to reducing automobile travel time, travelers tend to shift toward automobile use from other modes, which increases vehicle travel.
- Route changes - Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips.
- Newly generated trips - Increasing travel speeds can induce additional trips, which increases vehicle travel. For example, an individual who previously telecommuted or purchased goods on the internet might choose to accomplish those tasks via automobile trips as a result of increased speeds.
- Land Use Changes - Faster travel times along a corridor lead to land development farther along that corridor; that new development generates and attracts longer trips, which increases vehicle travel. Over several years, this induced growth component of induced vehicle travel can be substantial, making it critical to include in analyses.

Each of these effects has implications for the total amount of vehicle travel. These effects operate over different time scales. For example, changes in mode choice might occur immediately, while land use changes typically take a few years or longer. CEQA requires lead agencies to analyze both short-term and long-term effects.

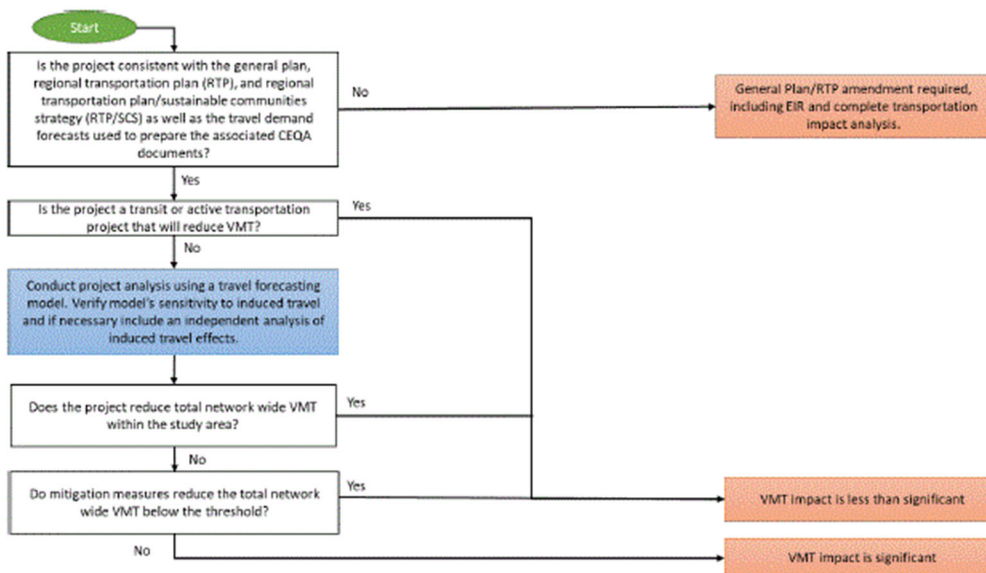
Transportation Projects Methodology

Methodology refers to the tools available to calculate the chosen metric. The methodology can range from a qualitative discussion to a detailed analysis that utilizes a travel demand model. Any tool will need to be based on the same travel demand model or other data used to establish thresholds, in order to provide an “apples to apples” comparison between the project’s effect and the threshold baseline condition.

The Technical Advisory is clear that transportation projects require a different analysis than land use projects. The flow chart for a transportation project was developed by Fehr & Peers and was presented in the proposed implementation plan and is shown below.

The Guidelines for California Environmental Quality Act, as amended December 1, 2019, states in Section 15064.3(b)(2) Determining the Significance of Transportation Impacts, Criteria for Analyzing Transportation Impacts – Transportation Projects, “Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.”

Figure 3: VMT Analysis Process for Transportation Projects



In general, transit and active transportation projects may be presumed to have a less than significant VMT impact. OPR’s technical advisory presents a list of projects that are not considered to be VMT-inducing, and therefore result in a less-than-significant

impact. For road capacity expansion projects, a complete VMT impact analysis is likely required. This analysis will start with the use of the El Dorado County Travel Demand Model to provide the analysis for transportation projects. Any increase in VMT by the project under baseline conditions or cumulative conditions would be considered a transportation impact under CEQA. Staff also recommends the County use the VMT analysis process flow chart for transportation projects.

As with the significance thresholds and methodology already approved by the Board for land use projects, staff is recommending the use of the El Dorado County Travel Demand Model and the El Dorado General Plan Countywide VMT calculated from the model, as the threshold to compare baseline plus project and cumulative plus project conditions against.

VMT generation is highly dependent on the location of a project with respect to the availability of alternative transportation modes and its location with respect to origins and destinations of trips within the regional area. Average vehicle trip length, which is an important component of VMT, is highly influenced by these factors. Transportation models are developed to take these factors into account and are widely accepted for analysis of factors related to trip-making behavior.¹

If a project would likely lead to a measurable and substantial increase in vehicle travel, the lead agency should conduct an analysis assessing the amount of vehicle travel the project will induce.

Screening Criteria

OPR's technical advisory presents a list of projects that are not considered to be VMT-inducing, and therefore result in a presumed less-than-significant impact.

Projects that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis, include:

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such as median barriers and guardrails
- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety

¹ Sacramento Area Council of Governments *Senate Bill 743 Implementation Tools*, May 2020

- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

Thresholds

Thresholds for SB 743 need to be established in order to evaluate a project's transportation impact related to VMT. El Dorado County has discretion to establish unique thresholds if they are supported by substantial evidence.

The OPR Technical Advisory recommends using induced travel, as measured by VMT, to quantify the amount of added vehicle travel in order to assess air quality impacts, greenhouse gas emission impacts, energy impacts and noise impacts.

In the Transportation Analysis Framework (TAF) "Caltrans concurs that VMT is the most appropriate measure of transportation impacts under CEQA. The determination of significance of a VMT impact will require a supporting induced travel analysis for capacity-increasing transportation projects on the State Highway System when Caltrans is lead agency or when another entity acts as a lead agency." The TAF provides guidance for evaluation of VMT on US-50, a Caltrans Facility.

Additionally, the legislative intent of SB 743 should be considered when establishing VMT thresholds. The legislative intent of SB 743 is to, "More appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas (GHG) emissions."

The Existing Plan and Policy Review, Thresholds Assessment, and Lead Agency Discretion at setting VMT Thresholds were thoroughly discussed during the previous workshops on implementation of SB 743 (see Legistar #20-0606, June 30, 2020 BOS item #36; Legistar #20-0981, August 4, 2020 BOS item #42; and Legistar #20-1059, October 6, 2020 BOS item #16).

Evaluation for Transportation Projects

The VMT analysis would vary depending on the mode of travel associated with the project and based on whether the project is currently included in the General Plan.

Transit, Bicycle, and Pedestrian Projects

Transit, bicycle, and pedestrian projects that would encourage the use of these modes of travel would be expected to reduce VMT, would not require a detailed VMT analysis, and would be presumed to have a less than significant impact on transportation. For these project types, the presumption of less than significant impact would apply even if the project was not in the General Plan.

Roadway Projects

VMT will be analysed for roadway projects which can not be screened out. The recommended significance threshold is the level of VMT expected based on the General Plan. This methodology is recommended for the following reasons:

- OPR's technical advisory encourages the use of VMT as a performance

measure. Although this recommendation is not binding, the intent of these guidelines is to follow OPR's guidance, except in cases where there are regional or local factors that warrant a revision or clarification.

- The use of General Plan consistency as a VMT threshold is based on the process by which transportation projects are incorporated into the General Plan. In order for a transportation project to be incorporated into a general plan, a considerable amount of analysis is typically conducted. General plans include the preparation of an Environmental Impact Report that considers a variety of environmental impacts, including transportation impacts. Since the General Plan is considered to represent sound planning decisions, consistency with these plans is considered to be a reasonable benchmark for the determination of a VMT significance threshold.

Roadway projects (or multimodal projects that include roadways) that are included in the General Plan would be presumed to have less than significant VMT impacts. In the case of some projects, a similar project may have been included in the General Plan, but revisions or refinements (e.g. a minor adjustment to alignment) have been incorporated. If the revisions or refinements are expected to cause increases in VMT, analysis should be conducted to compare the proposed project to the project description in the General Plan. Projects that result in VMT increases, in comparison to similar projects proposed in the General Plan, would need to reduce VMT levels below the level of VMT expected in the General Plan in order to avoid a significant VMT impact.

Roadway projects (or multimodal projects that include roadways) that are not included in the General Plan would need a detailed analysis of VMT to determine whether the project would be expected to increase or decrease VMT as compared to VMT levels in the General Plan. For small projects, the VMT analysis could be conducted using sketch planning techniques. For medium or large projects, the analysis would generally require the use of the County's TDM. Effects of induced demand are generally accounted for, as the model iteratively assigns traffic, sensitive to roadway capacity and uncongested and congested travel times.

The proposed threshold of no net increase in VTM for for transportation projects would apply to:

- Roadway Projects not included in the El Dorado County General Plan or screened out using OPR's guidance
- Bicycle and Pedestrian Projects which:
 - (1) Eliminate or adversely affect an existing bikeway or pedestrian facility in a way that would discourage its use; or
 - (2) Preclude the implementation of a planned bikeway or pedestrian way as shown in the Active Transportation Plan; or
 - (3) Fail to provide adequate access for bicyclists and pedestrians, resulting in unsafe conditions, including unsafe bicycle/pedestrian,

bicycle/motor vehicle, or pedestrian/motor vehicle conflicts.

- Projects which substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)

Mitigations

Transportation demand management (TDM) strategies and their effectiveness for reducing VMT were reviewed and assessed for their relevancy. Given the County's rural/suburban land use context, the following key strategies were identified as the most appropriate:

- Diversifying land use
- Improving active transportation networks
- Implementing traffic calming infrastructure
- Increasing transit accessibility
- Reducing the scope of the capacity increase
- Implementing or funding intelligent transportation systems (ITS) strategies

Of these strategies, only a few are likely to be effective in a rural or suburban setting such as El Dorado County. To help winnow the list, Fehr & Peers reviewed how land use context could influence each strategy's effectiveness and identified the six for more detailed review. These strategies are described in the Implementation Plan and listed below. Please note that disruptive trends, including but not limited to, TNCs, AVs, internet shopping, and micro-transit may affect the future effectiveness of these strategies.

1. Increase diversity of land uses – This strategy focuses on the inclusion of mixed uses in consideration of the surrounding area to minimize vehicle travel in terms of both the number of trips and the length of those trips.
2. Provide pedestrian network improvements – This strategy focuses on creating a pedestrian network within the project and connecting to nearby destinations. Projects in El Dorado County tend to be smaller, so the emphasis of this strategy would likely be the construction of network improvements that connect the project site directly to nearby destinations. Alternatively, implementation could occur through an impact fee program or benefit/assessment district based on local or regional plans such as the EDCTC's Active Transportation Plan.
3. Provide traffic calming measures and low-stress bicycle network improvements – This strategy combines the CAPCOA research focused on traffic calming with new research on providing a low-stress bicycle network. Traffic calming creates networks with low vehicle speeds and volumes that are more conducive to walking and bicycling. Building a low-stress bicycle network produces a similar outcome. Implementation options are similar to strategy 2 above. One potential change in this strategy over time is that e-bikes (and e-

scooters) could extend the effective range of travel on the bicycle network, which could enhance the effectiveness of this strategy.

4. Increase transit accessibility – This strategy focuses on improving transit service convenience and travel time competitiveness with driving. Note that implementation of this strategy would require regional or local agency implementation, substantial changes to current transit practices, and would not likely be applicable for individual transportation projects.
5. Reduce the scope of the roadway capacity increase within the project – This strategy can be coupled with others to replace trips induced by the project by use of other modes of travel.
6. Implementing or funding intelligent transportation systems (ITS) strategies to improve passenger throughput on existing lanes

Because of the limitations noted above, strategies 1, 2, 3, 5, and 6 are initially considered the highest priorities for transportation project mitigation subject to review and discussion with the project team and advisory committee.

Transportation staff has been participating in SACOG's Local Agency Working Group discussions on SB 743 Implementation tools. Mitigation measures for VMT impacts are an evolving area of study statewide and regionally. Potential regional mitigation measures can be included in the El Dorado County toolbox once the research and implementation has occurred. The Local Agency Working Group is pursuing a grant to fund development of a recommended framework for a regional mitigation bank or exchange.

At this time, staff is recommending the use of the mitigation measures above, as applicable, and potentially incorporating new mitigation measures as they become appropriate for use in El Dorado County. Active transportation, transit, and affordable housing projects are presumed to not have an impact under specific circumstances. Mitigation measures that accommodate these types of projects are encouraged as they are consistent with the legislative intent of SB 743.

RECOMMENDATION

Transportation is recommending the Board receive the workshop information on Senate Bill (SB) 743 and approve the application of the significance thresholds and potential mitigation measures as outlined above for transportation projects.

CONTACT

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