

Lead Agency Decisions	Common Options	Common Limitations	Considerations
What form of the VMT Metric?	<ol style="list-style-type: none"> 1) Total VMT 2) Total VMT per service population¹ 3) Household generated VMT per resident (activity/tour-based models) 4) Work tour VMT per employee (activity/tour-based models)) 5) Home-based VMT per resident 6) Home-based work VMT per employee 	<p>Metrics other than total VMT and total VMT per service population represent only partial VMT (i.e., some vehicle types and trip purposes are excluded in the models used to estimate VMT). This may be acceptable for screening purposes but not for a complete VMT impact analysis.</p>	<p>Include all forms of VMT needed for screening and complete analysis (this includes total VMT by speed bin for air quality, GHG, and energy impact analysis). Examples below are for trip-based models.</p> <ol style="list-style-type: none"> 1) Total VMT 2) Total VMT per service population 3) Home-based VMT per resident 4) Home-based work VMT per employee
What methodology to use in estimating and forecasting VMT?	<ol style="list-style-type: none"> 1) Caltrans Statewide Travel Demand Model 2) Regional MPO or RTPA travel demand model 3) City or County travel demand model 4) Sketch planning tool or spreadsheet² 	<p>Statewide and regional models have limited sensitivity and accuracy for local scale applications off the shelf.</p> <p>Regional and local models often truncate trips at model boundaries. Sketch and spreadsheet tools do not capture the 'project effect on VMT.'</p>	<p>Use regional or local models after calibrating and validating for local project scale sensitivity/accuracy and appending trip length data for trips with external trip ends. Use these models to analyze both 'project generated VMT' and 'project effect on VMT'. Land use projects only change land supply. As such, the analysis of project effect should recognize this condition.</p>
Is use of VMT impact screening per 15064.3 desired?³	<p>Projects that reduce VMT or are located within transit priority areas (TPAs) should be presumed to have a less than significant impact on VMT.</p>	<p>Screening does not provide information about the actual VMT changes associated with the project.</p>	<p>Rely on screening if consistent with applicable general plan and supported by substantial evidence.</p>

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<p>What is the VMT impact significance threshold for land use projects under baseline conditions?</p>	<p>1) Lead agency discretion consistent with general plan and expectations for 'project scale' VMT reductions not accounted for in general plan EIR and supported by substantial evidence.</p> <p>2) OPR 15% below baseline average for a city or region (automobiles only).⁴</p> <p>3) ARB 14.3% below baseline (2015–2018) average of jurisdiction (all vehicles).</p> <p>4) ARB 16.8% below baseline (2015–2018) average of jurisdiction (automobiles only).</p> <p>5) Any increase above baseline total for the study area or jurisdiction (all vehicles).</p>	<p>Difficult for lead agencies to determine what level of VMT change is unacceptable when viewed solely through a transportation lens.</p> <p>Uncertainty of VMT trends contributes to difficulty in setting thresholds. Connecting a VMT reduction expectation to baseline helps to reduce uncertainty associated with future conditions.</p> <p>No evidence provided in OPR, ARB, or Caltrans guidance to support treating land use and transportation projects differently when it comes to threshold expectations.</p> <p>Transportation and retail land use projects are subject to a threshold where any increase in total VMT causes a significant impact whereas residential and office land use projects only have impacts when their VMT generation rates are not at least 15% lower than existing land uses.</p>	<p>Since VMT is already used in air quality, GHG, and energy impact analysis, lead agencies should review thresholds for those sections to help inform new thresholds exclusively for transportation purposes.</p> <p>Lead agencies should carefully consider how they value state goals for VMT/GHG reduction in light of other general plan and community objectives. Translating state goals into VMT thresholds should carefully consider substantial evidence such as California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationships to State Climate Goals, January 2019, CARB.</p> <p>Absent development of a specific VMT threshold, lead agencies may rely on those of other state agencies. The ARB thresholds are supported by substantial evidence related to state air quality and GHG goals, but do not consider recent VMT trends or the potential influence of emerging mobility options such as autonomous vehicles (AVs).</p>

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<p>What is the VMT impact significance threshold for land use projects under cumulative conditions?</p>	<p>1) Use a regional model to analyze the 'project's effect on VMT' based on RTP/SCS consistency (projects should not increase the total regional VMT forecast used to support the RTP/SCS air quality conformity and SB 375 GHG targets).</p> <p>2) A lead agency can use the project analysis above if based on an efficiency metric form of VMT and evidence exists to demonstrate that cumulative trends in VMT rates are declining.</p> <p>3) Establish a VMT reduction threshold for cumulative conditions consistent with general plan objectives especially those related to air pollution and GHG reduction.</p>	<p>Uncertainty of VMT trends makes a cumulative impact finding less certain.</p> <p>Ability for a lead agency to identify the project's effect on land supply and corresponding VMT. Land use projects change land supply and the allocation of future population and employment growth. As such cumulative analysis should maintain the same control totals of regional population and employment growth.</p> <p>Requires knowledge of the forecasting tools available to test the project's effect on land supply and VMT.</p>	<p>Analyze the project's effect on land supply and VMT using an appropriate valid model. For impact findings, consider all available substantial evidence including 2018 Progress Report, California's Sustainable Communities and Climate Protection Act, November 2018, CARB and current research on the long-term effects of transportation network companies (TNCs), new mobility options, and autonomous vehicles (AVs). Specific research examples include Fehr & Peers AV effect model testing.</p>
<p>What is the VMT impact significant threshold for transportation projects under baseline conditions?</p>	<p>Lead agencies have discretion to choose their own metrics and thresholds for transportation project impact analysis. If VMT is selected, OPR recommends treating projects that reduce, or have no impact on, VMT to be presumed to have a less than significant impact.</p>	<p>Continued use of LOS is uncertain because of CEQA Guidelines Section 15064.3(b)(2) and 15064.7(d)(2).</p> <p>Transit, especially on-demand transit service, can generate new VMT, which should be considered as part of impact conclusions.</p>	<p>Consult CEQA legal advice about whether lead agency discretion allows continued use of LOS and whether VMT is required. VMT is required as an input to air quality, GHG, and energy impact analysis and should include induced vehicle travel effects.</p>

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<p>What VMT reduction mitigation strategies are feasible?</p>	<p>Menu of built environment and transportation demand management (TDM) mitigation strategies contained in Quantifying Greenhouse Gas Mitigation Strategies, CAPCOA, 2010.</p>	<p>Built environment strategies require modifying the project, which may create inconsistencies with the project description and financial feasibility.</p> <p>TDM strategies are often building tenant dependent so their use requires on-going monitoring and adjusting to account for changes in building tenants and their travel behavior.</p> <p>Ad-hoc project-by-project mitigation is less effective for reducing VMT than larger scale program-based approaches such as an impact fee program.</p>	<p>Develop a VMT mitigation program using any of the following approaches.</p> <p>1) Impact fee program based on a VMT reduction nexus (see City of Los Angeles example).</p> <p>2) In-lieu fee program for VMT reducing actions.</p> <p>3) VMT mitigation bank or exchange program.</p> <p>4) TDM ordinance applying to all employers (and potentially new residents).</p>

Notes:

- 1 Service population includes population plus employment and may include students or visitors; it is intended to include all independent variables used in estimating trips.
- 2 This method has limitations if using a citywide or regional average for a threshold.
- 3 CEQA Guidelines Section 15064.3 states that projects that would reduce VMT or are located in a TPA should be presumed to have a less than significant impact on VMT. The OPR *Technical Advisory* contains other potential screening options.
- 4 The OPR threshold was not developed through analytical or scientific study. It reflects OPR advice after reviewing various planning studies and state goals documented in the *Technical Advisory*. ARB used the OPR 15% threshold as an input to their threshold guidance and assumed that California statewide VMT would be 15% lower by 2050 compared to the 2015–2018 average. This means that all future residents are expected to perform at this level and that VMT from other sources (e.g., visitors) would also be 15% lower. Failure to meet these expectations would result in the State’s failure to meet GHG reduction goals. ARB’s threshold guidance also relied on calculations that use California’s clean fuel standards and electric vehicle adoption rates. The threshold guidance is not consistent with the SAFE Vehicle Rule, does not consider the 2019 update to statewide population forecasts, which reduced California’s population by about 5 million by 2050, and does not consider the long-term influence of transportation network companies, internet shopping, new mobility options, or autonomous vehicles.