

H. Vehicle Miles Traveled (VMT) Analysis Methodology

1. Senate Bill (SB) 743

Signed in 2013, SB 743 changes the way transportation studies are conducted in California Environmental Quality Act (CEQA) documents. Vehicle Miles Traveled (VMT) replaces motorist delay and level of service (LOS) as the new metric for transportation impact determination in CEQA. For land development projects, VMT is the product of the daily trips generated by a new development and the distance those trips travel to their destinations. For transportation projects, impacts are identified as the new VMT attributable to the new transportation improvement project.

In January 2019, the Natural Resources Agency and the Governor's Office of Planning and Research (OPR) codified Senate Bill 743 into the Public Resources Code (PRC) and the State CEQA Guidelines. CEQA Guidelines Section 15064.3 subdivision (b) states that a lead agency (City) has discretion to choose the most appropriate methodology to evaluate a project's impacts within their jurisdiction. The City has prepared a ***City SB 743 VMT Implementation Guide***, dated April 6, 2020, which will be used as a reference document for each project during the VMT analysis process. The various terminology used in the Policy are defined in the ***City SB 743 VMT Implementation Guide***.

This subsection of City Council Policy K-3 establishes the framework for completing a CEQA-level VMT transportation analysis for proposed land development projects and transportation projects. A Flow Chart outlining the step process is included in the ***City SB 743 VMT Implementation Guide*** as **Figure 4**. The framework includes the following:

- a. Screening Criteria under which projects are not required to submit a detailed VMT analysis.
- b. Significance Thresholds for Land Development projects (Residential, Office, Retail, Other).
- c. Significance Thresholds for Transportation projects.
- d. Requirements for projects to mitigate significant and unavoidable impacts.

2. Land Development Project Screening

Certain conditions may exist that would presume that a proposed land development project has a less than significant VMT impact. Land development projects that have one or more of the following attributes may be presumed to have a less than significant VMT impact.

- a. The project is located within 0.5 mile of a Transit Priority Area or a High Quality Transit Corridor unless the project is inconsistent with the Regional Transportation Plan/Sustainable Transportation Communities plan, has a floor-to-area ratio (FAR) less than 0.75, provides parking in excess of the City Municipal Code requirements, or reduces the number of affordable residential units.

A “High Quality Transit Corridor” means a corridor with fixed bus route service with a service frequency of 15 minutes or less during the peak morning and evening peak hours. A “Transit Priority Area” means an area within 0.5 mile of a major transit stop. A “Major Transit Stop” means a site containing a bus transit station, or the intersection of two or more major bus routes with a service frequency of 15 minutes or less during the peak morning and evening peak hours. **Figure 1** in the *City SB 743 VMT Implementation Guide* shows Transit Priority Areas in the city.

- b. The project is located in areas with low VMT per capita when compared to the average regional VMT per capita. **Figure 2** in the *City SB 743 VMT Implementation Guide* shows VMT per capita, in a map-based format, for all existing residential areas in the city. Proposed residential projects located within the green zones identified on the map that share project attributes with local development patterns (i.e. intensity, density, trip generation) would be deemed to be less than significant. **Figure 3** shows the VMT per employee. The employment based VMT within Newport Beach tends to be higher than the Orange County Regional average.
- c. Locally serving retail space of less than 50,000 square feet.
- d. The project has a high level of affordable housing units, as defined by the Community Development Department.
- e. The project generates a net increase of 300 or less daily trips, utilizing the most current Institute of Transportation Engineers (ITE) Trip Generation Manual. Credit is considered for existing uses generating traffic on the site, as outlined in the City Traffic Phasing Ordinance.
- f. Institutional/Government and public service uses such as police stations, fire stations, community centers, refuse centers, would not require CEQA VMT analysis.

3. Transportation Project Screening

Listed below are a series of transportation projects that would not likely lead to a substantial or measureable increase in vehicle travel, and would not require a detailed VMT analysis.

- a. Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets and that do not add additional motor vehicle capacity.
- b. Roadside safety devices or hardware such as median barriers or guardrails.
- c. 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 travel lanes.
- d. Addition of an auxiliary lane of less than 1 mile in length designed to improve roadway safety.
- e. 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.
- f. Addition of roadway capacity on local or collector streets, provided the project also substantially improves conditions for pedestrians, cyclists, and if applicable, transit.
- g. 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.
- h. Addition of a new lane that is permanently restricted to use only by transit vehicles.
- i. Reduction in the number of through lanes.
- j. Grade separation to separate vehicles from rail, transit, pedestrians, or bicycles, or to replace a lane in order to separate preferential vehicles (e.g.

high-occupancy vehicles [HOVs], high-occupancy toll [HOT] lane traffic, or trucks) from general vehicles.

- k. Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority features.
- l. Installation of traffic metering systems, detection systems, cameras, changeable message signs, and other electronics designed to optimize vehicle, bicycle, or pedestrian flow.
- m. Timing of signals to optimize vehicle, bicycle, or pedestrian flow.
- n. Installation of roundabouts or traffic circles.
- o. Installation or reconfiguration of traffic calming devices.
- p. Adoption of, or increase in tolls.
- q. Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase.
- r. Initiation of a new transit service.
- s. Conversion of streets from one-way to two-way operation with no net increase in the number of traffic lanes.
- t. Removal or relocation of off-street or on-street parking spaces.
- u. Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs).
- v. Addition of traffic wayfinding signage.
- w. Rehabilitation of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way.
- x. Addition of Class 1 bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel.
- y. Installation of publicly available alternative fuel/charging infrastructure.

- z. Passenger rail projects, bus and bus rapid-transit projects, and bicycle and pedestrian infrastructure projects.

4. Significance Thresholds for Land Development Projects

For all projects that do not meet the Project Screening criteria, a more detailed VMT impact analysis will be required. In outlining the project thresholds, the type of trips used in the VMT calculation are defined as “home-based work trips”. A detailed VMT analysis will cover residential uses, office uses and retail uses. The metric used is the Vehicle Miles Travelled (VMT) per person (capita), or per employee per day, or total VMT. For residential projects the metric used is “VMT per capita”. For office projects, the metric used is “VMT per employee”. For retail projects, the metric is “total VMT”. For other land uses not specified in the OPR guidance, the metric best fitting the predominant trip making variable for that use shall be used. For example, hospitality uses would be VMT per employee, industrial uses would also be VMT per employee. Where there are uses that have multiple trip purposes, the total service rate (per capita and per employee) may be used.

- a. SB 743 covers the State goals for reducing green house gas emissions by 15 percent below existing conditions by 2035. Most regional planning agencies have agreed to these goals through land use and transportation planning. The defined City VMT Thresholds are as follows:
 - i. A proposed residential project exceeding a level of 15 percent below the existing County average VMT per capita would indicate a significant transportation impact.
 - ii. A similar threshold applies to office projects – exceeding 15 percent below existing County average VMT per employee indicates a significant impact.
 - iii. For retail projects, any net increase in total VMT for the project would indicate a significant impact.
 - iv. For other uses, any net increase in VMT per capita or per employee would indicate a significant impact for uses consistent with the General Plan. For projects seeking a General Plan Amendment, a project exceeding a level of 15 percent below the existing County average VMT per capita or per employee would indicate a significant transportation impact.
- b. According to the Orange County Transportation Authority, the average VMT/capita in Orange County is 17.9. The average VMT/employee is 24.1. Based on the goal of 15 percent below County average, the City’s thresholds would be:

- i. **Residential** – 15.2 VMT per capita.
- ii. **Office** – 20.5 VMT per employee.
- iii. **Retail** – No net change in total VMT.
- iv. **Other Land Uses** – No net change in VMT per capita or per employee.

For mixed-use projects, the VMT should be evaluated for each component of the project independently. Should the mixed-use project include 50,000 square feet or less of local serving retail use, then that component can be screened out.

5. Significance Thresholds for Transportation Projects

The City shall be required to consider the effects of transportation projects on vehicle travel. Projects that lead to additional vehicle travel are referred to as “induced vehicle travel” and would be required to analyze the growth impacts under CEQA. The addition of new through lanes on an existing roadway would be a typical project that could induce a VMT impact. If a proposed transportation project meets the screening criteria previously outlined, then a detailed analysis will not be required for the project. More detail on transportation project VMT analysis is outlined in the SB 743 Implementation Guide.

For projects on the State highway system, Caltrans will use and will require the City to use VMT as the CEQA metric. An assessment of a transportation project’s VMT should disclose the VMT without the project, and the VMT with the project. Any growth in VMT attributable to the transportation project would result in a significant impact.

6. Land Development Project Review Process

- a. At the beginning of the project development process, the applicant shall submit a full and complete project description including the intensity/density of the project, proposed parking supply, number of affordable housing units (if residential) or any other project features that may affect trip generation, VMT generation, project access, and alternate modes of travel.
- b. Once the development application has been filed, project screening will be conducted as the first step of analysis. Project screening will be completed by city staff and reviewed by the City Traffic Engineer. If the project meets any one of the screening criteria outlined previously, the project will be presumed to create a less than significant impact. No further VMT analysis is necessary. The CEQA document shall enumerate the screening criterion, and how the project meets or does not meet the criteria.

- c. If the project does not meet the screening criteria, a detailed VMT analysis will be required. For residential projects, the VMT per capita rate shall be calculated. For commercial office projects, the VMT per employee rate shall be calculated. For a retail project, the total VMT shall be calculated. For mixed-use projects, the VMT per land use shall be calculated. Credit for internal trip capture can be applied for mixed use projects.
- d. For projects with a trip generation rate of between 300 and 1,000 net trips per day, or those with one predominant land use, the determination of project VMT may be calculated manually as the product of the daily trip generation (land use density/intensity multiplied by the City-approved trip generation rate) and the trip length in miles for the specified land use. Trip lengths can be found in CalEEMod or derived from the City Model NBTM.
- e. For large or multi-use projects, use of the NBTM traffic forecasting model shall be required. For purposes of City review, a project generating 1,000 ADT or more should use the NBTM model to calculate the project VMT rates.
- f. The project-generated VMT per capita for residential projects, VMT per employee for office projects, or total VMT for retail projects shall be compared to the City Thresholds outlined previously. If the calculated VMT metrics exceed the City Threshold, the project has a significant impact and mitigation measures are required. If the project VMT metrics are less than the City Thresholds, the project has less than significant impacts.

7. Mitigation Measures

When the detailed VMT analysis indicates that a project has a significant impact, the applicant is required to identify feasible mitigation measures to avoid or reduce the impact created by the project. The mitigation measures can come from strategies outlined in the SB 743 Implementation Guide, or selected by the applicant. The City will decide what is feasible mitigation for the project, and the related VMT percent reduction.

If the mitigation measures fully mitigate the project impact, the project is presumed to have an impact mitigated to a less than significant level. No further analysis is required. If the project's VMT impact cannot be fully mitigated, the City may (1) request the project be re-designed, relocated or realigned to reduce the VMT impact, or (2) prepare a Statement of Overriding Considerations (SOC) for the transportation impacts associated with the project. All feasible mitigation measures must be assigned to and carried out by the project even if a SOC is prepared.

8. Traffic Phasing Ordinance (TPO) Analysis

To establish consistency with the City General Plan and other city requirements, all proposed land use projects generating 300 or more daily trips will continue to be required to prepare a level-of-service (LOS) analysis of transportation impacts consistent with Chapter 15.40 of the Newport Beach Municipal Code, in addition to the CEQA-level VMT analysis.