



ASSOCIATION OF BAY AREA GOVERNMENTS  
METROPOLITAN TRANSPORTATION COMMISSION



# SB 743 POLICY ADOPTION TECHNICAL ASSISTANCE PROGRAM

## ESTABLISHING AN INFILL AND AFFORDABLE HOUSING SCREEN

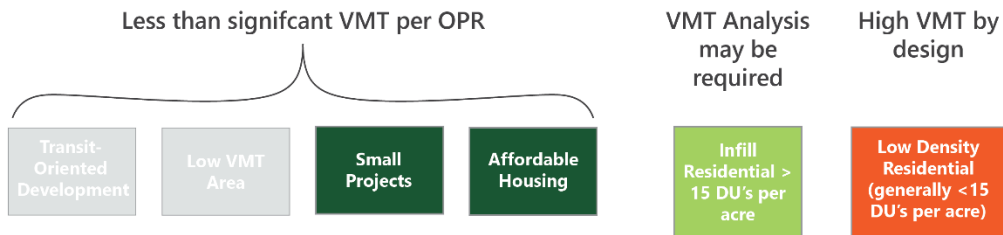
### Summary

When adopting VMT thresholds, screening criteria, or VMT/TIA guidelines, lead agencies could consider VMT screening criteria for qualifying infill housing projects. Suburban and rural lead agencies in particular can consider this screen when transit services are not available and the model data supporting low VMT areas are limited or unreliable. Establishing a VMT screening criteria for infill housing would be consistent with OPR’s guidance to use alternate approaches when use of a calibrated travel demand model is unavailable. This would streamline how lead agencies approach VMT analysis and clarify the types of housing development that align a city’s housing production goals with state climate goals. To aid in this process, OPR recently released a tool, Site Check<sup>1</sup>, which is a free and public tool aimed to help users understand what streamlining options and/or exemptions under CEQA apply to any parcel in California.

**Figure 1** shows how the screening options for suburban and rural jurisdictions can be expanded.

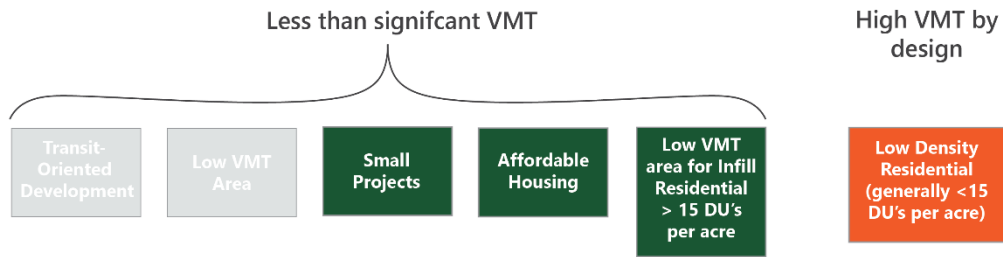
**Figure 1: VMT Screening Options for Suburban and Rural Jurisdictions**

Existing Screening Options without TOD and Inadequate Low VMT Areas



<sup>1</sup> [Site Check Walkthrough](#)

## Potential Future Screening Options



\* OPR = California Attorney General's Office of Planning and Research

The sections below provide more detail on **Figure 1** as well as the steps and substantial evidence lead agencies can consider when pursuing this approach.

## Why Consider an Infill Housing or Mixed Use Screen

In the pursuit of California's housing, transportation, and climate goals, the interplay between constraints created by the application of CEQA to housing developments and the need to promote infill housing has emerged as a critical nexus that local jurisdictions must navigate. This guide explores how local jurisdictions can align local vehicle miles traveled (VMT) and housing policies through the establishment of General Plan policies, VMT thresholds, or screening criteria relating to infill residential or residential mixed-use multi-family projects<sup>2</sup> (referred to as "infill housing" going forward, although they may include up to a third mixed-use component). This guide is intended to address common challenges heard during MTC's VMT Policy Adoption Technical Assistance (SB 743) program<sup>3</sup> by helping lead agencies with limited high-quality transit service or low VMT areas determine an appropriate VMT analysis approach for infill housing sites. While some of the approaches and research presented in this guide could apply to commercial or other land uses, this guide focuses on housing given the close alignment of local infill housing with state climate and housing production goals while infill commercial may need to consider local jobs/housing imbalances and other factors when adopting new VMT screening criteria.

Lead agencies are responsible for adopting thresholds of significance for VMT based on local values and conditions. In 2013, Senate Bill (SB) 743 and subsequent guidance from the California Attorney General's Office of Planning and Research (OPR) established VMT as the preferred metric to balance the "needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions." Lead agencies often rely on regional travel demand models to understand the types of land uses and locations that could result in a significant impact on the environment associated with VMT. However, some suburban and rural jurisdictions face challenges in the application of VMT due to the complexity of regional travel demand models, lack of sensitivity of regional models to the local travel characteristics of infill and affordable housing, and uncertainty related to post-COVID travel patterns. Further, the placement of multi-family housing in areas

<sup>2</sup> Defined by the California PRC §65589.5.(h)(2)(B) "Mixed-use developments consisting of residential and nonresidential uses with at least two-thirds of the square footage designated for residential use."

<sup>3</sup> Based on technical assistance provided between 2022 and 2023. For more information on the program, visit: <https://abag.ca.gov/technical-assistance/sb-743-los-vmt-transition-program-overview>

with existing low density land use patterns skew off-the-shelf model data that jurisdictions typically use to identify low VMT areas. This guide presents how the project characteristics inherent to multi-family development lead to lower levels of VMT when compared to low density land uses, such as through the increased density, proximity to amenities and services, or the provision of affordable housing. This guide clarifies the statutory guidance and options available for streamlining the VMT analysis of infill housing sites for lead agencies that are facing these challenges.

### Overview of Approach to Establishing an Infill Housing Screen

Lead agencies are responsible for the evaluation of environmental impacts under CEQA. Many infill housing projects will qualify for categorical exemptions from CEQA and VMT analysis due to recent state legislation described in **Appendix A**. For those that do not qualify, or for when there is uncertainty about whether the infill housing projects do qualify, there are multiple paths for tiering and streamlining infill housing through the General Plan and threshold setting process as presented in the following section, *VMT Streamlining Approaches*—The options include:

- Using CEQA Section 15183 to tier-off a general plan or housing element that has analyzed the VMT impacts
- Establishing local General Plan policies that create a nexus between a jurisdiction’s need to produce housing and the value that it places on VMT and GHG reduction
- Establishing a specific VMT threshold or screening criteria related to infill housing.

If considering the last option to establish a specific VMT threshold or screening criteria related to infill housing, the *Substantial Evidence*<sup>4</sup> section below details the following considerations:

1. **Density** – Review zoning designations and account for the VMT reduction effects of increasing residential density on sites with minimum multi-family density zoning (generally 15 dwelling units per acre or higher).
2. **Proximity** – Evaluate whether these zones or sites are proximate to amenities or services, such as those provided in town centers, commercial corridors, or mixed-use zones.
3. **Affordable Housing** – Document the VMT reduction effects of affordable housing to support the presumption of less-than-significant VMT impacts for 100% affordable projects or to account for the VMT reduction benefits provided by required inclusionary affordable housing.
4. **TDM and Parking** – Account for VMT reduction benefits created by TDM programs and parking reductions if they are required per municipal code and there are clear mechanisms for monitoring effectiveness.

Steps 1 and 2 are applicable for most infill housing sites while steps 3 and 4 would provide additional VMT reduction benefits to support findings of a presumption of less-than-significant impacts if they are available. In locations where reliable regional travel model data is unavailable for the site, other data sources such as VMT+, which includes recent VMT estimates based on observed travel conditions using

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<sup>4</sup> Per CEQA section 15384, “substantial evidence” refers to the provision of “enough relevant information and reasonable inferences from this information that a fair argument can be made to support a conclusion, even though other conclusions might also be reached.” Further, “substantial evidence shall include facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts.”

StreetLight Data, can provide additional substantial evidence supporting the local thresholds.<sup>5</sup> Lead agencies should review local conditions and apply discretion at these steps related to the unique characteristics of their communities. Lastly, when developing the approach, involve the City Attorney and other departments involved in development review, including Planning, Public Works, Community Development or Mayor/Executive's Office.

### Bay Area Case Studies

Two case studies for Piedmont and Half Moon Bay are presented at the end of this memorandum to demonstrate how these lead agencies defined the characteristics of infill housing projects that lead to the presumption of a less-than-significant VMT impact. These case studies illustrate how lead agencies facing challenges in meeting their Regional Housing Needs Assessment (RHNA) targets due to VMT-related constraints should consider adopting local policies and VMT thresholds and procedures that account for the characteristics of infill housing.

## VMT Streamlining Approaches

As part of the implementation of SB 743, OPR's Technical Advisory contains recommendations for the evaluation of transportation impacts. As stated in Cal. Code Regs. tit. 14 § 15064.3: "Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact" and that:

*"Achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development **is both generally achievable and is supported by evidence** that connects this level of reduction to the State's emissions goals."* (emphasis added)<sup>6</sup>

OPR's Technical Advisory goes on to state that transit-oriented projects, small projects, projects in existing low VMT areas, and affordable housing projects can be presumed to have a less-than-significant impact based on the project's characteristics and thus could be screened out from a VMT analysis. OPR's Technical Advisory also notes that qualitative VMT analysis options can be considered as follows:

*If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc.*<sup>7</sup>

Given the state's challenges in meeting VMT and GHG reduction goals, as expressed through CARB's 2022 Scoping Plan that notes that VMT per capita will need to be reduced by 25% below 2019 levels by 2030 and 30% below 2019 levels by 2045,<sup>8</sup> lead agencies should use their discretion to select their own VMT thresholds that balance state and local goals and are supported by substantial evidence. Remy Moose Manley, LLP (RMM), a land use and environmental law firm based in Sacramento, provided guidance on establishing thresholds for VMT<sup>9</sup> and noted that, while OPR's Technical Advisory recommends specific thresholds and screening criteria, the statute only generally directs that the threshold "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a

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<sup>5</sup> Free statewide VMT data is available at: [Visualizing VMT Per Capita. For more information, see the below "Big Data: VMT+ Case Study".](#)

<sup>6</sup> [OPR Technical Advisory on Evaluating Transportation Impacts in CEQA](#)

<sup>7</sup> [Section 15064.3 - Determining the Significance of Transportation Impacts](#)

<sup>8</sup> [California Air Resources Board 2022 Scoping Plan. Appendix D: Local Actions.](#)

<sup>9</sup> [WRCOG SB 743 Implementation Pathway](#)

diversity of land uses.”<sup>10</sup> This provides flexibility to set thresholds based on local considerations, such as a lead agency’s general plan or housing element.

A lead agency could therefore define the project characteristics for infill housing that could be presumed to have a less-than-significant impact based on substantial evidence. Further, for lead agencies with known limitations to travel demand tools for estimating VMT for infill housing, a qualitative approach based on these characteristics would be consistent with OPR’s Technical Advisory. OPR’s Technical Advisory cites the court case *Covina Residents for Responsible Development v. City of Covina*, which includes legal precedent of the environmental benefits of infill development and its overall effect of reducing greenhouse gas emissions.

*“As one appellate court recently explained: “During the last 10 years, the Legislature has charted a course of long-term sustainability based on denser infill development, reduced reliance on individual vehicles and improved mass transit, all with the goal of reducing greenhouse gas emissions. Section 21099 is part of that strategy . . . .” (Covina Residents for Responsible Development v. City of Covina (2018) 21 Cal.App.5th 712, 729.)”<sup>11</sup>*

### Options to Consider if Infill Housing Projects Do Not Qualify for Categorical CEQA Exemptions

As described in the *Infill Definition* section of Appendix A, many infill housing projects will qualify for categorical exemptions from CEQA and VMT analysis due to recent state legislation. To see which housing projects qualify for streamlining and/or exemptions under CEQA, jurisdictions can refer to the OPR Site Check tool<sup>12</sup>, which can help identify housing projects that may qualify. For those that don’t qualify, or for when there is uncertainty about whether the infill housing projects do qualify, jurisdictions could use the following three options to streamline the VMT analysis for infill housing and thus avoid creating a constraint to implementation of their housing element.

#### **Option 1: General Plan Tiering**

Lead agencies that have evaluated the VMT impacts in a general plan or housing element can take advantage of CEQA Guidelines Section 15183:

- (a) *CEQA mandates that projects which are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was certified shall not require additional environmental review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site. This streamlines the review of such projects and reduces the need to prepare repetitive environmental studies.*

This section of the CEQA Guidelines relieves a project of additional environmental review if the environmental impact was adequately addressed in the General Plan EIR, including identification of project-level mitigation, and the project is consistent with the General Plan.

#### **Option 2: Establish a VMT Threshold Based on Local Values**

Whether lead agencies decide to use the general plan tiering approach or establish a separate threshold or screening criteria for project-level analysis, they need to establish a VMT threshold for determining the impact. This could include following OPR’s Technical Advisory recommendations, such as the reduction of

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<sup>10</sup> Pub. Resources Code, § 21099, subd. (b).

<sup>11</sup> [OPR Technical Advisory on Evaluating Transportation Impacts in CEQA](#)

<sup>12</sup> [Site Check](#)

VMT by 15% for office and residential uses, CARB's target for a 30% reduction, or a threshold based on local values that account for their VMT reduction goals and the need to balance the objectives of SB 743, including GHG reduction, provision of adequate housing, and support for multi-modal transportation networks. When considering use of local goals, lead agencies can consider alignment between their climate action plan (CAP) and the Bay Area Air Quality Management District (BAAQMD). CAPs include growth projections that typically include infill housing sites and actions to allow local jurisdictions to meet their state mandated climate targets which should be consistent with BAAQMD guidance in line with the current CARB Scoping Plan.<sup>13</sup>

Butte County recognized that projects which don't interfere with the state's objectives in achieving VMT and GHG reduction goals could serve as an appropriate benchmark. This benchmark assesses whether development projects align with local CAPs and acknowledges the constraints that individual jurisdictions face in reducing VMT, given the more powerful tools that are available to the state such as VMT taxes, tolls, etc.<sup>14</sup> For any route, lead agencies should establish their own substantial evidence that their VMT threshold is appropriate and consistent with the intent of SB 743 and CEQA Guidelines Section 15064.3.

### **Option 3: Establish Infill Screening Criteria**

When adopting VMT thresholds, screening criteria, or VMT/TIA guidelines, lead agencies could consider a VMT screening criteria for qualifying infill housing projects. For this guide, the minimum density threshold of 15 dwelling units per acre is used when referring to qualifying infill housing although, as noted the following the *Substantial Evidence* section, lead agencies have the authority to determine a locally appropriate definition of infill housing, including the threshold for the proximity to amenities and services and the density levels that would qualify. **Appendix A** presents the statute definition of infill housing.

Figure 1 summarizes the current VMT screening options available to suburban and rural jurisdictions where transit services are not available and the model data supporting low VMT areas are limited or unreliable. Establishing a VMT screening criteria for infill housing would be consistent with OPR's guidance to use alternate approaches when use of a calibrated travel demand model is unavailable. This would streamline how lead agencies approach VMT analysis and clarify the types of housing development that align a city's housing production goals with state climate goals. While this approach could relieve the need of conducting VMT analysis for these projects, lead agencies will need to determine whether VMT or traffic data is required for air quality, noise, and GHG analysis.

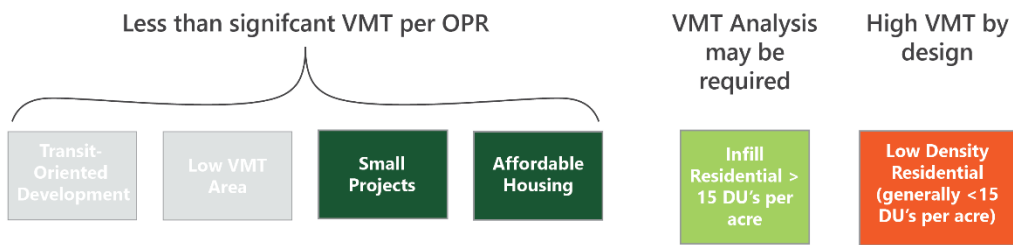
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<sup>13</sup> Table 3-2, item A.2 of Bay Area Air Quality Management District's 2022 CEQA Guidelines: [https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-3-thresholds\\_final\\_v2-pdf.pdf?la=en](https://www.baaqmd.gov/~media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-3-thresholds_final_v2-pdf.pdf?la=en)

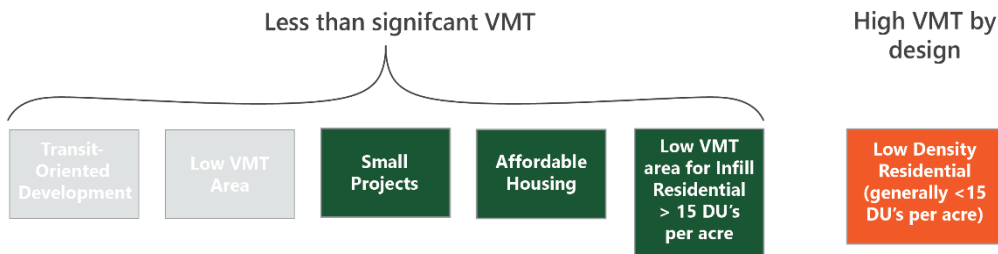
<sup>14</sup> <http://www.bcag.org/Planning/SB-743-Implementation-Study/index.html>

**Figure 1: VMT Screening Options for Suburban and Rural Jurisdictions**

Existing Screening Options without TOD and Inadequate Low VMT Areas



Potential Future Screening Options



## Substantial Evidence

As noted above, lead agencies could set a local VMT threshold or screening criteria that balances multiple local and state objectives related to GHG reduction, adequate housing, and support for multimodal transportation networks. Substantial evidence means that “a fair argument can be made to support a conclusion” based on substantial evidence and reasonable inferences.<sup>15</sup> The substantial evidence presented below demonstrates that infill developments located outside of high-quality transit areas or existing low VMT areas could be presumed to have a less-than-significant impact if they meet minimum densities and are proximate to amenities and services and/or provide affordable housing.

### Density

One of the more effective strategies to reduce the VMT generated by residential developments is increasing the residential density (Strategy T-1 in the CAPCOA 2021 Handbook<sup>16</sup>). Increasing residential density results in shorter and fewer trips by single-occupancy vehicles and thus results in VMT reductions. According to the CAPCOA Handbook, the elasticity of VMT with respect to residential density is -0.22, meaning that a 1% increase in development density would reduce VMT by about 0.22%.<sup>17</sup> The CAPCOA

<sup>15</sup> Cal. Code Regs. Tit. 14, § 15384

<sup>16</sup> California Air Pollution Control Officers Association (CAPCOA) 2021 *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*

<sup>17</sup> As noted in the CAPCOA Handbook, this elasticity is appropriate for residential uses that are greater than the average residential density in the U.S. of 9.1 dus/acre.

Handbook also sets a maximum VMT reduction of 30% from baseline conditions for this strategy.<sup>18</sup> As shown in **Table 1**, multi-family infill developments that are denser than the existing neighborhood would be expected to generate less VMT than that of the surrounding neighborhood.

**Table 1: VMT Reductions Associated with Density**

Density (Dwelling units per acre)	VMT Reduction Compared to Average U.S. Density
9.1 <sup>1</sup>	0%
10	-2.2%
15 <sup>2</sup>	-14.3%
20 <sup>3</sup>	-26.4%
25	-30%

Notes:

1. Average residential density in the U.S., which should serve as the default for calculations unless the density of the surrounding neighborhood is higher than 9.1 dwelling units per acre. These reduction values should only be applied when the density of the project is greater than that of the surrounding neighborhood.
2. This density level aligns with recent state laws, as noted in the infill definition section in Appendix A.
3. As noted in [CARB 2022 Scoping Plan Appendix D Local Actions](#), CARB recommends this minimum density for infill housing that could be presumed to be consistent with state climate goals among other factors

Source: CAPCOA 2021 Handbook, Fehr & Peers. 2023

Lead agencies can determine the density of future development through their general plan and zoning code based on local goals and values. Lead agencies can account for the density of future developments that are consistent with the zoning code in establishing local VMT thresholds or screening criteria. While increased density at infill locations can reduce VMT, jurisdictions will also want to consider a site’s proximity to amenities and services, as described below.

Proximity to Amenities and Services

As noted in state law (PRC §65913(6)(E)) and presented in Appendix A, the proximity of housing to amenities and services is an important consideration for determining the potential for a project to create a significant impact on the environment. The amenities and services in this statute include supermarkets or grocery stores, public parks, community centers, pharmacy or drugstores, medical clinics or hospitals, public libraries, and schools that maintain a kindergarten or any of grades 1 to 12. This statute notes that an infill site should have at least six of these amenities within one mile, or two miles for rural context, to be categorically exempt. The one- to two-mile radius reflects the fact that households within suburban and rural jurisdictions are often located in single-use environments with few nearby amenities; thus, people living within these radii would have shorter drive trips and more opportunities to walk, bike, or take transit than a traditional single-use suburban environment.

Evidence supporting this statute is found in the Environmental Protection Agency’s (EPA’s) MXD methodology<sup>19</sup>, which estimates the amount of vehicle trips generated based on a project’s geographic setting, mix of project site and nearby land uses, neighborhood demographics, design of the pedestrian and bicycling environment, and proximity to regional transit. The MXD methodology indicates that traditional low density suburban style development patterns typically generate 35% more vehicle trips than development in mixed-use context. This is consistent with the Institute of Transportation Engineers

<sup>18</sup> [CAPCOA Handbook for Analyzing Greenhouse Gas Emission Reduction, Assessing Climate Vulnerabilities, and Advancing Health and Equity Strategy T-1. Increase Residential Density](#)

<sup>19</sup> For more information on the MXD methodology please visit <https://www.fehrandpeers.com/mainstreet/> or see *Getting Trip Generation Right Eliminating the Bias Against Mixed Use Development* by the American Planning Association, May 2013.



(ITE) Trip Generation Handbook (3rd Edition) which recommends against using data from low density suburban land uses for “development and redevelopment in compact, urbanized areas where walking, bicycling, and transit are viable modes of transportation.”<sup>20</sup>

Jurisdictions could consider this evidence when establishing a VMT threshold or screening criteria by determining which infill sites are proximate to amenities. Many suburban and rural jurisdictions identify town centers, commercial corridors, or other mixed-use districts that, by definition, meet the statute due to the mix of amenities and, therefore, could use those areas to determine which infill sites could be presumed to be less than significant. While this statute uses a one-mile buffer for suburban jurisdictions and a two-mile buffer for rural areas, jurisdictions should consider whether these buffers are appropriate or whether additional factors, such as the connectivity of walking, bicycling, and transit networks to these amenities, could be considered as substantial evidence that housing sites would reduce the number and length of driving trips. This research offers jurisdictions a basis to justify the expansion of an infill parcel that falls within an infill VMT threshold or screening criteria. This expansion could go beyond the requirement of “75% of the perimeter of the site adjoins parcels that are developed with qualified urban uses.” This can be done by demonstrating which parcels are well connected and within a convenient walking distance to the amenities and services, such as through a complete pedestrian network (e.g., ADA-compliant sidewalks and crossings), thus demonstrating that they would function similar to an infill site from a VMT perspective.

### Affordable Housing

Jurisdictions are required through the RHNA process to facilitate the construction of affordable housing and many jurisdictions or state laws require a minimum percentage of housing units be set aside for affordable housing. With the passage of California Assembly Bill 1449 in October 2023, certain affordable housing projects will be exempt from CEQA. For the purposes of this bill, affordable housing must dedicate 100% of units to lower income households and meet criteria related to the project’s location for infill locations as defined above.<sup>21</sup> OPR’s Technical Advisory states that “adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT,”<sup>22</sup> citing research done to investigate job-housing fit and commute distance by Karner and Berner.<sup>23</sup> OPR also states that:

*“A project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT. Evidence supports a presumption of less-than-significant impact for a 100% affordable residential development (or the residential component of a mixed-use development) in infill locations. Lead agencies may develop their own presumption of less-than-significant impact for residential projects (or residential portions of mixed-use projects) containing a particular amount of affordable housing, based on local circumstances and evidence. Furthermore, a project which includes any affordable residential units may factor the effect of the affordability on VMT into the assessment of VMT generated by those units.”*<sup>24</sup>

Caltrans SB 743 Program Mitigation Playbook describes mitigation methods for VMT induced by highway capacity projects but acknowledges that the primary method for reducing VMT is not mitigation but

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<sup>20</sup> Institute of Transportation Engineers *Trip Generation Handbook, 3<sup>rd</sup> Edition* (2017), page 8.

<sup>21</sup> [California Assembly Bill 1449](#)

<sup>22</sup> [OPR Technical Advisory on Evaluating Transportation Impacts in CEQA](#)

<sup>23</sup> Karner and Benner (2016) The convergence of social equity and environmental sustainability: Jobs-housing fit and commute distance.

<sup>24</sup> [OPR Technical Advisory on Evaluating Transportation Impacts in CEQA](#)

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developing projects that do not increase VMT in the first place. In relation to land use, the Playbook states:

*"Affordable housing produces less VMT compared to market-rate housing. To the extent a project contributes to such housing, it can take credit for the VMT reduction compared to business as usual. Compared to other options, denser, more affordable housing is a powerful VMT-reduction tool."<sup>25</sup>*

The CAPCOA 2021 Handbook includes a strategy (T-4) titled "Integrate Affordable and Below Market Rate Housing." CAPCOA defines the implementation requirements of Strategy T-4 as:

*"Multifamily residential units must be permanently dedicated as affordable for lower income families. The California Department of Housing and Community Development (2021) defines lower income as 80% of area median income or below, and affordable housing as costing 30% of gross household income or less."<sup>26</sup>*

**Table 2** presents VMT reduction associated with qualifying affordable housing projects when compared to market rate units. When affordable housing is required by a jurisdiction, they could consider accounting for VMT reduction benefits provided by the required affordable housing in the VMT thresholds or screening criteria.

**Table 2: VMT Reductions Associated with Affordability**

Required Percentage of Affordable Housing <sup>1</sup>	VMT Reduction Compared to 100% Market Rate <sup>2</sup>
10%	-2.86%
15%	-4.29%
20%	-5.72%
50%	-14.3%
100%	-28.6%

Notes:

1. Typical levels of affordable housing required for state law compliance or local inclusionary as case studies.
2. The Caltrans Mitigation Playbook uses a 1,000 unit development example to showcase potential VMT reduction of affordable housing. If the 1,000 unit development proposed 100% affordable housing on U.S. average residential density of 9.1 units/acre, it could assume an annual VMT reduction of 5,618 per household based on the 28.6 percent reduction from the typical 19,641.8 per year. Based on this household reduction, 1,000 units could claim a reduction of 5,617,555 VMT per year.

Source: CAPCOA 2021 Handbook, Fehr & Peers. 2023

### TDM and Parking

The CAPCOA 2021 Handbook presents the transportation-related categories that are effective at reducing GHG emissions that may be required for new land uses and could be accounted to substantiate local VMT thresholds and screening criteria. These quantifiable measures offer a comprehensive framework that covers various aspects of TDM, from reducing single-occupancy vehicle trips to promoting alternative transportation options. Municipalities can utilize CAPCOA's measures to structure TDM ordinances that suit their unique needs and local conditions, ensuring that the ordinances are aligned with statewide air quality and sustainability goals. By incorporating strategies outlined by CAPCOA 2021 Handbook, municipalities can design comprehensive VMT thresholds and screening criteria that prioritize the

<sup>25</sup> [Caltrans SB 743 Program Mitigation Playbook.](#)

<sup>26</sup> [CAPCOA Handbook for Analyzing Greenhouse Gas Emission Reduction, Assessing Climate Vulnerabilities, and Advancing Health and Equity Strategy T-4. Integrate Affordable and Below Market Rate Housing](#)

implementation of physical measures, such as complete streets designs (e.g., frontage improvements to prioritize people walking, bicycling, and riding transit), and programmatic measures through TDM ordinances.

Although reduced parking can lessen the convenience of driving, incentivize a shift to other modes, and reduce overall VMT, VMT-mitigating parking strategies often pose large challenges, particularly in suburban and rural areas. The CAPCOA 2021 Handbook includes the strategy (T-14) titled “Limit Residential Parking Supply.” Reduced off-street parking for new developments can result in spillover parking on side streets and private lots, causing inconvenience and concerns from existing neighbors. Another strategy identified by CAPCOA is T-15 titled “Unbundle Residential Parking Costs from Property Cost.” This strategy ensures that the price of parking is passed through to the vehicle owner using the parking space, which may act to disincentivize vehicle ownership. California Assembly Bill 1317, passed in October 2023, “require[s] the owner of qualifying residential property, as defined, that provides parking with the qualifying residential property to unbundle parking from the price of rent.”<sup>27</sup> The bill will come into effect January 1, 2025, and applies to residential properties with 16 or more dwelling units within the counties of Alameda, Fresno, Los Angeles, Riverside, Sacramento, San Bernadino, San Joaquin, Santa Clara, Shasta, or Ventura. When these parking measures are required by a jurisdiction, and there are established management strategies (e.g., residential parking permits) to account for spillover parking, these required parking reductions could be considered when establishing a local VMT threshold or screening criteria.

For additional information on the application of VMT reductions associated with TDM or parking measures, review the CAPCOA 2021 Handbook at [https://www.caleemod.com/handbook/full\\_handbook.html](https://www.caleemod.com/handbook/full_handbook.html) or use the TDM+ provided by Caltrans for free at <https://dot.ca.gov/programs/esta/sb-743/resources>.

Steps on establishing a TDM Ordinance can be found on the MTC/ABAG Technical Assistance Portal at <https://abag.ca.gov/technical-assistance/parking-transportation-demand-management-policy>.

### Big Data: VMT+ Case Study

Understanding the amount of VMT generated by a community provides insights into the efficiency of existing land use patterns, but frequently suburban and rural jurisdictions face challenges in calibrating local and regional travel demand models used to traditionally create VMT estimates. All models have limitations and regional travel models may not represent current conditions, complete trip lengths, or unique land uses. They can also be time-consuming to operate. To address these limitations and enhance the reliability of VMT data, VMT+ emerges as a valuable alternative data source. VMT+ offers recent VMT estimates based on observed travel conditions from March through May of 2019 using StreetLight Data.<sup>28</sup> VMT+ provides VMT per capita estimates at the specific level of Census Block Groups, enabling a detailed exploration of trip generation rates in specific areas. For jurisdictions looking for big data VMT solutions, an alternate source includes Replica.<sup>29</sup>

## Case Studies

The following case studies demonstrate how two lead agencies are aligning their VMT thresholds with their housing element by identifying the project characteristics that could be presumed to be less than significant.

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<sup>27</sup> [California Assembly Bill 1317](#)

<sup>28</sup> [Find Your VMT With VMT+](#)

<sup>29</sup> <https://www.replicahq.com/>

## Piedmont

Piedmont's Housing Element Draft EIR<sup>30</sup> considered the effect of the density at infill housing sites in determining which sites would have the potential to create a significant impact. This approach leveraged the opportunities presented by CEQA Guidelines Section 15183 and the substantial evidence presented above for the density of future projects to establish a new screening criterion for future infill housing consistent with the housing element.

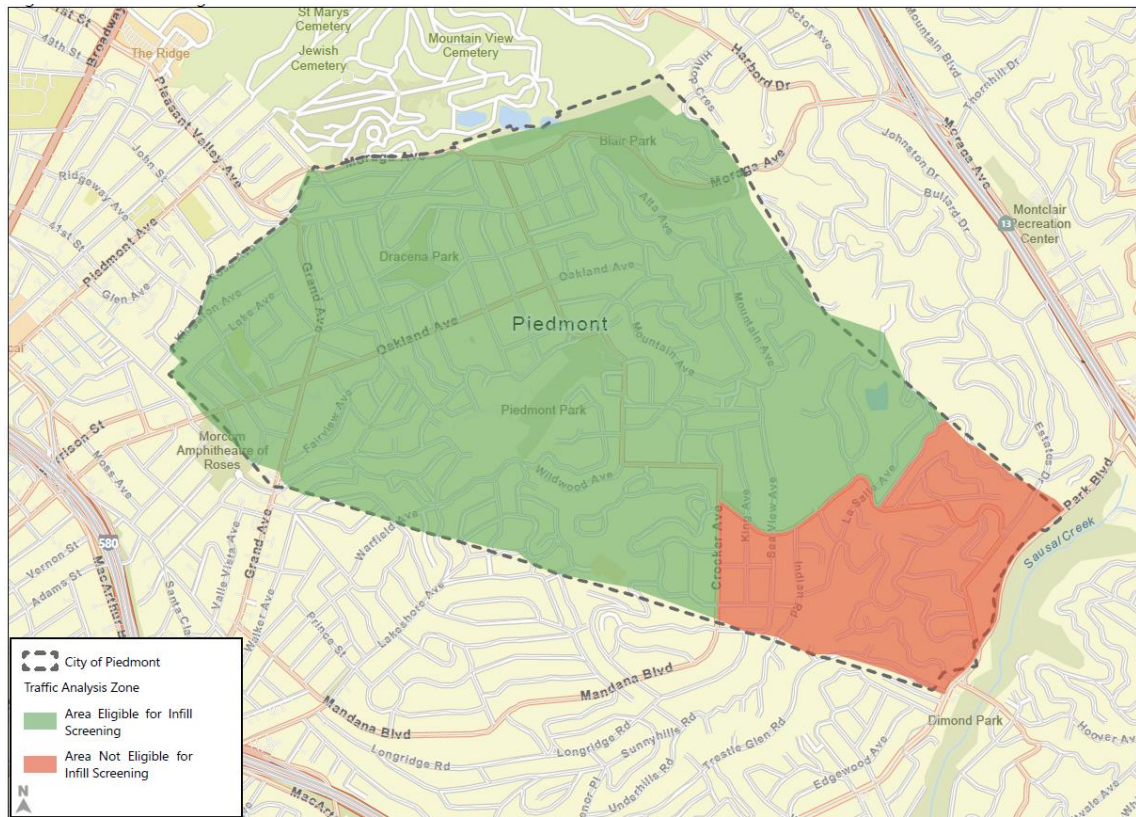
This Draft EIR included using VMT data from the Alameda CTC Model, which includes 6 TAZs in the city of Piedmont. Based on the results of the Alameda CTC Model, and applying the CAPCOA Handbook's increasing residential densities strategy, residential developments with a density of 20 units per acre or higher in 5 of the 6 TAZs in the city of Piedmont would have a home-based VMT per resident below the threshold of significance (i.e., 15% below the Bay Area Regional Baseline Average). Therefore, these developments would have a less-than-significant impact on VMT.

**Figure 2** from the Housing Element Draft EIR) shows the areas of the city where future housing developments with a minimum density of 20 units per acre would have a less-than-significant impact on VMT. As shown in **Figure 2**, future developments in the southeast area of the city would not meet this criterion because the baseline VMT in this area is more than 30% above the threshold of significance and increasing the development density would not reduce VMT to a less-than-significant level.

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<sup>30</sup> <https://www.piedmontishome.org/housing-element-update>

Figure 2: Areas Eligible for Infill Screening



Source:  
Fehr & Peers, 2023

### Half Moon Bay

Half Moon Bay does not have adequate model information available to develop low-VMT areas because the city is split into three zones in the countywide C/CAG Travel Demand Model, each of which generate approximately the same level of VMT. Half Moon Bay is adopting VMT thresholds that align with OPR’s recommendations to reduce VMT by 15% for residential uses compared to the citywide average. Half Moon Bay has, therefore, decided to establish an Infill screening criterion that identified urbanized parcels (per the Census definition noted in Appendix A) that are within convenient walking distance (one-half mile) of the designated Town Center that would result in a 15% reduction or greater (as shown in **Figure 3**). The substantial evidence supporting this approach includes the following:

- The minimum density of these pipeline projects and housing element sites (at least 20 dwelling units per acre) are greater than the existing neighborhood densities.
- The proximity of these sites are within walking distance to the amenities and services provided by Half Moon Bay’s Town Center.
- The fact that sites that currently don’t qualify as urbanized parcels per the Census definition noted above will qualify with the addition of the pipeline projects or housing element opportunity sites.

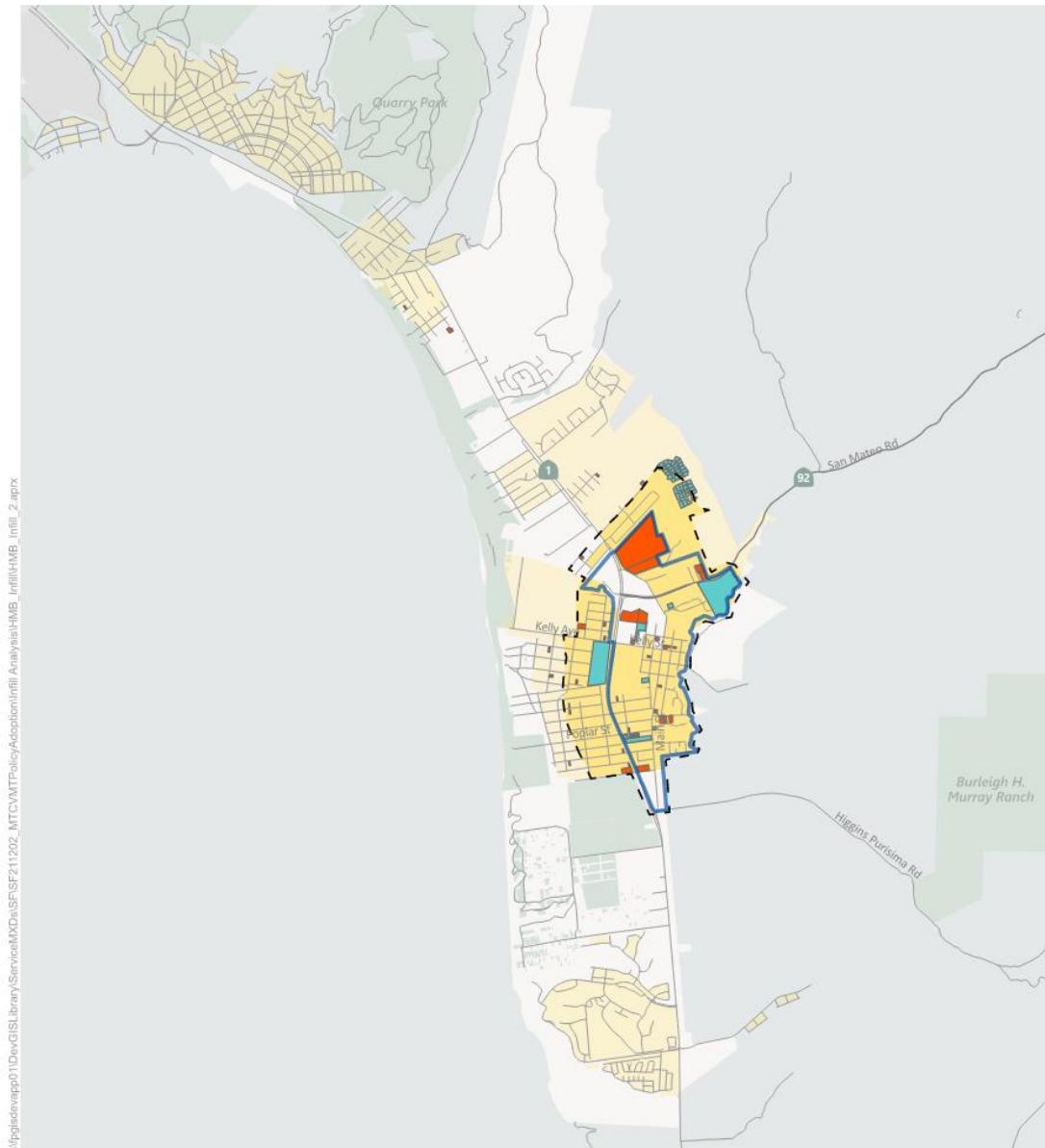
Parcels that meet these criteria can be presumed to have a less-than-significant impact on the environment given the VMT reduction potential for projects with these characteristics. Parcels that qualify as urbanized areas but are not within convenient walking distance of the Town Center could not be presumed to have a less-than-significant impact and would require a VMT analysis to demonstrate that

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the project would provide the density, proximity to amenities and services required, and if needed, affordable housing or TDM measures to reduce VMT to a less-than-significant level.

As an additional level of substantial evidence supporting the City's screening criteria is the VMT presented in VMT+ shown in **Figure 4**. This indicates that, with the existing residential densities, the areas within or adjacent to the Town Center generate less VMT than the citywide average (Town Center is 11% below and other green areas are 5% below). Therefore, the VMT reduction generated by multi-family densities (over 25% reduction as indicated in Table 1) would result in a less-than-significant impact using this data source.

Figure 3: Residential Infill Screening Map for Half Moon Bay



\\fpgisdevapp01\Dev\GIS\Library\Services\MXD\SF\SF211202\_MTC\VMTPolicyAdoption\Infill\_Analysis\HMB\_Infill\_2.aprx

--- Buffer around Town Center

▭ Town Center

▭ Pipeline Projects

▭ Housing Element Opportunity Sites

▭ Infill Parcels - Inside Town Center

(1) Infill parcels are those that meet the US Census designated minimum housing density for infill development (450 housing units per square mile).  
 (2) Per 2021 CAPCOA Handbook, residential projects with a minimum of 20 dwelling units per acre. This screening criteria may also be met by including affordability.

▭ Infill Parcels - Outside Town Center



Residential Infill Screening Map for Half Moon Bay

Figure 4: VMT+ Data for Half Moon Bay



Source: [Find Your VMT With VMT+](#)



## Appendix A: Legislative and Regulatory context

Public Resource Code 210001 underscores the role that housing serves as an overarching guiding criterion in public decisions within California (underline added for emphasis):

*“Ensure that the long-term protection of the environment, consistent with the provision of a decent home and suitable living environment for every Californian, shall be the guiding criterion in public decisions.”*

The California Department of Housing and Community Development (HCD) requires the removal of constraints to the maintenance, improvement, and development of housing, as stated in Government Code Section 65583(c)(3):

*“Address and, where appropriate and legally possible, remove governmental and nongovernmental constraints to the maintenance, improvement, and development of housing, including housing for all income levels and housing for persons with disabilities. The program shall remove constraints to, and provide reasonable accommodations for housing designed for, intended for occupancy by, or with supportive services for, persons with disabilities.”<sup>31</sup>*

The California Air Resource Board (CARB) 2022 Scoping Plan infill housing emerges as a critical component of achieving the state’s climate goals, such as those in SB 375, the Sustainable Communities and Climate Protection Act<sup>32</sup>, as stated in Appendix D “Local Actions”:

*“As discussed in Section 3.2.1, “Project Attributes for Residential Projects to Qualitatively Determine Consistency with the Scoping Plan,” development in infill and transit-oriented areas helps to reduce or avoid increasing GHG emissions.”<sup>33</sup>*

CARB’s 2022 Scoping Plan goes on to describe how, by utilizing previously developed or underutilized urban spaces, infill housing minimizes urban sprawl, reduces the need for new infrastructure, preserves open spaces, and limits the ecological footprint of development. Infill housing promotes more sustainable transportation patterns by placing residents closer to existing amenities and services or transit options, thereby requiring shorter vehicle trips and encouraging walking, bicycling, and public transport to meet one’s daily needs. Affordable housing ensures that a more diverse range of individuals can access housing close to job centers, amenities, and services, further promoting sustainable transportation choices. CARB’s 2022 Scoping Plan acknowledges that lengthy review and approval processes have historically been a leading constraint to housing production in California, recommending that local governments adopt processes to encourage and expedite housing projects, particularly for infill opportunities:

*“O’Neill et al. (2022) found that restrictive local zoning and development approval processes are the chief regulatory contributors to California’s housing crisis. Local governments have a clear opportunity to eliminate these barriers by reforming their local laws to facilitate dense development in infill areas, particularly those in high resource and/or low-VMT communities. Local jurisdictions can also choose to adopt ministerial entitlement processes for housing instead of imposing discretionary review processes (some jurisdictions currently even impose multiple layers of discretionary review) that provide project opponents opportunities to slow or stop projects, sometimes without advancing legitimate environmental goals.”<sup>34</sup>*

<sup>31</sup> [California Government Code Section 65583\(c\)\(3\)](#)

<sup>32</sup> [Sustainable Communities & Climate Protection Program](#)

<sup>33</sup> [California Air Resources Board 2022 Scoping Plan. Appendix D: Local Actions.](#)

<sup>34</sup> [California Air Resources Board 2022 Scoping Plan. Appendix D: Local Actions.](#)

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SB 743 and subsequent updates to the CEQA Guidelines Section 15064.3 eliminated automobile delay and established alternate criteria for evaluating transportation impacts under CEQA. SB 743 includes the following two legislative intent statements (underline added for emphasis):

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.*
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 GHG emissions.*

As part of the implementation of SB 743, OPR's Technical Advisory contains recommendations for the evaluation of transportation impacts through the use of VMT, as described in the *VMT Streamlining Approaches* section of this memorandum. In general, the replacement of LOS with VMT streamlined the environmental review for infill housing because it generates less VMT than traditional suburban sprawl patterns of development and because infill housing often occurs within areas that are well served by transit or that are low VMT areas. However, many suburban and rural communities have limited high-quality transit service and low-VMT communities and the available regional travel models are calibrated to existing low density suburban land use patterns and are too complex or costly for many communities to update them to reflect the characteristics of new infill multi-family housing. The limited availability of reliable technical tools can create uncertainty about when new infill housing in these communities could result in a significant impact to the environment. Therefore, lead agencies facing challenges in meeting their Regional Housing Needs Assessment (RHNA) targets due to VMT-related constraints should consider adopting local policies and VMT thresholds and procedures that account for the characteristics of infill housing.

### Infill Definition

Given that the SB 743 statute describes infill development as one of the goals, it is important to define this concept. OPR defines infill as "...building within unused and underutilized lands within existing development patterns, typically but not exclusively within urban areas."<sup>35</sup> A definition for Infill is also codified in California's Public Resources Code (PRC) §21061.3:

"Infill site" means a site in an urbanized area that meets either of the following criteria:

- (a) The site has not been previously developed for urban uses and both of the following apply:
  - (1) The site is immediately adjacent to parcels that are developed with qualified urban uses, or at least 75 percent of the perimeter of the site adjoins parcels that are developed with qualified urban uses, and the remaining 25 percent of the site adjoins parcels that have previously been developed for qualified urban uses.
  - (2) No parcel within the site has been created within the past 10 years unless the parcel was created as a result of the plan of a redevelopment agency.
- (b) The site has been previously developed for qualified urban uses.<sup>36</sup>

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<sup>35</sup> OPR Infill Development Definition

<sup>36</sup> [PRC §21061.3](#)

## VMT POLICY ADOPTION TECHNICAL ASSISTANCE MEMO TEMPLATE

Both definitions refer to development of unused land or redevelopment of land within urban areas. In addition, "urban areas" as referenced by OPR are referring to the US Census Bureau's definition of infill. Following the 2020 Census, the following documentation is provided on the definition of urban:

*The Census Bureau proposes to begin the delineation process by identifying and aggregating contiguous census blocks each having a housing unit density of at least 425 housing units per square mile. This aggregation of continuous census blocks would be known as the "initial urban area core." The initial urban area core must encompass at least 425 housing units (consistent with the requirement for at least 1,000 people in the 2010 criteria).<sup>37</sup>*

Other recent state laws, such as SB 226 and AB 1633,<sup>38</sup> have clarified that infill housing (as defined by the above) with at least 15 dwelling units per acre is categorically exempt from CEQA and, therefore, an evaluation of VMT would not be required if it is not in a very high fire hazard severity zone and located in one of the following areas:

1. One-half mile walking distance to a high-quality transit corridor,<sup>39</sup> a major transit stop,<sup>40</sup> or a bus station or ferry terminal.
2. Low vehicle travel area (15% below regional or citywide VMT).
3. In close proximity to amenities and services of six or more of the following: a supermarket or grocery store, a public park, a community center, a pharmacy or drugstore, a medical clinic or hospital, a public library, or a school that maintains a kindergarten or any of grades 1 to 12, inclusive.<sup>41</sup>

OPR recommends that areas 1 and 2 can be presumed to have a less-than-significant impact due to VMT, while area 3 is typical of infill locations in suburban and rural environments that could be presumed to have a less-than-significant impact based on substantial evidence. Essentially, area 3 identifies the characteristics of a low VMT area for new infill housing that meets the minimum state law density requirements that may not be accurately reflected within the existing baseline of regional travel demand models.

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<sup>37</sup> [Redefining Urban Areas following the 2020 Census](#)

<sup>38</sup> [https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill\\_id=202320240AB1633](https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202320240AB1633)

<sup>39</sup> "High-quality transit corridor" has the same meaning defined in subdivision (b) of Section 21155 of the Public Resources Code.

<sup>40</sup> "Major transit stop" has the same meaning as defined in Section 21064.3 of the Public Resources Code.

<sup>41</sup> The housing development project is proximal to six or more amenities pursuant to subclause (IV) of clause (vii) of PRC §65913(6)(E) as of the date of submission of the application for the project. Proximal is defined by being within one mile, or for a parcel in a rural area, within two miles of a project site.