AGENDA REPORT SUMMARY

Meeting Date: February 14, 2023

Subject: **Consider a Resolution to Adopt a Policy Implementing SB 743 and Finding the Council's Action Exempt from Review Under the California Environmental Quality Act (CEQA)** -- Consider adopting a resolution that would implement a policy establishing thresholds of significance, using Vehicle Miles Travelled (VMT), to analyze transportation impacts under CEQA, consistent with SB 743; consider a finding that the City Council's action in adopting the resolution is not subject to review under CEQA pursuant to Public Resources Code Section 21065 (definition of a CEQA "project"), CEQA Guidelines Section 15064.7 (requirements for adopting thresholds of significance), and CEQA Guidelines Section 15061(b)(3) (commonsense exemption).

Prepared by: Erik Ramakrishnan, Law Office of Erik Ramakrishnan, Contractor to City Attorney
Stephanie Williams, Planning Services Manager
Reviewed by: Jolie Houston, City Attorney; Nick Zornes, Development Services Director
Approved by: Gabriel Engeland, City Manager

Attachments:
1. Draft Resolution Adopting VMT Policy
2. Draft VMT Policy
3. Governor's Office of Planning and Research SB 743 Technical Advisory
4. Hexagon Memorandum, dated August 18, 2021

Initiated by: City Staff

Previous Council Consideration: None.

Fiscal Impact: None.

Environmental Review:
The approval of the VMT Policy is exempt from review under the California Environmental Quality Act ("CEQA") pursuant to Public Resources Code Section 21065 (definition of a CEQA "project"), CEQA Guidelines Section 15064.7 (requirements for adopting thresholds of

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significance), and CEQA Guidelines Section 15061(b)(3) (commonsense exemption), and none of the exceptions under CEQA Guidelines Section 15300.2 apply.

Background:
Historically, when new development projects were reviewed under CEQA, traffic impacts were measured in terms of Level of Service (LOS), which essentially measures wait times at traffic stops. This is because the theory under which traffic impacts were analyzed under CEQA was that sitting in traffic was considered an impact on the "human" environment. In other words, the emphasis was on inconvenience to persons. However, this approach to traffic impacts had an unintended result in that urban infill projects may have significant local traffic impacts if measured using LOS even though infill projects are considered overall to be environmentally desirable because they avoid sprawl. Sprawl forces people to commute further, which increases fossil fuel consumption, puts greater pressure on roadways, and renders public transportation less practical.

In 2013, the Legislature enacted SB 743 to address climate change and to reform CEQA. One of the provisions of the bill required all jurisdictions to drop the use of LOS in measuring traffic impacts for purposes of CEQA beginning July 1, 2020. In place of LOS, the Legislature determined to require vehicle miles travelled (VMT) to be used. VMT favors infill projects because infill projects typically place homes closer to workplaces, thereby reducing the average number of miles people in a community travel per day by automobile.

Importantly, SB 743 does not prohibit local agencies from using LOS for purposes other than CEQA analysis. Program C8 of the Circulation Element of the City's General Plan requires LOS analysis of development projects that will generate 50 or more vehicle trips per day. This allows the City to determine the effects of projects on local street operations so that significant effects can be minimized or avoided. The adoption of a VMT policy by the City Council to implement SB 743 will not affect implementation of Program C8.

SB 743 required the Governor's Office of Planning and Research (OPR) to develop guidelines for implementation of VMT as a measure of traffic impacts for purposes of CEQA. In carrying out its task, OPR faced an "urban-rural divide" over the best way to measure VMT because, depending on how VMT is measured, the switch from LOS to VMT could have forced preparation of an EIR for almost any development project in a rural area where settlement patterns are more spread out. To encourage flexibility, OPR issued guidelines allowing each lead agency to develop its own thresholds of significance for VMT. To assist lead agencies in performing this function, OPR issued a Technical Advisory, which is attached to the staff report as Attachment 3.

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Thresholds of significance are a core CEQA concept. CEQA requires lead agencies to distinguish between environmental impacts of projects that may be deemed "significant" and those that would be "less than significant." Significance is a flexible concept, and so each jurisdiction is encouraged to establish thresholds that establish tolerable limits of environmental effects for their community. Thresholds may be qualitative, but ideally they should be quantitative. An agency may adopt thresholds on a project-by-project basis, but absent unique circumstances, ad hoc thresholds are less defensible than standard thresholds of significance. There is no requirement that standard thresholds be adopted by a lead agency's legislative body, but courts tend to defer to thresholds that have been scrutinized by the public and by elected officials.

When SB 743's mandate to use VMT took effect on July 1, 2020, the Planning Director at the time adopted staff level guidelines for measuring traffic impacts using VMT for purposes of CEQA. The intent was to obtain an analysis from a transportation consultant to assist in developing a more permanent policy that eventually would be brought to the City Council for its review and approval. A draft policy was prepared by staff, which was considered in study sessions by the City Council (May 11, 2020), the Planning Commission (May 20, 2020, and October 7,2021), and the Complete Streets Commission (May 11, 2020, March 31, 2021, and August 24, 2021). In August 2021, the analysis attached to the staff report as Attachment 4 was obtained from Hexagon Transportation Consultants, Inc., which generally reflects the approach outlined in OPR's Technical Advisory, but which also incorporates feedback received at public meetings.

Due to staff shortages and turnover and other priorities, especially the Housing Element Update, efforts to bring forward a formal VMT policy for the City Council's approval were delayed beginning in October 2021. More recently, the City Manager directed the City Attorney to work with the Planning Division to finalize the process. Pending before your Council this evening is a resolution that would adopt staff's current recommendation. The proposed policy largely reflects the draft policy most recently considered by the Planning Commission in October 2021, but it incorporates changes recommended by current planning staff. These changes represent staff's *considered* opinions based on their experience in implementing SB 743 since July 1, 2020.

Analysis:
The key components of the proposed policy are as follows:

(1) The policy identifies projects that do not require screening for VMT impacts because they can be presumed not to have a significant impact on traffic. The identification of such projects is generally consistent with OPR guidance, and include small projects, local serving retail and public services (which are intended to put people closer to services, and therefore reduce overall VMT), affordable housing, projects proximate to transit, projects

that will reduce VMT over existing baseline conditions, and certain projects that encourage multimodal transportation alternatives.

(2) "Map-based" screening, as recommended by OPR, is also included. This method of screening involves the use of transportation heat maps prepared by the Santa Clara Valley Transportation Authority, which compare VMT in various parts of the community to average VMT, measured both locally and regionally. Projects located in areas with existing VMT at least 15 percent below average are presumed not to have a significant effect on traffic and therefore should also be screened out.

(3) If a project is not screened out, then its project-level per capita VMT will have to be calculated. The policy sets forth thresholds for various land use types to determine whether projects' individually calculated VMT are significant for purposes of CEQA. Consistent with the map-based screening approach, these thresholds generally treat projects that will result in VMT at least 15 percent below average as not having a significant effect on the environment.

(4) For projects deemed to have a significant impact on traffic, the policy describes how impacts can be mitigated below the level of significance. Options include modifying a project, implementing a transportation demand management (TDM) program to reduce vehicle trips, fee-based mitigation, or providing public improvements that will reduce vehicle trips.

(5) Finally, the policy exempts projects already being reviewed under the City's existing staff-level VMT policy, includes general implementation provisions, and authorizes the Planning Director to interpret any ambiguities in the policy.

As indicated above, the current draft policy differs from the prior draft regarding use of VMT thresholds of significance using local per capita averages for both residential and non-residential projects. To understand the differences, please refer to the following table:

Area	Average Per Capita Residential VMT in Miles (2015)	Average Per Capita Non-Residential VMT in Miles (2015)
Bay Area	13.95	15.33
Santa Clara County	13.33	16.64
Los Altos	12.22	19.07

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State law allows lead agencies to set VMT thresholds of significance based either on local or regional per capita averages. As can be seen from the data in the table above, average per capita VMT for residential projects in Los Altos is somewhat below county and regional levels, but average non-residential VMT is significantly greater than county and regional levels. This suggests that those who live in Los Altos generally live closer to their workplaces than individuals in other communities in the region, but that many individuals who work in Los Altos do not live in or near the City, possibly because they cannot afford to do so. We can assume then that increased housing production, consistent with the City's obligations to meet its RHNA targets, will reduce VMT by making it possible for more people who work in or near the City to live here. On the other hand, since people who live in the City generally work closer to home than average for the region, it also behooves the City in the interest of reducing VMT to retain the City's employment lands.

Consistent with feedback received by the consultant during study sessions, the transportation consultant's report proposes using local VMT as the basis for thresholds of significance for both residential and non-residential projects because this is the more "stringent" standard. But that is only true of residential development and using a more stringent standard is not necessarily a net benefit. If people who work in the City can afford to live in the City, then they will commute less, contributing to an overall lower VMT for the region. If a more stringent standard is used for housing, then more housing development projects will be subjected to additional requirements under CEQA, which may discourage housing development. This would have the unintended consequence of acting as a constraint on new housing development. Thus, there is merit in using a regional standard for housing which is proposed in the current draft of the policy. Additionally, if a regional standard is used for non-residential development, that will conversely discourage such commercial development, even though the City has an interest in preserving its employment lands. Thus, there is merit in using a local standard for non-residential development, which staff recommends in the current draft of the policy and is the same as the previous draft.

Another major difference in the current draft policy from discussions in the transportation consultant's report is that the transportation consultant's report proposes using 50 daily vehicle trips as the threshold for small projects, whereas OPR recommends using 110 trips. It appears from the analysis at page 4 of the report that this proposal was largely informed by community comment, but staff does not see merit in subjecting small projects to increased scrutiny under CEQA beyond that recommended by state agencies with appropriate expertise. Note, however, that as indicated above in the discussion about LOS, development projects generating 50 or more daily trips will still be subject to transportation analysis to be consistent with other City policies.

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A final distinction is that the transportation's consultant report assumed that the City was intending to adopt a city-wide TDM requirement for most new development projects. This, however, is not recommended because legal counsel has advised that projects cannot be required to mitigate for impacts they will not have. However, TDM programs may be implemented for individual projects to reduce their VMT when they are exceeding the VMT threshold.

Staff Recommendation: Adopt a Resolution to Adopt a Policy Implementing SB 743 and Finding the Council's Action Exempt from Review Under the California Environmental Quality Act (CEQA).

RESOLUTION NO. 2023-XX

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF LOS ALTOS ADOPTING A POLICY IMPLEMENTING CALIFORNIA SENATE BILL NO. 743 REGARDING TRANSPORTATION ANALYSIS UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA), AND FINDING THAT THE ADOPTION OF THIS RESOLUTION IS EXEMPT FROM REVIEW UNDER CEQA

WHEREAS, Senate Bill No. 743 (SB 743) requires the City to use Vehicle Miles Travelled (VMT) to evaluate project transportation impacts for purposes of the California Environmental Quality Act (CEQA) rather than Level of Service (LOS); and

WHEREAS, the Governor's Office of Planning and Research (OPR) CEQA Guidelines require every public agency in California to determine its own VMT thresholds of significance based on OPR guidance; and

WHEREAS, to implement OPR's guidance, staff proposes the adoption of the City policies attached hereto as **Attachment A**; and

WHEREAS, the City Council held a public hearing on ____, 2023, on the proposed policies implementing SB 743; and after considering the whole record determined the policies are consistent with SB 743; and

WHEREAS, the adoption of the thresholds of significance described in **Attachment A** is not subject to CEQA review pursuant to Public Resources Code Section 21065 (definition of a CEQA "project"), CEQA Guidelines Section 15064.7 (requirements for adopting thresholds of significance), and CEQA Guidelines Section 15061(b)(3) (commonsense exemption);

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Los Altos hereby finds that the foregoing recitals are true and correct and approves and adopts the City policies attached hereto as **Attachment A**.

I HEREBY CERTIFY that the foregoing is a true and correct copy of a Resolution passed and adopted by the City Council of the City of Los Altos at a meeting thereof on the XXth day of ____, 2023, by the following vote:

AYES:
NOES:
ABSENT:
PRESENT:

_____
Sally Meadows, MAYOR

Attest:

_____
Angel Rodriguez, CITY CLERK

ATTACHMENT A
CITY POLICY ESTABLISHING THRESHOLDS OF SIGNIFICANCE USING VEHICLE MILES TRAVELLED (VMT) TO MEASURE TRANSPORTATION IMPACTS

CEQA Project Screening Criteria

Projects shall be presumed to have a less-than-significant transportation impact if they meet any of the following screening criteria:

1. Small Projects: Any development that would generate fewer than 110 daily vehicle trips. Examples include:
    a. Single-Family residential developments with 12 units or fewer units;
    b. Multi-Family residential developments with 20 or fewer units;
    c. Office development of 10,000 sf or less; and
    d. Childcare facilities with fewer than 65 children.

2. Local-Serving Retail: Retail commercial projects comprised of stores of up to 60,000 gross square feet.

3. Local-Serving Public Facilities: Local-serving public facilities (publicly owned or controlled), excluding all private schools, high schools and middle schools. Examples of these projects include a park, branch library, community or senior center, fire station, and public elementary school.

4. Affordable Housing: Projects comprised of 100 percent affordable housing units.

5. Map-Based Screening: Residential and employment land use projects located in areas of low VMT, defined as exhibiting VMT that is 15 percent or greater below the existing average VMT. Average VMT per capita or per employee baseline values are obtained from VTA and may be amended periodically (subject to the reasonable discretion of the Community Development Director) to reflect the best available data and most relevant base year. For employment land use projects, the citywide average per capita VMT shall be used, and for residential land use projects, the regional nine-county Bay Area average per employee VMT shall be used.

6. Transit Proximity: All land -use projects located within one- half mile of a major transit stop, or a stop along a high- quality transit corridor, pursuant to State definitions for such facilities, unless any of the following factors are exhibited by the project:
    a. Floor Area Ratio (FAR) of less than 0.75;
    b. Provides more parking than required by the City Code; or
    c. Replaces affordable housing with a fewer number of affordable units.

7. Existing Uses: Redevelopment projects that replace existing VMT-generating uses and result in a net decrease in total VMT shall be presumed to cause a less than significant impact. For redevelopment projects that result in a net increase in total VMT, the screening criteria for each land use will be based on the size of the proposed development without any credit for the existing use.

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8. Transportation Projects: Transportation projects that reduce or do not increase VMT. Examples include transportation projects that enhance pedestrian, bike, or transit infrastructure, and transportation projects that maintain current infrastructure, without adding new automobile capacity.

CEQA Thresholds of Significance

For projects not screened out with a presumption of less-than-significant impact on VMT based upon the above criteria, the following thresholds of significance shall apply to the corresponding project types to determine the transportation impact level of significance:

1. Residential Land Use Projects: A proposed project exceeding a level of 15 percent below the existing regional nine-county Bay Area average VMT per capita shall be presumed to cause a significant transportation impact.

2. Office and Retail Land Use Projects: A proposed project exceeding a level of 15 percent below existing Los Altos citywide average VMT per employee shall be presumed to cause a significant transportation impact.

3. Non-Local Serving Uses: A proposed non-local serving school (e.g. private schools, junior high schools, high schools, magnate schools, and charter schools), congregate care facilities/ assisted living, medical/dental office, research and development space, industrial, manufacturing, and warehouse uses should be treated as office for screening and analysis.

4. Other Uses: Religious institutions, business hotels, and athletic clubs should be treated as retail for screening and analysis.

5. Mixed-Use Projects: Each land use within a mixed-use project, shall be evaluated independently by applying the most appropriate threshold of significance from above to each land use type included in the project, given project-specific information.

6. Changing or Adding to Existing Use: Changes of use or additions to existing development that are not screened out will be analyzed based on the significance thresholds for each land use component described above.

7. Land Use Plans: For General Plan Amendments, Specific Plans or Other Area Plans, each land use component will be analyzed independently, applying the significance thresholds listed above for each land use component.

8. Transportation Projects: A net increase in VMT greater than that consistent with the Regional Sustainable Communities Strategy shall be presumed to cause a significant transportation impact.

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Mitigation of Significant Impacts

To mitigate VMT impacts, the project shall be conditioned for implementation of mitigation measures in the following categories:

1. Modify the project to reduce VMT generated by the project, such as a reduction in size, intensity, number of students, etc;
2. Implement multimodal transportation improvements to reduce VMT generated by the project such as implementing bike lanes, improving the pedestrian network, implementing traffic calming, increase transit accessibility, and improve network connectivity. These improvements require coordination with City staff and additional studies to determine feasibility. Ideally, consultants should use the City's approved plans which contain various transportation improvements to bicycle, pedestrian, and roadway as VMT mitigation.
3. Implement transportation Demand Management (TDM) measures to reduce VMT generated by the project; and/or
4. Participate in a VMT fee program and/or VMT mitigation exchange/banking program (if they exist) to reduce VMT from the project or other land uses to achieve acceptable levels.

Applicability of Policy (Pipeline Provisions)

This policy is effective immediately upon approval by the City Council (the "Effective Date"), provided that for any active project for which a draft environmental review document was published prior to the Effective Date, the policies in effect as of the publication date shall determine the transportation analysis required for the project.

Implementation, Interpretation, and Savings

The Development Services Director is authorized and instructed to adopt such rules, procedures, or forms as may be necessary or convenient to implement this policy, and to resolve any ambiguity that may arise in the application of this policy to individual circumstances. If a court of competent jurisdiction determines that any portion of this policy is invalid or unenforceable, then the court is authorized and instructed to modify the same to effectuate as closely as possible the City Council's original intent in adopting this policy.

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TECHNICAL ADVISORY

ON EVALUATING TRANSPORTATION IMPACTS IN CEQA

December 2018

Contents

A. Introduction

This technical advisory is one in a series of advisories provided by the Governor's Office of Planning and Research (OPR) as a service to professional planners, land use officials, and CEQA practitioners. OPR issues technical assistance on issues that broadly affect the practice of land use planning and the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). (Gov. Code, § 65040, subds. (g), (l), (m).) The purpose of this document is to provide advice and recommendations, which agencies and other entities may use at their discretion. This document does not alter lead agency discretion in preparing environmental documents subject to CEQA. This document should not be construed as legal advice.

Senate Bill 743 (Steinberg, 2013), which was codified in Public Resources Code section 21099, required changes to the guidelines implementing CEQA (CEQA Guidelines) (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.) regarding the analysis of transportation impacts. 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.) Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (*Id.*, subd. (b)(1); see generally, adopted CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].) To that end, in developing the criteria, OPR has proposed, and the California Natural Resources Agency (Agency) has certified and adopted, changes to the CEQA Guidelines that identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. With the California Natural Resources Agency's certification and adoption of the changes to the CEQA Guidelines, automobile delay, as measured by "level of service" and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3).)

This advisory contains technical recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures. Again, OPR provides this Technical Advisory as a resource for the public to use at their discretion. OPR is not enforcing or attempting to enforce any part of the recommendations contained herein. (Gov. Code, § 65035 ["It is not the intent of the Legislature to vest in the Office of Planning and Research any direct operating or regulatory powers over land use, public works, or other state, regional, or local projects or programs."].)

This December 2018 technical advisory is an update to the advisory it published in April 2018. OPR will continue to monitor implementation of these new provisions and may update or supplement this advisory in response to new information and advancements in modeling and methods.

B. Background

VMT and Greenhouse Gas Emissions Reduction. Senate Bill 32 (Pavley, 2016) requires California to reduce greenhouse gas (GHG) emissions 40 percent below 1990 levels by 2030, and Executive Order B-16-12 provides a target of 80 percent below 1990 emissions levels for the transportation sector by 2050. The transportation sector has three major means of reducing GHG emissions: increasing vehicle efficiency, reducing fuel carbon content, and reducing the amount of vehicle travel. The California Air Resources Board (CARB) has provided a path forward for achieving these emissions reductions from the transportation sector in its 2016 Mobile Source Strategy. CARB determined that it will not be possible to achieve the State's 2030 and post-2030 emissions goals without reducing VMT growth. Further, in its 2018 Progress Report on California's Sustainable Communities and Climate Protection Act, CARB found that despite the State meeting its 2020 climate goals, "emissions from statewide passenger vehicle travel per capita [have been] increasing and going in the wrong direction," and "California cannot meet its [long-term] climate goals without curbing growth in single-occupancy vehicle activity."[1] CARB also found that "[w]ith emissions from the transportation sector continuing to rise despite increases in fuel efficiency and decreases in the carbon content of fuel, California will not achieve the necessary greenhouse gas emissions reductions to meet mandates for 2030 and beyond without significant changes to how communities and transportation systems are planned, funded, and built."[2]

Thus, to achieve the State's long-term climate goals, California needs to reduce per capita VMT. This can occur under CEQA through VMT mitigation. Half of California's GHG emissions come from the transportation sector[3], therefore, reducing VMT is an effective climate strategy, which can also result in co-benefits.[4] Furthermore, without early VMT mitigation, the state may follow a path that meets GHG targets in the early years, but finds itself poorly positioned to meet more stringent targets later. For example, in absence of VMT analysis and mitigation in CEQA, lead agencies might rely upon verifiable offsets for GHG mitigation, ignoring the longer-term climate change impacts resulting from land use development and infrastructure investment decisions. As stated in CARB's 2017 Scoping Plan:

> "California's future climate strategy will require increased focus on integrated land use planning to support livable, transit-connected communities, and conservation of agricultural and other lands. Accommodating population and economic growth through travel- and energy-efficient land use provides GHG-efficient growth, reducing GHGs from both transportation and building energy use. GHGs can be further reduced at the project level through implementing energy-efficient construction and travel demand management approaches."[5] (*Id.* at p. 102.)

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[1] California Air Resources Board (Nov. 2018) *2018 Progress Report on California's Sustainable Communities and Climate Protection Act*, pp. 4, 5, available at https://ww2.arb.ca.gov/sites/default/files/2018-11/Final2018Report_SB150_112618_02_Report.pdf.
[2] *Id.*, p. 28.
[3] See https://ca50million.ca.gov/transportation/
[4] Fang et al. (2017) *Cutting Greenhouse Gas Emissions Is Only the Beginning: A Literature Review of the Co-Benefits of Reducing Vehicle Miles Traveled*.
[5] California Air Resources Board (Nov. 2017) *California's 2017 Climate Change Scoping Plan*, p. 102, available at https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

In light of this, the 2017 Scoping Plan describes and quantifies VMT reductions needed to achieve our long-term GHG emissions reduction goals, and specifically points to the need for statewide deployment of the VMT metric in CEQA:

> "Employing VMT as the metric of transportation impact statewide will help to ensure GHG reductions planned under SB 375 will be achieved through on-the-ground development, and will also play an important role in creating the additional GHG reductions needed beyond SB 375 across the State. Implementation of this change will rely, in part, on local land use decisions to reduce GHG emissions associated with the transportation sector, both at the project level, and in long-term plans (including general plans, climate action plans, specific plans, and transportation plans) and supporting sustainable community strategies developed under SB 375."[6]

VMT and Other Impacts to Health and Environment. VMT mitigation also creates substantial benefits (sometimes characterized as "co-benefits" to GHG reduction) in both in the near-term and the long-term. Beyond GHG emissions, increases in VMT also impact human health and the natural environment. Human health is impacted as increases in vehicle travel lead to more vehicle crashes, poorer air quality, increases in chronic diseases associated with reduced physical activity, and worse mental health. Increases in vehicle travel also negatively affect other road users, including pedestrians, cyclists, other motorists, and many transit users. The natural environment is impacted as higher VMT leads to more collisions with wildlife and fragments habitat. Additionally, development that leads to more vehicle travel also tends to consume more energy, water, and open space (including farmland and sensitive habitat). This increase in impermeable surfaces raises the flood risk and pollutant transport into waterways.[7]

VMT and Economic Growth. While it was previously believed that VMT growth was a necessary component of economic growth, data from the past two decades shows that economic growth is possible without a concomitant increase in VMT. (Figure 1.) Recent research shows that requiring development projects to mitigate LOS may actually reduce accessibility to destinations and impede economic growth.[8,9]

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[6] *Id.* at p. 76.

[7] Fang et al. (2017) *Cutting Greenhouse Gas Emissions Is Only the Beginning: A Literature Review of the Co-Benefits of Reducing Vehicle Miles Traveled*, available at https://ncst.ucdavis.edu/wp-content/uploads/2017/03/NCST-VMT-Co-Benefits-White-Paper_Fang_March-2017.pdf.

[8] Haynes et al. (Sept. 2015) *Congested Development: A Study of Traffic Delays, Access, and Economic Activity in Metropolitan Los Angeles*, available at http://www.its.ucla.edu/wp-content/uploads/sites/6/2015/11/Haynes_Congested-Development_1-Oct-2015_final.pdf.

[9] Osman et al. (Mar. 2016) *Not So Fast: A Study of Traffic Delays, Access, and Economic Activity in the San Francisco Bay Area*, available at http://www.its.ucla.edu/wp-content/uploads/sites/6/2016/08/Taylor-Not-so-Fast-04-01-2016_final.pdf.

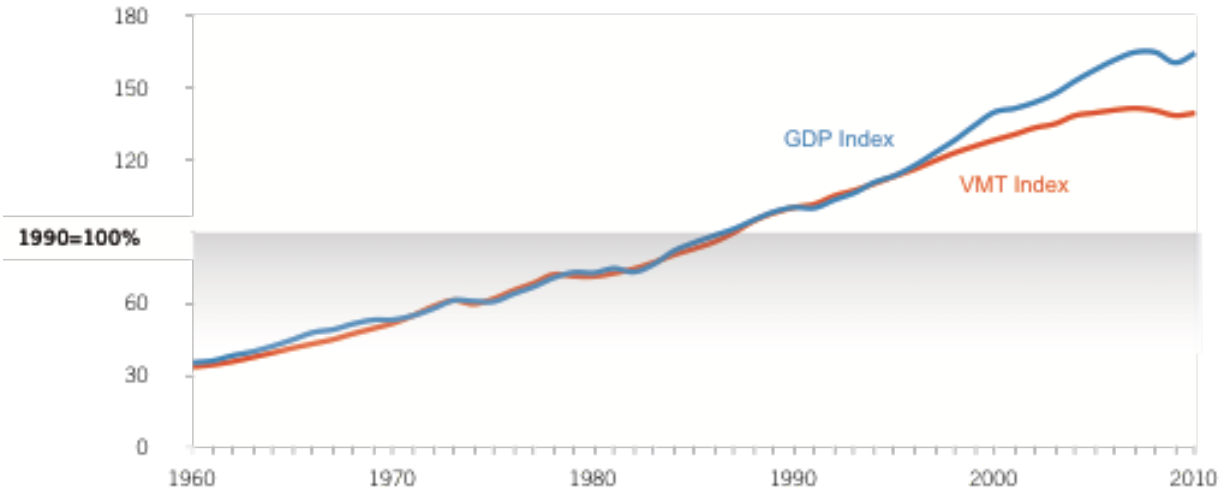

Figure 1. Kooshian and Winkelman (2011) *VMT and Gross Domestic Product (GDP), 1960-2010*.

C. Technical Considerations in Assessing Vehicle Miles Traveled

Many practitioners are familiar with accounting for VMT in connection with long-range planning, or as part of the CEQA analysis of a project's greenhouse gas emissions or energy impacts. This document provides technical information on how to assess VMT as part of a transportation impacts analysis under CEQA. Appendix 1 provides a description of which VMT to count and options on how to count it. Appendix 2 provides information on induced travel resulting from roadway capacity projects, including the mechanisms giving rise to induced travel, the research quantifying it, and information on additional approaches for assessing it.

1. Recommendations Regarding Methodology

Proposed Section 15064.3 explains that a "lead agency may use models to estimate a project's vehicle miles traveled . . . ." CEQA generally defers to lead agencies on the choice of methodology to analyze impacts. (*Santa Monica Baykeeper v. City of Malibu* (2011) 193 Cal.App.4th 1538, 1546; see *Laurel Heights Improvement Assn. v. Regents of University of California* (1988) 47 Cal.3d 376, 409 ["the issue is not whether the studies are irrefutable or whether they could have been better" … rather, the "relevant issue is only whether the studies are sufficiently credible to be considered" as part of the lead agency's overall evaluation].) This section provides suggestions to lead agencies regarding methodologies to analyze VMT associated with a project.

Vehicle Types. Proposed Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project." Here, the term "automobile" refers to on-road passenger vehicles, specifically cars and light trucks. Heavy-duty truck VMT could be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). For an apples-to-apples

comparison, vehicle types considered should be consistent across project assessment, significance thresholds, and mitigation.

Residential and Office Projects. Tour- and trip-based approaches[10] offer the best methods for assessing VMT from residential/office projects and for comparing those assessments to VMT thresholds. These approaches also offer the most straightforward methods for assessing VMT reductions from mitigation measures for residential/office projects. When available, tour-based assessment is ideal because it captures travel behavior more comprehensively. But where tour-based tools or data are not available for all components of an analysis, a trip-based assessment of VMT serves as a reasonable proxy.

Models and methodologies used to calculate thresholds, estimate project VMT, and estimate VMT reduction due to mitigation should be comparable. For example:

- A tour-based assessment of project VMT should be compared to a tour-based threshold, or a trip-based assessment to a trip-based VMT threshold.
- Where a travel demand model is used to determine thresholds, the same model should also be used to provide trip lengths as part of assessing project VMT.
- Where only trip-based estimates of VMT reduction from mitigation are available, a trip-based threshold should be used, and project VMT should be assessed in a trip-based manner.

When a trip-based method is used to analyze a residential project, the focus can be on home-based trips. Similarly, when a trip-based method is used to analyze an office project, the focus can be on home-based work trips.

When tour-based models are used to analyze an office project, either employee work tour VMT or VMT from all employee tours may be attributed to the project. This is because workplace location influences overall travel. For consistency, the significance threshold should be based on the same metric: either employee work tour VMT or VMT from all employee tours.

For office projects that feature a customer component, such as a government office that serves the public, a lead agency can analyze the customer VMT component of the project using the methodology for retail development (see below).

Retail Projects. Generally, lead agencies should analyze the effects of a retail project by assessing the change in total VMT[11] because retail projects typically re-route travel from other retail destinations. A retail project might lead to increases or decreases in VMT, depending on previously existing retail travel patterns.

[10] See Appendix 1, *Considerations About Which VMT to Count,* for a description of these approaches.
[11] See Appendix 1, *Considerations About Which VMT to Count, "*Assessing Change in Total VMT" section, for a description of this approach.

Considerations for All Projects. Lead agencies should not truncate any VMT analysis because of jurisdictional or other boundaries, for example, by failing to count the portion of a trip that falls outside the jurisdiction or by discounting the VMT from a trip that crosses a jurisdictional boundary. CEQA requires environmental analyses to reflect a "good faith effort at full disclosure." (CEQA Guidelines, § 15151.) Thus, where methodologies exist that can estimate the full extent of vehicle travel from a project, the lead agency should apply them to do so. Where those VMT effects will grow over time, analyses should consider both a project's short-term and long-term effects on VMT.

Combining land uses for VMT analysis is not recommended. Different land uses generate different amounts of VMT, so the outcome of such an analysis could depend more on the mix of uses than on their travel efficiency. As a result, it could be difficult or impossible for a lead agency to connect a significance threshold with an environmental policy objective (such as a target set by law), inhibiting the CEQA imperative of identifying a project's significant impacts and providing mitigation where feasible. Combining land uses for a VMT analysis could streamline certain mixes of uses in a manner disconnected from policy objectives or environmental outcomes. Instead, OPR recommends analyzing each use separately, or simply focusing analysis on the dominant use, and comparing each result to the appropriate threshold. Recommendations for methods of analysis and thresholds are provided below. In the analysis of each use, a mixed-use project should take credit for internal capture.

Any project that includes in its geographic bounds a portion of an existing or planned Transit Priority Area (i.e., the project is within a ½ mile of an existing or planned major transit stop or an existing stop along a high quality transit corridor) may employ VMT as its primary metric of transportation impact for the entire project. (See Pub. Resources Code, § 21099, subds. (a)(7), (b)(1).)

Cumulative Impacts. A project's cumulative impacts are based on an assessment of whether the "incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects." (Pub. Resources Code, § 21083, subd. (b)(2); see CEQA Guidelines, § 15064, subd. (h)(1).) When using an absolute VMT metric, i.e., total VMT (as recommended below for retail and transportation projects), analyzing the combined impacts for a cumulative impacts analysis may be appropriate. However, metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa. This is similar to the analysis typically conducted for greenhouse gas emissions, air quality impacts, and impacts that utilize plan compliance as a threshold of significance. (See *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal.4th 204, 219, 223; CEQA Guidelines, § 15064, subd. (h)(3).)

D. General Principles to Guide Consideration of VMT

SB 743 directs OPR to establish specific "criteria for determining the significance of transportation impacts of projects[.]" (Pub. Resources Code, § 21099, subd. (b)(1).) In establishing this criterion, OPR was guided by the general principles contained within CEQA, the CEQA Guidelines, and applicable case law.

To assist in the determination of significance, many lead agencies rely on "thresholds of significance." The CEQA Guidelines define a "threshold of significance" to mean "an identifiable **quantitative, qualitative[12] 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 which means the effect ***normally*** will be determined to be less than significant." (CEQA Guidelines, § 15064.7, subd. (a) (emphasis added).) Lead agencies have discretion to develop and adopt their own, or rely on thresholds recommended by other agencies, "provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." (*Id*. at subd. (c); *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068.) Substantial evidence means "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." (*Id*. at § 15384 (emphasis added); *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th 1099, 1108-1109.)

Additionally, the analysis leading to the determination of significance need not be perfect. The CEQA Guidelines describe the standard for adequacy of environmental analyses:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to **make a decision which intelligently takes account of environmental consequences**. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is **reasonably feasible**. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The **courts have looked not for perfection** but for **adequacy**, **completeness**, and a **good faith effort** at full disclosure.

(CEQA Guidelines, § 15151 (emphasis added).)

These general principles guide OPR's recommendations regarding thresholds of significance for VMT set forth below.

[12] Generally, qualitative analyses should only be conducted when methods do not exist for undertaking a quantitative analysis.

E. Recommendations Regarding Significance Thresholds

As noted above, lead agencies have the discretion to set or apply their own thresholds of significance. (*Center for Biological Diversity v. California Dept. of Fish & Wildlife* (2015) 62 Cal.4th 204, 218-223 [lead agency had discretion to use compliance with AB 32's emissions goals as a significance threshold]; *Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th at p. 1068.) However, Section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote: (1) reduction of greenhouse gas emissions; (2) development of multimodal transportation networks; and (3) a diversity of land uses. It further directed OPR to prepare and develop criteria for determining significance. (Pub. Resources Code, § 21099, subd. (b)(1).) This section provides OPR's suggested thresholds, as well as considerations for lead agencies that choose to adopt their own

The VMT metric can support the three statutory goals: "the reduction of greenhouse gas emissions, the development of multimodal transportation networks, ***and*** a diversity of land uses." (Pub. Resources Code, § 21099, subd. (b)(1), emphasis added.) However, in order for it to promote and support all three, lead agencies should select a significance threshold that aligns with state law on all three. State law concerning the development of multimodal transportation networks and diversity of land uses requires planning for and prioritizing increases in complete streets and infill development, but does not mandate a particular depth of implementation that could translate into a particular threshold of significance. Meanwhile, the State has clear quantitative targets for GHG emissions reduction set forth in law and based on scientific consensus, and the depth of VMT reduction needed to achieve those targets has been quantified. Tying VMT thresholds to GHG reduction also supports the two other statutory goals. Therefore, to ensure adequate analysis of transportation impacts, OPR recommends using quantitative VMT thresholds linked to GHG reduction targets when methods exist to do so.

Various legislative mandates and state policies establish quantitative greenhouse gas emissions reduction targets. For example:

- Assembly Bill 32 (2006) requires statewide GHG emissions reductions to 1990 levels by 2020 and continued reductions beyond 2020.

- Senate Bill 32 (2016) requires at least a 40 percent reduction in GHG emissions from 1990 levels by 2030.

- Pursuant to Senate Bill 375 (2008), the California Air Resources Board GHG emissions reduction targets for metropolitan planning organizations (MPOs) to achieve based on land use patterns and transportation systems specified in Regional Transportation Plans and Sustainable Community Strategies (RTP/SCS). Current targets for the State's largest MPOs call for a 19 percent reduction in GHG emissions from cars and light trucks from 2005 emissions levels by 2035.

- Executive Order B-30-15 (2015) sets a GHG emissions reduction target of 40 percent below 1990 levels by 2030.

- Executive Order S-3-05 (2005) sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050.

- Executive Order B-16-12 (2012) specifies a GHG emissions reduction target of 80 percent below 1990 levels by 2050 specifically for transportation.

- Executive Order B-55-18 (2018) established an additional statewide goal of achieving carbon neutrality as soon as possible, but no later than 2045, and maintaining net negative emissions thereafter. It states, "The California Air Resources Board shall work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal."

- Senate Bill 391 requires the California Transportation Plan to support 80 percent reduction in GHGs below 1990 levels by 2050.

- The *California Air Resources Board Mobile Source Strategy* (2016) describes California's strategy for containing air pollutant emissions from vehicles, and quantifies VMT growth compatible with achieving state targets.

- The California Air Resources Board's *2017 Climate Change Scoping Plan Update: The Strategy for Achieving California's 2030 Greenhouse Gas Target* describes California's strategy for containing GHG emissions from vehicles, and quantifies VMT growth compatible with achieving state targets.

Considering these various targets, the California Supreme Court observed:

> Meeting our statewide reduction goals does not preclude all new development. Rather, the Scoping Plan … assumes continued growth and depends on increased efficiency and conservation in land use and transportation from all Californians.

(*Center for Biological Diversity v. California Dept. of Fish & Wildlife*, *supra*, 62 Cal.4th at p. 220.) Indeed, the Court noted that when a lead agency uses consistency with climate goals as a way to determine significance, particularly for long-term projects, the lead agency must consider the project's effect on meeting long-term reduction goals. (*Ibid*.) And more recently, the Supreme Court stated that "CEQA requires public agencies . . . to ensure that such analysis stay in step with evolving scientific knowledge and state regulatory schemes." (*Cleveland National Forest Foundation v. San Diego Assn. of Governments* (2017) 3 Cal.5th 497, 504.)

Meeting the targets described above will require substantial reductions in existing VMT per capita to curb GHG emissions and other pollutants. But targets for overall GHG emissions reduction do not translate directly into VMT thresholds for individual projects for many reasons, including:

- Some, but not all, of the emissions reductions needed to achieve those targets could be accomplished by other measures, including increased vehicle efficiency and decreased fuel carbon content. The CARB's *First Update to the Climate Change Scoping Plan* explains:

"Achieving California's long-term criteria pollutant and GHG emissions goals will require four strategies to be employed: (1) improve vehicle efficiency and develop zero emission technologies, (2) reduce the carbon content of fuels and provide market support to get these lower-carbon fuels into the marketplace, (3) **plan and build communities to reduce vehicular GHG emissions and provide more transportation options, and (4) improve the efficiency and throughput of existing transportation systems.**"[13] CARB's *2018 Progress Report on California's Sustainable Communities and Climate Protection Act* states on page 28 that "California cannot meet its climate goals without curbing growth in single-occupancy vehicle activity." In other words, vehicle efficiency and better fuels are necessary, but insufficient, to address the GHG emissions from the transportation system. Land use patterns and transportation options also will need to change to support reductions in vehicle travel/VMT.

- New land use projects alone will not sufficiently reduce per-capita VMT to achieve those targets, nor are they expected to be the sole source of VMT reduction.

- Interactions between land use projects, and also between land use and transportation projects, existing and future, together affect VMT.

- Because location within the region is the most important determinant of VMT, in some cases, streamlining CEQA review of projects in travel efficient locations may be the most effective means of reducing VMT.

- When assessing climate impacts of some types of land use projects, use of an efficiency metric (e.g., per capita, per employee) may provide a better measure of impact than an absolute numeric threshold. (*Center for Biological Diversity*, *supra*.)

Public Resources Code section 21099 directs OPR to propose criteria for determining the significance of transportation impacts. In this Technical Advisory, OPR provides its recommendations to assist lead agencies in selecting a significance threshold that may be appropriate for their particular projects. While OPR's Technical Advisory is not binding on public agencies, CEQA allows lead agencies to "consider thresholds of significance . . . recommended by other public agencies, provided the decision to adopt those thresholds is supported by substantial evidence." (CEQA Guidelines, § 15064.7, subd. (c).) Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board quantifying the need for VMT reduction in order to meet the State's long-term climate goals, **OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold**.

Fifteen percent reductions in VMT are achievable at the project level in a variety of place types.[14]

Moreover, a fifteen percent reduction is consistent with SB 743's direction to OPR to select a threshold that will help the State achieve its climate goals. As described above, section 21099 states that the

[13] California Air Resources Board (May 2014) *First Update to the Climate Change Scoping Plan*, p. 46 (emphasis added).
[14] CAPCOA (2010) *Quantifying Greenhouse Gas Mitigation Measures*, p. 55, available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

criteria for determining significance must "promote the reduction in greenhouse gas emissions." In its document *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*[15], CARB assesses VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update assumptions that achieve climate state climate goals.

CARB finds per capita vehicle travel would need to be kept below what today's policies and plans would achieve.

CARB's assessment is based on data in the 2017 Scoping Plan Update and 2016 Mobile Source Strategy. In those documents, CARB previously examined the relationship between VMT and the state's GHG emissions reduction targets. The Scoping Plan finds:

> "While the State can do more to accelerate and incentivize these local decisions, local actions that reduce VMT are also necessary to meet transportation sector-specific goals and achieve the 2030 target under SB 32. Through developing the Scoping Plan, CARB staff is more convinced than ever that, in addition to achieving GHG reductions from cleaner fuels and vehicles, California must also reduce VMT. Stronger SB 375 GHG reduction targets will enable the State to make significant progress toward needed reductions, but alone will not provide the VMT growth reductions needed; there is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals."[16]

Note that, at present, consistency with RTP/SCSs does not necessarily lead to a less-than-significant VMT impact.[17] As the Final 2017 Scoping Plan Update states,

> VMT reductions are necessary to achieve the 2030 target and must be part of any strategy evaluated in this Plan. Stronger SB 375 GHG reduction targets will enable the State to make significant progress toward this goal, but alone will not provide all of the VMT growth reductions that will be needed. There is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals."[18]

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[15] California Air Resources Board (Jan. 2019) *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, available at https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate.

[16] California Air Resources Board (Nov. 2017) *California's 2017 Climate Change Scoping Plan*, p. 101.

[17] California Air Resources Board (Feb. 2018) *Updated Final Staff Report: Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets*, Figure 3, p. 35, available at https://www.arb.ca.gov/cc/sb375/sb375_target_update_final_staff_report_feb2018.pdf.

[18] California Air Resources Board (Nov. 2017) *California's 2017 Climate Change Scoping Plan*, p. 75.

Also, in order to capture the full effects of induced travel resulting from roadway capacity projects, an RTP/SCS would need to include an assessment of land use effects of those projects, and the effects of those land uses on VMT. (See section titled "*Estimating VMT Impacts from Transportation Projects"* below.) RTP/SCSs typically model VMT using a collaboratively-developed land use "vision" for the region's land use, rather than studying the effects on land use of the proposed transportation investments.

In summary, 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.

1. Screening Thresholds for Land Use Projects

Many agencies use "screening thresholds" to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. (See e.g., CEQA Guidelines, §§ 15063(c)(3)(C), 15128, and Appendix G.) As explained below, this technical advisory suggests that lead agencies may screen out VMT impacts using project size, maps, transit availability, and provision of affordable housing.

Screening Threshold for Small Projects

Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy (SCS) or general plan, projects that generate or attract fewer than 110 trips per day[19] generally may be assumed to cause a less-than-significant transportation impact.

Map-Based Screening for Residential and Office Projects

Residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with VMT data, for example from a travel survey or a travel demand model, can illustrate areas that are

[19] CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).) Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

currently below threshold VMT (see recommendations below). Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis.

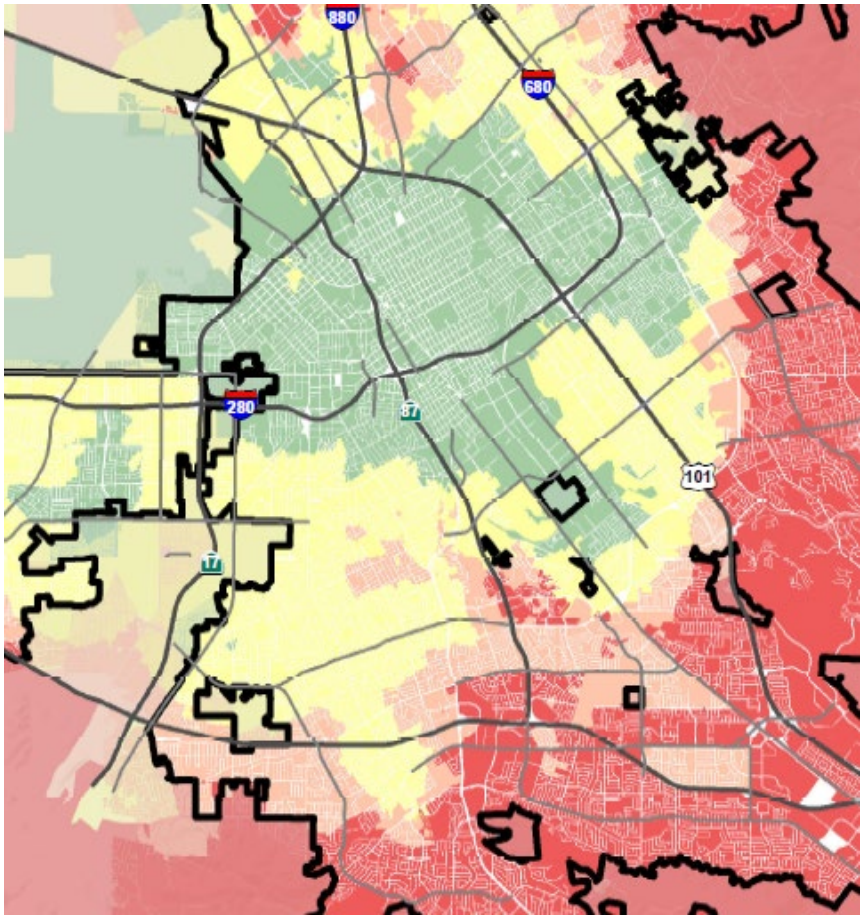

Figure 2. Example map of household VMT that could be used to delineate areas eligible to receive streamlining for VMT analysis. (Source: City of San José, Department of Transportation, draft output of City Transportation Model.)

Presumption of Less Than Significant Impact Near Transit Stations

Proposed CEQA Guideline Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop[20] or an existing stop

[20] Pub. Resources Code, § 21064.3 ("'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.").

along a high quality transit corridor[21] will have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:

- Has a Floor Area Ratio (FAR) of less than 0.75
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking)
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization)
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units

A project or plan near transit which replaces affordable residential units[22] with a smaller number of moderate- or high-income residential units may increase overall VMT because the increase in VMT of displaced residents could overwhelm the improvements in travel efficiency enjoyed by new residents.[23]

If any of these exceptions to the presumption might apply, the lead agency should conduct a detailed VMT analysis to determine whether the project would exceed VMT thresholds (see below).

Presumption of Less Than Significant Impact for Affordable Residential Development

Adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT.[24,25] Further, "… low-wage workers in particular would be more likely to choose a residential location close to their workplace, if one is available."[26] In areas where existing jobs-housing match is closer to optimal, low income housing nevertheless generates less VMT than market-

[21] Pub. Resources Code, § 21155 ("For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.").
[22] Including naturally-occurring affordable residential units.
[23] Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement,* Chapter 4, pp. 159-160, available at https://www.arb.ca.gov/research/apr/past/13-310.pdf.
[24] Karner and Benner (2016) *The convergence of social equity and environmental sustainability: Jobs-housing fit and commute distance* ("[P]olicies that advance a more equitable distribution of jobs and housing by linking the affordability of locally available housing with local wage levels are likely to be associated with reduced commuting distances").
[25] Karner and Benner (2015) *Low-wage jobs-housing fit: identifying locations of affordable housing shortages.*
[26] Karner and Benner (2015) *Low-wage jobs-housing fit: identifying locations of affordable housing shortages.*

rate housing.[27,28] Therefore, 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 percent 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.

2. Recommended Numeric Thresholds for Residential, Office, and Retail Projects

Recommended threshold for residential projects: A proposed project exceeding a level of 15 percent below existing VMT per capita may indicate a significant transportation impact. Existing VMT per capita may be measured as regional VMT per capita or as city VMT per capita. Proposed development referencing a threshold based on city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the number of units specified in the SCS for that city, and should be consistent with the SCS.

Residential development that would generate vehicle travel that is 15 or more percent below the existing residential VMT per capita, measured against the region or city, may indicate a less-than-significant transportation impact. In MPO areas, development measured against city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the SCS for that city because greater-than-planned amounts of development in areas above the region-based threshold would undermine the VMT containment needed to achieve regional targets under SB 375.

For residential projects in unincorporated county areas, the local agency can compare a residential project's VMT to (1) the region's VMT per capita, or (2) the aggregate population-weighted VMT per capita of all cities in the region. In MPO areas, development in unincorporated areas measured against aggregate city VMT per capita (rather than regional VMT per capita) should not cumulatively exceed the population or number of units specified in the SCS for that city because greater-than-planned amounts of development in areas above the regional threshold would undermine achievement of regional targets under SB 375.

[27] Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement*, available at https://www.arb.ca.gov/research/apr/past/13-310.pdf.
[28] CAPCOA (2010) *Quantifying Greenhouse Gas Mitigation Measures*, pp. 176-178, available at http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

These thresholds can be applied to either household (i.e., tour-based) VMT or home-based (i.e., trip-based) VMT assessments.[29] It is critical, however, that the agency be consistent in its VMT measurement approach throughout the analysis to maintain an "apples-to-apples" comparison. For example, if the agency uses a home-based VMT for the threshold, it should also be use home-based VMT for calculating project VMT and VMT reduction due to mitigation measures.

Recommended threshold for office projects: A proposed project exceeding a level of 15 percent below existing regional VMT per employee may indicate a significant transportation impact.

Office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact. In cases where the region is substantially larger than the geography over which most workers would be expected to live, it might be appropriate to refer to a smaller geography, such as the county, that includes the area over which nearly all workers would be expected to live.

Office VMT screening maps can be developed using tour-based data, considering either total employee VMT or employee work tour VMT. Similarly, tour-based analysis of office project VMT could consider either total employee VMT or employee work tour VMT. Where tour-based information is unavailable for threshold determination, project assessment, or assessment of mitigation, home-based work trip VMT should be used throughout all steps of the analysis to maintain an "apples-to-apples" comparison.

Recommended threshold for retail projects: A net increase in total VMT may indicate a significant transportation impact.

Because new retail development typically redistributes shopping trips rather than creating new trips,[30] estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts.

By adding retail opportunities into the urban fabric and thereby improving retail destination proximity, local-serving retail development tends to shorten trips and reduce VMT. Thus, lead agencies generally may presume such development creates a less-than-significant transportation impact. Regional-serving retail development, on the other hand, which can lead to substitution of longer trips for shorter ones, may tend to have a significant impact. Where such development decreases VMT, lead agencies should consider the impact to be less-than-significant.

Many cities and counties define local-serving and regional-serving retail in their zoning codes. Lead agencies may refer to those local definitions when available, but should also consider any project-

[29] See Appendix 1 for a description of these approaches.
[30] Lovejoy, et al. (2013) *Measuring the impacts of local land-use policies on vehicle miles of travel: The case of the first big-box store in Davis, California, The Journal of Transport and Land Use*.

specific information, such as market studies or economic impacts analyses that might bear on customers' travel behavior. Because lead agencies will best understand their own communities and the likely travel behaviors of future project users, they are likely in the best position to decide when a project will likely be local-serving. Generally, however, retail development including stores larger than 50,000 square feet might be considered regional-serving, and so lead agencies should undertake an analysis to determine whether the project might increase or decrease VMT.

Mixed-Use Projects

Lead agencies can evaluate each component of a mixed-use project independently and apply the significance threshold for each project type included (e.g., residential and retail). Alternatively, a lead agency may consider only the project's dominant use. In the analysis of each use, a project should take credit for internal capture. Combining different land uses and applying one threshold to those land uses may result in an inaccurate impact assessment.

Other Project Types

Of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types. In developing thresholds for other project types, or thresholds different from those recommended here, lead agencies should consider the purposes described in section 21099 of the Public Resources Code and regulations in the CEQA Guidelines on the development of thresholds of significance (e.g., CEQA Guidelines, § 15064.7).

Strategies and projects that decrease local VMT but increase total VMT should be avoided. Agencies should consider whether their actions encourage development in a less travel-efficient location by limiting development in travel-efficient locations.

Redevelopment Projects

Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply.

As described above, a project or plan near transit which replaces affordable[31] residential units with a smaller number of moderate- or high-income residential units may increase overall VMT, because

[31] Including naturally-occurring affordable residential units.

displaced residents' VMT may increase.[32] A lead agency should analyze VMT for such a project even if it otherwise would have been presumed less than significant. The assessment should incorporate an estimate of the aggregate VMT increase experienced by displaced residents. That additional VMT should be included in the numerator of the VMT per capita assessed for the project.

If a residential or office project leads to a net increase in VMT, then the project's VMT per capita (residential) or per employee (office) should be compared to thresholds recommended above. Per capita and per employee VMT are efficiency metrics, and, as such, apply only to the existing project without regard to the VMT generated by the previously existing land use.

If the project leads to a net increase in provision of locally-serving retail, transportation impacts from the retail portion of the development should be presumed to be less than significant. If the project consists of regionally-serving retail, and increases overall VMT compared to with existing uses, then the project would lead to a significant transportation impact.

RTP/SCS Consistency (All Land Use Projects)

Section 15125, subdivision (d), of the CEQA Guidelines provides that lead agencies should analyze impacts resulting from inconsistencies with regional plans, including regional transportation plans. For this reason, if a project is inconsistent with the Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS), the lead agency should evaluate whether that inconsistency indicates a significant impact on transportation. For example, a development may be inconsistent with an RTP/SCS if the development is outside the footprint of development or within an area specified as open space as shown in the SCS.

3. Recommendations Regarding Land Use Plans

As with projects, agencies should analyze VMT outcomes of land use plans across the full area over which the plan may substantively affect travel patterns, including beyond the boundary of the plan or jurisdiction's geography. And as with projects, VMT should be counted in full rather than split between origin and destination. (Emissions inventories have sometimes spit cross-boundary trips in order to sum to a regional total, but CEQA requires accounting for the full impact without truncation or discounting). Analysis of specific plans may employ the same thresholds described above for projects. A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office, or retail land uses would in aggregate exceed the respective thresholds recommended above. Where the lead agency tiers from a general plan EIR pursuant to CEQA Guidelines sections 15152 and 15166, the lead agency generally focuses on the environmental impacts that are specific to the later project and were not analyzed as significant impacts in the prior EIR. (Pub. Resources Code, § 21068.5; Guidelines, § 15152, subd. (a).) Thus, in analyzing the later project, the lead agency

[32] Chapple et al. (2017) *Developing a New Methodology for Analyzing Potential Displacement,* Chapter 4, pp. 159-160, available at https://www.arb.ca.gov/research/apr/past/13-310.pdf.

would focus on the VMT impacts that were not adequately addressed in the prior EIR. In the tiered document, the lead agency should continue to apply the thresholds recommended above.

Thresholds for plans in non-MPO areas may be determined on a case-by-case basis.

4. Other Considerations

Rural Projects Outside of MPOs

In rural areas of non-MPO counties (i.e., areas not near established or incorporated cities or towns), fewer options may be available for reducing VMT, and significance thresholds may be best determined on a case-by-case basis. Note, however, that clustered small towns and small town main streets may have substantial VMT benefits compared to isolated rural development, similar to the transit oriented development described above.

Impacts to Transit

Because criteria for determining the significance of transportation impacts must promote "the development of multimodal transportation networks" pursuant to Public Resources Code section 21099, subd. (b)(1), lead agencies should consider project impacts to transit systems and bicycle and pedestrian networks. For example, a project that blocks access to a transit stop or blocks a transit route itself may interfere with transit functions. Lead agencies should consult with transit agencies as early as possible in the development process, particularly for projects that are located within one half mile of transit stops.

When evaluating impacts to multimodal transportation networks, lead agencies generally should not treat the addition of new transit users as an adverse impact. An infill development may add riders to transit systems and the additional boarding and alighting may slow transit vehicles, but it also adds destinations, improving proximity and accessibility. Such development also improves regional vehicle flow by adding less vehicle travel onto the regional network.

Increased demand throughout a region may, however, cause a cumulative impact by requiring new or additional transit infrastructure. Such impacts may be adequately addressed through a fee program that fairly allocates the cost of improvements not just to projects that happen to locate near transit, but rather across a region to all projects that impose burdens on the entire transportation system, since transit can broadly improve the function of the transportation system.

F. Considering the Effects of Transportation Projects on Vehicle Travel

Many transportation projects change travel patterns. A transportation project which leads to additional vehicle travel on the roadway network, commonly referred to as "induced vehicle travel," would need to quantify the amount of additional vehicle travel in order to assess air quality impacts, greenhouse gas emissions impacts, energy impacts, and noise impacts. Transportation projects also are required to

examine induced growth impacts under CEQA. (See generally, Pub. Resources Code, §§ 21065 [defining "project" under CEQA as an activity as causing either a direct or reasonably foreseeable indirect physical change], 21065.3 [defining "project-specific effect" to mean all direct or indirect environmental effects], 21100, subd. (b) [required contents of an EIR].) For any project that increases vehicle travel, explicit assessment and quantitative reporting of the amount of additional vehicle travel should not be omitted from the document; such information may be useful and necessary for a full understanding of a project's environmental impacts. (See Pub. Resources Code, §§ 21000, 21001, 21001.1, 21002, 21002.1 [discussing the policies of CEQA].) 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. When the lead agency uses another metric to analyze the transportation impacts of a roadway project, changes in amount of vehicle travel added to the roadway network should still be analyzed and reported.[33]

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. (See, e.g., *California Clean Energy Com. v. City of Woodland* (2014) 225 Cal.App.4th 173, 210 [EIR failed to consider project's transportation energy impacts]; *Ukiah Citizens for Safety First v. City of Ukiah* (2016) 248 Cal.App.4th 256, 266.) Appendix 2 describes in detail the causes of induced vehicle travel, the robust empirical evidence of induced vehicle travel, and how models and research can be used in conjunction to quantitatively assess induced vehicle travel with reasonable accuracy.

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. Project types that would likely lead to a measurable and substantial increase in vehicle travel generally include:

- Addition of through lanes on existing or new highways, including general purpose lanes, HOV lanes, peak period lanes, auxiliary lanes, or lanes through grade-separated interchanges

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

[33] See, e.g., California Department of Transportation (2006) *Guidance for Preparers of Growth-related, Indirect Impact Analyses*, available at http://www.dot.ca.gov/ser/Growth-related_IndirectImpactAnalysis/GRI_guidance06May_files/gri_guidance.pdf.

- 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
- 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

1. Recommended Significance Threshold for Transportation Projects

As noted in Section 15064.3 of the CEQA Guidelines, lead agencies for roadway capacity projects have discretion, consistent with CEQA and planning requirements, to choose which metric to use to evaluate transportation impacts. This section recommends considerations for evaluating impacts using vehicle miles traveled. Lead agencies have discretion to choose a threshold of significance for transportation projects as they do for other types of projects. As explained above, Public Resources Code section 21099, subdivision (b)(1), provides that criteria for determining the significance of transportation impacts must promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. (*Id.*; see generally, adopted CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].) With those goals in mind, OPR prepared and the Agency adopted an appropriate transportation metric.

Whether adopting a threshold of significance, or evaluating transportation impacts on a case-by-case basis, a lead agency should ensure that the analysis addresses:

- Direct, indirect and cumulative effects of the transportation project (CEQA Guidelines, § 15064, subds. (d), (h))
- Near-term and long-term effects of the transportation project (CEQA Guidelines, §§ 15063, subd. (a)(1), 15126.2, subd. (a))
- The transportation project's consistency with state greenhouse gas reduction goals (Pub. Resources Code, § 21099)[34]
- The impact of the transportation project on the development of multimodal transportation networks (Pub. Resources Code, § 21099)
- The impact of the transportation project on the development of a diversity of land uses (Pub. Resources Code, § 21099)

The CARB Scoping Plan and the CARB Mobile Source Strategy delineate VMT levels required to achieve legally mandated GHG emissions reduction targets. A lead agency should develop a project-level threshold based on those VMT levels, and may apply the following approach:

1. Propose a fair-share allocation of those budgets to their jurisdiction (e.g., by population);

[34] The California Air Resources Board has ascertained the limits of VMT growth compatible with California containing greenhouse gas emissions to levels research shows would allow for climate stabilization. (See *The 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target* (p. 78, p. 101); *Mobile Source Strategy* (p. 37).) CARB's *Updated Final Staff Report on Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets* illustrates that the current Regional Transportation Plans and Sustainable Communities Strategies will fall short of achieving the necessary on-road transportation-related GHG emissions reductions called for in the 2017 Scoping Plan (Figure 3, p. 35). Accordingly, OPR recommends not basing GHG emissions or transportation impact analysis for a transportation project solely on consistency with an RTP/SCS.

2. Determine the amount of VMT growth likely to result from background population growth, and subtract that from their "budget";
3. Allocate their jurisdiction's share between their various VMT-increasing transportation projects, using whatever criteria the lead agency prefers.

2. Estimating VMT Impacts from Transportation Projects

CEQA requires analysis of a project's potential growth-inducing impacts. (Pub. Resources Code, § 21100, subd. (b)(5); CEQA Guidelines, § 15126.2, subd. (d).) Many agencies are familiar with the analysis of growth inducing impacts associated with water, sewer, and other infrastructure. This technical advisory addresses growth that may be expected from roadway expansion projects.

Because a roadway expansion project can induce substantial VMT, incorporating quantitative estimates of induced VMT is critical to calculating both transportation and other impacts of these projects. Induced travel also has the potential to reduce or eliminate congestion relief benefits. An accurate estimate of induced travel is needed to accurately weigh costs and benefits of a highway capacity expansion project.

The effect of a transportation project on vehicle travel should be estimated using the "change in total VMT" method described in *Appendix 1*. This means that an assessment of total VMT without the project and an assessment with the project should be made; the difference between the two is the amount of VMT attributable to the project. The assessment should cover the full area in which driving patterns are expected to change. As with other types of projects, the VMT estimation should not be truncated at a modeling or jurisdictional boundary for convenience of analysis when travel behavior is substantially affected beyond that boundary.

Transit and Active Transportation Projects

Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals contained in SB 743 by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development.

Roadway Projects

Reducing roadway capacity (for example, by removing or repurposing motor vehicle travel lanes) will generally reduce VMT and therefore is presumed to cause a less-than-significant impact on transportation. Generally, no transportation analysis is needed for such projects.

Building new roadways, adding roadway capacity in congested areas, or adding roadway capacity to areas where congestion is expected in the future, typically induces additional vehicle travel. For the types of projects previously indicated as likely to lead to additional vehicle travel, an estimate should be made of the change in vehicle travel resulting from the project.

For projects that increase roadway capacity, lead agencies can evaluate induced travel quantitatively by applying the results of existing studies that examine the magnitude of the increase of VMT resulting from a given increase in lane miles. These studies estimate the percent change in VMT for every percent change in miles to the roadway system (i.e., "elasticity").[35] Given that lead agencies have discretion in choosing their methodology, and the studies on induced travel reveal a range of elasticities, lead agencies may appropriately apply professional judgment in studying the transportation effects of a particular project. The most recent major study, estimates an elasticity of 1.0, meaning that every percent change in lane miles results in a one percent increase in VMT.[36]

To estimate VMT impacts from roadway expansion projects:

1. Determine the total lane-miles over an area that fully captures travel behavior changes resulting from the project (generally the region, but for projects affecting interregional travel look at all affected regions).
2. Determine the percent change in total lane miles that will result from the project.
3. Determine the total existing VMT over that same area.
4. Multiply the percent increase in lane miles by the existing VMT, and then multiply that by the elasticity from the induced travel literature:

[% increase in lane miles] x [existing VMT] x [elasticity] = [VMT resulting from the project]

A National Center for Sustainable Transportation tool can be used to apply this method: https://ncst.ucdavis.edu/research/tools

This method would not be suitable for rural (non-MPO) locations in the state which are neither congested nor projected to become congested. It also may not be suitable for a new road that provides new connectivity across a barrier (e.g., a bridge across a river) if it would be expected to substantially

[35] See U.C. Davis, Institute for Transportation Studies (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*; Boarnet and Handy (Sept. 2014) *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions*, California Air Resources Board Policy Brief, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf.
[36] See Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at http://www.nber.org/papers/w15376.

shorten existing trips. If it is likely to be substantial, the trips-shortening effect should be examined explicitly.

The effects of roadway capacity on vehicle travel can also be applied at a programmatic level. For example, in a regional planning process the lead agency can use that program-level analysis to streamline later project-level analysis. (See CEQA Guidelines, § 15168.) A program-level analysis of VMT should include effects of the program on land use patterns, and the VMT that results from those land use effects. In order for a program-level document to adequately analyze potential induced demand from a project or program of roadway capacity expansion, lead agencies cannot assume a fixed land use pattern (i.e., a land use pattern that does not vary in response to the provision of roadway capacity). A proper analysis should account for land use investment and development pattern changes that react in a reasonable manner to changes in accessibility created by transportation infrastructure investments (whether at the project or program level).

Mitigation and Alternatives

Induced VMT has the potential to reduce or eliminate congestion relief benefits, increase VMT, and increase other environmental impacts that result from vehicle travel.[37] If those effects are significant, the lead agency will need to consider mitigation or alternatives. In the context of increased travel that is induced by capacity increases, appropriate mitigation and alternatives that a lead agency might consider include the following:

- Tolling new lanes to encourage carpools and fund transit improvements
- Converting existing general purpose lanes to HOV or HOT lanes
- Implementing or funding off-site travel demand management
- Implementing Intelligent Transportation Systems (ITS) strategies to improve passenger throughput on existing lanes

Tolling and other management strategies can have the additional benefit of preventing congestion and maintaining free-flow conditions, conferring substantial benefits to road users as discussed above.

G. Analyzing Other Impacts Related to Transportation

While requiring a change in the methodology of assessing transportation impacts, Public Resources Code section 21099 notes that this change "does not relieve a public agency of the requirement to analyze a project's potentially significant transportation impacts related to air quality, noise, safety, or any other impact associated with transportation." OPR expects that lead agencies will continue to

[37] See National Center for Sustainable Transportation (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*, available at http://www.dot.ca.gov/newtech/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf; see Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at http://www.nber.org/papers/w15376.

address mobile source emissions in the air quality and noise sections of an environmental document and the corresponding studies that support the analysis in those sections. Lead agencies should continue to address environmental impacts of a proposed project pursuant to CEQA's requirements, using a format that is appropriate for their particular project.

Because safety concerns result from many different factors, they are best addressed at a programmatic level (i.e., in a general plan or regional transportation plan) in cooperation with local governments, metropolitan planning organizations, and, where the state highway system is involved, the California Department of Transportation. In most cases, such an analysis would not be appropriate on a project-by-project basis. Increases in traffic volumes at a particular location resulting from a project typically cannot be estimated with sufficient accuracy or precision to provide useful information for an analysis of safety concerns. Moreover, an array of factors affect travel demand (e.g., strength of the local economy, price of gasoline), causing substantial additional uncertainty. Appendix B of OPR's General Plan Guidelines summarizes research which could be used to guide a programmatic analysis under CEQA. Lead agencies should note that automobile congestion or delay does not constitute a significant environmental impact (Pub. Resources Code, §21099(b)(2)), and safety should not be used as a proxy for road capacity.

H. VMT Mitigation and Alternatives

When a lead agency identifies a significant impact, it must identify feasible mitigation measures that could avoid or substantially reduce that impact. (Pub. Resources Code, § 21002.1, subd. (a).) Additionally, CEQA requires that an environmental impact report identify feasible alternatives that could avoid or substantially reduce a project's significant environmental impacts.

Indeed, the California Court of Appeal recently held that a long-term regional transportation plan was deficient for failing to discuss an alternative which could significantly reduce total vehicle miles traveled. In *Cleveland National Forest Foundation v. San Diego Association of Governments, et al.* (2017) 17 Cal.App.5th 413, the court found that omission "inexplicable" given the lead agency's "acknowledgment in its Climate Action Strategy that the state's efforts to reduce greenhouse gas emissions from on-road transportation will not succeed if the amount of driving, or vehicle miles traveled, is not significantly reduced." (*Cleveland National Forest Foundation*, *supra*, 17 Cal.App.5th at p. 436.) Additionally, the court noted that the project alternatives focused primarily on congestion relief even though "the [regional] transportation plan is a long-term and congestion relief is not necessarily an effective long-term strategy." (*Id.* at p. 437.) The court concluded its discussion of the alternatives analysis by stating: "Given the acknowledged long-term drawbacks of congestion relief alternatives, there is not substantial evidence to support the EIR's exclusion of an alternative focused primarily on significantly reducing vehicle trips." (*Ibid*.)

Several examples of potential mitigation measures and alternatives to reduce VMT are described below. However, the selection of particular mitigation measures and alternatives are left to the discretion of

the lead agency, and mitigation measures may vary, depending on the proposed project and significant impacts, if any. Further, OPR expects that agencies will continue to innovate and find new ways to reduce vehicular travel.

Potential measures to reduce vehicle miles traveled include, but are not limited to:

- Improve or increase access to transit.
- Increase access to common goods and services, such as groceries, schools, and daycare.
- Incorporate affordable housing into the project.
- Incorporate neighborhood electric vehicle network.
- Orient the project toward transit, bicycle and pedestrian facilities.
- Improve pedestrian or bicycle networks, or transit service.
- Provide traffic calming.
- Provide bicycle parking.
- Limit or eliminate parking supply.
- Unbundle parking costs.
- Provide parking cash-out programs.
- Implement roadway pricing.
- Implement or provide access to a commute reduction program.
- Provide car-sharing, bike sharing, and ride-sharing programs.
- Provide transit passes.
- Shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services.
- Providing telework options.
- Providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle.
- Providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms.
- Providing employee transportation coordinators at employment sites.
- Providing a guaranteed ride home service to users of non-auto modes.

Notably, because VMT is largely a regional impact, regional VMT-reduction programs may be an appropriate form of mitigation. In lieu fees have been found to be valid mitigation where there is both a commitment to pay fees and evidence that mitigation will actually occur. (*Save Our Peninsula Committee v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 140-141; *Gentry v. City of Murrieta* (1995) 36 Cal.App.4th 1359; *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 727–728.) Fee programs are particularly useful to address cumulative impacts. (CEQA Guidelines, § 15130, subd. (a)(3) [a "project's incremental contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact"].) The mitigation program must undergo CEQA evaluation, either on the program as a whole, or the in-lieu fees or other mitigation must be evaluated

on a project-specific basis. (*California Native Plant Society v. County of El Dorado* (2009) 170 Cal.App.4th 1026.) That CEQA evaluation could be part of a larger program, such as a regional transportation plan, analyzed in a Program EIR. (CEQA Guidelines, § 15168.)

Examples of project alternatives that may reduce vehicle miles traveled include, but are not limited to:

- Locate the project in an area of the region that already exhibits low VMT.
- Locate the project near transit.
- Increase project density.
- Increase the mix of uses within the project or within the project's surroundings.
- Increase connectivity and/or intersection density on the project site.
- Deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes.

Appendix 1. Considerations About Which VMT to Count

Consistent with the obligation to make a good faith effort to disclose the environmental consequences of a project, lead agencies have discretion to choose the most appropriate methodology to evaluate project impacts.[38] A lead agency can evaluate a project's effect on VMT in numerous ways. The purpose of this document is to provide technical considerations in determining which methodology may be most useful for various project types.

Background on Estimating Vehicle Miles Traveled

Before discussing specific methodological recommendations, this section provides a brief overview of modeling and counting VMT, including some key terminology.

Here is an illustrative example of some methods of estimating vehicle miles traveled. Consider the following hypothetical travel day (all by automobile):

1. Residence to Coffee Shop
2. Coffee Shop to Work
3. Work to Sandwich Shop
4. Sandwich Shop to Work
5. Work to Residence
6. Residence to Store
7. Store to Residence

Trip-based assessment of a project's effect on travel behavior counts VMT from individual trips to and from the project. It is the most basic, and traditionally the most common, method of counting VMT. A trip-based VMT assessment of the residence in the above example would consider segments 1, 5, 6 and 7. For residential projects, the sum of home-based trips is called *home-based* VMT.

A *tour-based* assessment counts the entire home-back-to-home tour that includes the project. A tour-based VMT assessment of the residence in the above example would consider segments 1, 2, 3, 4, and 5 in one tour, and 6 and 7 in a second tour. A tour-based assessment of the workplace would include segments 1, 2, 3, 4, and 5. Together, all tours comprise *household* VMT.

[38] The California Supreme Court has explained that when an agency has prepared an environmental impact report:

> [T]he issue is not whether the [lead agency's] studies are irrefutable or whether they could have been better. The relevant issue is only whether the studies are sufficiently credible to be considered as part of the total evidence that supports the [lead agency's] finding[.]

(*Laurel Heights Improvement Assn. v. Regents of the University of California* (1988) 47 Cal.3d 376, 409; see also *Eureka Citizens for Responsible Gov't v. City of Eureka* (2007) 147 Cal.App.4th 357, 372.)

Both trip- and tour-based assessments can be used as measures of transportation efficiency, using denominators such as per capita, per employee, or per person-trip.

Trip- and Tour-based Assessment of VMT

As illustrated above, a tour-based assessment of VMT is a more complete characterization of a project's effect on VMT. In many cases, a project affects travel behavior beyond the first destination. The location and characteristics of the home and workplace will often be the main drivers of VMT. For example, a residential or office development located near high quality transit will likely lead to some commute trips utilizing transit, affecting mode choice on the rest of the tour.

Characteristics of an office project can also affect an employee's VMT beyond the work tour. For example, a workplace located at the urban periphery, far from transit, can require an employee to own a car, which in turn affects the entirety of an employee's travel behavior and VMT. For this reason, when estimating the effect of an office development on VMT, it may be appropriate to consider total employee VMT if data and tools, such as tour-based models, are available. This is consistent with CEQA's requirement to evaluate both direct and *indirect* effects of a project. (See CEQA Guidelines, § 15064, subd. (d)(2).)

Assessing Change in Total VMT

A third method, estimating the *change in total VMT* with and without the project, can evaluate whether a project is likely to divert existing trips, and what the effect of those diversions will be on total VMT. This method answers the question, "What is the net effect of the project on area VMT?" As an illustration, assessing the total change in VMT for a grocery store built in a food desert that diverts trips from more distant stores could reveal a net VMT reduction. The analysis should address the full area over which the project affects travel behavior, even if the effect on travel behavior crosses political boundaries.

Using Models to Estimate VMT

Travel demand models, sketch models, spreadsheet models, research, and data can all be used to calculate and estimate VMT (see Appendix F of the preliminary discussion draft). To the extent possible, lead agencies should choose models that have sensitivity to features of the project that affect VMT. Those tools and resources can also assist in establishing thresholds of significance and estimating VMT reduction attributable to mitigation measures and project alternatives. When using models and tools for those various purposes, agencies should use comparable data and methods, in order to set up an "apples-to-apples" comparison between thresholds, VMT estimates, and VMT mitigation estimates.

Models can work together. For example, agencies can use travel demand models or survey data to estimate existing trip lengths and input those into sketch models such as CalEEMod to achieve more

accurate results. Whenever possible, agencies should input localized trip lengths into a sketch model to tailor the analysis to the project location. However, in doing so, agencies should be careful to avoid double counting if the sketch model includes other inputs or toggles that are proxies for trip length (e.g., distance to city center). Generally, if an agency changes any sketch model defaults, it should record and report those changes for transparency of analysis. Again, trip length data should come from the same source as data used to calculate thresholds to be sure of an "apples-to-apples" comparison.

Additional background information regarding travel demand models is available in the California Transportation Commission's "2010 Regional Transportation Plan Guidelines," beginning at page 35.

Appendix 2. Induced Travel: Mechanisms, Research, and Additional Assessment Approaches

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.

Evidence of Induced Vehicle Travel. A large number of peer reviewed studies[39] have demonstrated a causal link between highway capacity increases and VMT increases. Many provide quantitative estimates of the magnitude of the induced VMT phenomenon. Collectively, they provide high quality evidence of the existence and magnitude of the induced travel effect.

[39] See, e.g., Boarnet and Handy (Sept. 2014) Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions, California Air Resources Board Policy Brief, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf; National Center for Sustainable Transportation (Oct. 2015) *Increasing Highway Capacity Unlikely to Relieve Traffic Congestion*, available at http://www.dot.ca.gov/research/researchreports/reports/2015/10-12-2015-NCST_Brief_InducedTravel_CS6_v3.pdf.

Most of these studies express the amount of induced vehicle travel as an "elasticity," which is a multiplier that describes the additional vehicle travel resulting from an additional lane mile of roadway capacity added. For example, an elasticity of 0.6 would signify an 0.6 percent increase in vehicle travel for every 1.0 percent increase in lane miles. Many of these studies distinguish "short run elasticity" (increase in vehicle travel in the first few years) from "long run elasticity" (increase in vehicle travel beyond the first few years). Long run elasticity is larger than short run elasticity, because as time passes, more of the components of induced vehicle travel materialize. Generally, short run elasticity can be thought of as excluding the effects of land use change, while long run elasticity includes them. Most studies find a long run elasticity between 0.6 and just over 1.0,[40] meaning that every increase in lanes miles of one percent leads to an increase in vehicle travel of 0.6 to 1.0 percent. The most recent major study finds the elasticity of vehicle travel by lanes miles added to be 1.03; in other words, each percent increase in lane miles results in a 1.03 percent increase in vehicle travel.[41] (An elasticity greater than 1.0 can occur because new lanes induce vehicle travel that spills beyond the project location.) In CEQA analysis, the long-run elasticity should be used, as it captures the full effect of the project rather than just the early-stage effect.

Quantifying Induced Vehicle Travel Using Models. Lead agencies can generally achieve the most accurate assessment of induced vehicle travel resulting from roadway capacity increasing projects by applying elasticities from the academic literature, because those estimates include vehicle travel resulting from induced land use. If a lead agency chooses to use a travel demand model, additional analysis would be needed to account for induced land use. This section describes some approaches to undertaking that additional analysis.

Proper use of a travel demand model can capture the following components of induced VMT:

- Trip length (generally increases VMT)
- Mode shift (generally shifts from other modes toward automobile use, increasing VMT)
- Route changes (can act to increase or decrease VMT)
- Newly generated trips (generally increases VMT)
    - Note that not all travel demand models have sensitivity to this factor, so an off-model estimate may be necessary if this effect could be substantial.

However, estimating long-run induced VMT also requires an estimate of the project's effects on land use. This component of the analysis is important because it has the potential to be a large component of

[40] See Boarnet and Handy (Sept. 2014) *Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions*, California Air Resources Board Policy Brief, p. 2, available at https://www.arb.ca.gov/cc/sb375/policies/hwycapacity/highway_capacity_brief.pdf.

[41] Duranton and Turner (2011) *The Fundamental Law of Road Congestion: Evidence from US cities*, available at http://www.nber.org/papers/w15376.

the overall induced travel effect. Options for estimating and incorporating the VMT effects that are caused by the subsequent land use changes include:

1. *Employ an expert panel.* An expert panel could assess changes to land use development that would likely result from the project. This assessment could then be analyzed by the travel demand model to assess effects on vehicle travel. Induced vehicle travel assessed via this approach should be verified using elasticities found in the academic literature.
2. *Adjust model results to align with the empirical research.* If the travel demand model analysis is performed without incorporating projected land use changes resulting from the project, the assessed vehicle travel should be adjusted upward to account for those land use changes. The assessed VMT after adjustment should fall within the range found in the academic literature.
3. *Employ a land use model, running it iteratively with a travel demand model.* A land use model can be used to estimate the land use effects of a roadway capacity increase, and the traffic patterns that result from the land use change can then be fed back into the travel demand model. The land use model and travel demand model can be iterated to produce an accurate result.

A project which provides new connectivity across a barrier, such as a new bridge across a river, may provide a shortened path between existing origins and destinations, thereby shortening existing trips. In rare cases, this trip-shortening effect might be substantial enough to reduce the amount of vehicle travel resulting from the project below the range found in the elasticities in the academic literature, or even lead a net reduction in vehicle travel overall. In such cases, the trip-shortening effect could be examined explicitly.

Whenever employing a travel demand model to assess induced vehicle travel, any limitation or known lack of sensitivity in the analysis that might cause substantial errors in the VMT estimate (for example, model insensitivity to one of the components of induced VMT described above) should be disclosed and characterized, and a description should be provided on how it could influence the analysis results. A discussion of the potential error or bias should be carried into analyses that rely on the VMT analysis, such as greenhouse gas emissions, air quality, energy, and noise.

HEXAGON TRANSPORTATION CONSULTANTS, INC.

Memorandum

Date: August 18, 2021

To: Mr. Guido Persicone, City of Los Altos

From: Gary Black, Michelle Hunt

Subject: Senate Bill 743: CEQA Transportation Analysis using Vehicle Miles Traveled

Senate Bill (SB) 743 is a landmark bill that changes how transportation impacts are to be analyzed under the California Environmental Quality Act (CEQA). The purpose of this memorandum is to provide an overview of the changes under SB 743, which require that all local agencies begin using Vehicle Miles Traveled as a metric to assess a projects transportation impact. This memorandum also presents the recommended VMT policy framework for the City of Los Altos and answers frequently asked questions from several recent study sessions with the Complete Streets Commission, the Planning Commission, and City Council.

Background

In 2013, Senate Bill 743 was signed by Governor Brown. SB 743 directed the State Office of Planning and Research (OPR) to develop new California Environmental Quality Act (CEQA) guidelines and to replace Level of Service (LOS) as the evaluation measure for transportation impacts under CEQA with another measure such as Vehicle Miles Traveled (VMT).

> ***FAQ #1: What is LOS?*** *Level of Service (LOS) is a qualitative measure of transportation performance at a specific location that is based on traffic congestion and the ability to maneuver. For signalized intersections, LOS is measured by the average delay experienced by motorists during peak hour traffic. LOS is measured using a grading scale from LOS A, which represents free flow conditions with minimal delay to LOS F, where the vehicle demand exceeds roadway capacity and excessive delays are the result.*
>
> ***FAQ #2: What is VMT?*** *Vehicle Miles Traveled (VMT) measures the amount of daily vehicle trip making and trip length across the entire system and is usually expressed per person.*

Rather than treating traffic congestion faced by drivers as an environmental impact, this new metric instead considers distance traveled by vehicles as the environmental impact. A reduction in VMT would promote state and local goals related to the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses and infill development that reduces the reliance on individual vehicles.

It should be noted that SB 743 does not preclude cities from retaining General Plan policies related to LOS. Furthermore, cities may continue to require transportation analyses of a project's consistency with the adopted LOS goals and/or other operational issues related to transportation. While the mitigation measures identified in the project's CEQA document will be based on VMT and not LOS, cities may require transportation improvements intended to address LOS deficiencies

through project conditions of approval. While the previous CEQA process required a city to prepare and circulate an EIR and adopt a statement of overriding considerations if a project would result in a significant unavoidable impact related to level of service, under the new guidelines, the City may grant an exception to the adopted level of service standards at its discretion.

Pertinent Plans and Policies

The new CEQA guidelines serve to implement two key state goals:

- Ensure that environmental impacts of traffic (e.g. noise, air pollution, safety) are properly addressed and mitigated, and
- Promote public health and the reduction in greenhouse gases.

The City of Los Altos' *Climate Action Plan,* adopted in 2013, sets forth a greenhouse gas emissions reduction goal of 15 percent below 2005 levels by 2020. In order to achieve the emissions reduction goal, the Plan calls for an 8 percent reduction in vehicle miles traveled with additional emissions reductions from other sources. More recently, the California Air Resources Board adopted an updated SB 375 emissions target for the San Francisco Bay Area of 19 percent below 2005 levels by 2035. The City's VMT Policy would lead to a reduction in VMT and thereby reduce vehicle emissions.

VMT Policy Framework for Land Use Development Projects

In December 2018, after a five-year process of extensive stakeholder input, the California Natural Resources Agency certified and adopted the CEQA Guidelines update package, including the Guidelines section implementing Senate Bill 743. The guidelines potentially make it easier for developers to build residential, commercial, and mixed-use infill projects that improve air quality by reducing the number of miles driven by automobiles, based on the land use and transportation characteristics of the project. The Governor's Office of Planning and Research (OPR) has also developed a Technical Advisory on Evaluating Transportation Impacts in CEQA, which contains OPR's high-level recommendations on the analysis methodology, significance thresholds, and mitigation measures for three types of land use projects: residential, office, and retail projects.

The Cities of Pasadena, San Francisco, Oakland, San Jose, and Los Angeles were the first to implement VMT analysis procedures in compliance with the CEQA Guidelines. While each agency's approach is individually tailored, they all generally followed the OPR recommended framework. A comparison of the VMT Policies adopted by these major cities as well as subsequent VMT Policies adopted by smaller cities in Santa Clara County are presented at the end of this document. Note that state guidance from the OPR gives wide discretion to lead agencies in implementing SB 743 to establish new thresholds of significance and screening criteria in terms of VMT for development projects.

This memorandum presents the VMT policy framework recommended for Los Altos including an analysis of policy options based on State guidance and practices employed by other jurisdictions. The VMT policy framework includes the following basic components:

- Screening criteria
- Analysis methodology
- Mitigation

Screening Criteria

OPR's technical advisory recommends that various types of developments such as small infill developments, projects in low VMT areas, local-serving retail and public facilities, and/or projects near major transit corridors may be presumed to have a less than significant impact on VMT. Screening criteria may be based on location, project size, or land use.

> ***FAQ #3: What does it mean to be "screened out"?*** *A development project may be "screened out" if its location, type, size, density, and other attributes support a presumption that, if analyzed, the project's impact under VMT would be less than significant. Thus, a screened project would not be required to conduct a detailed VMT analysis to quantify the project's VMT and would not need to implement trip reduction measures or multimodal improvements to mitigate a significant impact on VMT. Projects that do not meet the screening criteria adopted by the City are "screened in" and must complete a detailed analysis of VMT produced by the project.*

Location-Based Screening

Location-based screening usually involves a map-based tool outlining areas within the City that are known to generate less VMT per capita than the relevant significance thresholds. In support of implementing SB 743 and in its capacity as the Congestion Management Agency in Santa Clara County, The Santa Clara Valley Transportation Authority (VTA) has developed VMT estimates for residential and employment land uses within Santa Clara County by traffic analysis zone (TAZ) and by parcel using the recently recalibrated VTA Travel Demand Model, which is based on land use data from ABAG Projections 2017 series for the baseline Year 2015. Hexagon has used the VTA data to produce the attached heat maps that compare the VMT per resident and VMT per job for all parcels in Los Altos to the citywide average (See Figures 1 and 2). Parcels shown in green have a VMT below the recommended VMT threshold of 15 percent below the citywide average. Developments in low VMT areas that are currently below the adopted VMT threshold can be screened out from preparing a detailed VMT analysis. Most cities have implemented this type of location-based screening for projects in low VMT areas that are below the CEQA significance threshold. As shown on Figure 1, residential developments adjacent to El Camino Real and a few other locations could be screened out and exempted from further VMT analysis. As shown on Figure 2, no employment developments would be screened out based on low VMT since the employment VMT per job for all parcels exceeds the recommended CEQA impact threshold.

> ***FAQ #4: What is the mechanism for how VMT is being calculated in the heat maps?*** *The heat maps show the 2015 baseline VMT data produced using the recently recalibrated VTA Travel Demand Model using 2015 land use data from ABAG's Projections 2017. The Model covers the 9-County Bay Area plus Monterey, Santa Cruz, San Benito, and San Joaquin Counties, but with greater detail in Santa Clara and San Mateo Counties.*

> ***FAQ #5: Is the model based on Google driving data and how often can it be updated?*** *The VTA Travel Demand Model is not based on Google driving data but rather was developed using land use and demographic data prepared by the Association of Bay Area Governments (ABAG) with input from local jurisdictions. In addition, journey to work data were obtained from the United States Census Bureau's American Community Survey (ACS). The Caltrans Household Travel Survey (CHTS) provides observed data for non-work trips. The model is calibrated to match actual traffic counts. Furthermore, the VTA Model was developed based on a database of regional transit trips developed by MTC from household and transit on-board surveys and ridership data provided by VTA, Caltrain, and other transit providers serving Santa Clara County. The VTA Travel Demand Model is updated in*

response to new releases of ABAG land use data and new Census data typically every three to five years.

FAQ #6: What are the attributes of the different colored areas shown on the VMT heat map that make them different? Why are some low and some high? *The differences in VMT per capita and per job shown on the heat maps reflect differences in the mode split (the share of trips conducted by single-occupant vehicles versus alternative modes) and differences in vehicle trip lengths. VMT per capita and per job is higher in locations that have a higher percentage of trips conducted by single-occupant vehicles and lower in locations that are well served by transit and other non-auto transportation options. Furthermore, locations that exhibit higher development densities with a mix of complementary land uses in close proximity tend to have shorter trip lengths than other locations that are less dense and farther from downtown centers or other major job centers.*

As recommended by OPR, some cities such as Oakland also allow projects located within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor to be presumed to have a less than significant impact on VMT.

To qualify as a "major transit stop" or a "high-quality transit corridor", there has to be transit service headways of no longer than 15 minutes. The only transit service in the City of Los Altos that qualifies under this definition are Express Route 522 and Local Route 22, which both provide bus service along El Camino Real. Prior to the reduction in transit service implemented in response to the COVID-19 pandemic, Express Route 522 had 10 to 15-minute headways during peak commute periods while Local Route 22 had 15 to 20-minute headways during peak commute periods. The VMT heat maps (Figures 1 and 2) also show the area within ½ mile of the high-quality transit corridor on El Camino Real. As shown on Figure 1, all of the parcels directly adjacent to El Camino Real and most of the parcels within ½ mile of El Camino Real have a residential VMT per capita that is below the recommended CEQA impact threshold. Thus, there is no compelling reason to add another screening criterion for residential uses based on the proximity to transit. As shown on Figure 2, the parcels within ½ mile of El Camino Real have an employment VMT per job that is below the citywide average VMT but not below the recommended CEQA impact threshold. Adoption of a screening criterion based on proximity to transit is not recommended for employment uses in order to encourage all employment projects to implement trip reduction measures, such as subsidized transit passes, to reduce VMT.

Small Infill Projects

Size-based screening establishes policies that allows certain small projects the presumption of a less-than-significant VMT impact, which would streamline the transportation review of small infill projects. CEQA Guidelines, § 15301, subd. (e)(2) provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. Office uses typically generate approximately 110 daily vehicle trips per 10,000 square feet. Nevertheless, Los Altos previously required that a transportation impact analysis be prepared for any project that would generate 50 or more daily vehicle trips. Given the City's previous threshold, the rural nature of the community, and comments received from elected officials and residents, it is recommended that Los Altos continue to use the 50 daily trip threshold to define infill projects presumed to cause a less-than-significant transportation impact. Based on this screening criterion, the following developments would be "screened out" and not require a VMT analysis:

- Residential: 5 single family detached dwelling units, or 10 multifamily dwelling units
- Office: 5,000 square feet gross floor area
- Industrial: 10,000 square feet gross floor area
- Congregate Care/Assisted Living: 20 beds

FAQ #7: For the 50 daily trips, are we looking at the net increase or the total?
Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the screening criteria for small infill projects would apply based on gross trips with no trip reductions for existing or previous uses on the project site.

FAQ #8: How do we account for the cumulative impact of lots of small developments?
Metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency, cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa.

To account for the cumulative impact of lots of small developments, the City will continue to require that projects conduct a Local Traffic Analysis (LTA) to assess the combined effects of all projects (past, current, and probable future projects of all sizes) on intersection levels of service. The City has developed Transportation Checklists that establish the elements required to be included in the LTA.

The City also could commission a citywide transportation study or update the Transportation Impact Fee Nexus Study to provide a comprehensive evaluation of cumulative traffic conditions and identify a comprehensive list of transportation improvements needed to serve all modes of travel. Inclusion of multimodal improvements in the fee program would allow projects to take credit for their fair share of the estimated reduction in VMT anticipated as a result of their TIF-funded projects.

Local-Serving Retail

OPR's technical advisory recommends local-serving retail be presumed to have a less than significant VMT impact. The underlying assumption is that local-serving retail will improve retail destination proximity, and thus shorten trips and reduce VMT. OPR suggests that retail development including stores smaller than 50,000 square feet could be considered local serving. In response to questions from the City Council, a review of retail uses in Los Altos found that there are local-serving grocery stores that exceed the suggested 50,000 s.f. screening threshold (see Table 1). Furthermore, although the total floor area of the Rancho Shopping Center exceeds 50,000 s.f., it is comprised of many small local-serving businesses the largest of which (Safeway Community Markets) is under 30,000 s.f. There are currently no true regional retail uses in Los Altos. In recognition of this effect, it is recommended that the City of Los Altos assume retail projects comprised of stores of up to 60,000 gross square feet be presumed to cause a less-than-significant transportation impact.

Table 1
Example Retail Developments in Los Altos

Use (Location)	Approximate Gross Floor Area	Retail Type
Rancho Shopping Center/Safeway (Foothill Expwy)	74,000/26,000 s.f.	Local-Serving
Whole Foods (El Camino Real)	55,000 s.f.	Local-Serving
Lucky Supermarket (Grant Rd)	49,000 s.f.	Local-Serving
Walgreens (2nd St)	15,000 s.f.	Local-Serving

Local-Serving Public Facilities

Local-serving public facilities either produce very low VMT or divert existing trips from established facilities to new facilities without measurably increasing trips outside of the area. For these reasons, it is recommended that local-serving public facilities (publicly owned or controlled) be presumed to have a less than significant VMT impact. Public neighborhood elementary schools are presumed to be a local-serving use and satisfy this screening criterion. Conversely, schools with large attendance areas, e.g. private schools, high schools, middle schools, magnet schools, and charter schools have longer trip lengths and thus would not be screened out. Other examples of projects that may be screened out by this criterion include:

- Branch Library
- Community or Senior Center
- Fire Station

FAQ #9: Should we include schools when the City does not have jurisdiction over public schools? *The local school district is the lead agency responsible for public school projects in the District. As the lead agency, the District may determine the VMT analysis methodology and significant thresholds to be used for public schools. However, in practice, school districts often apply the same methodology and significance thresholds adopted by the surrounding local jurisdiction. Thus, it is recommended that the City of Los Altos VMT policy clearly spell out which school projects should be screened out and how schools that are not screened out should be evaluated.*

FAQ #10: Why should we treat public schools as retail? *Public neighborhood elementary schools serve students within a small defined attendance boundary. Thus, they are similar to local-serving retail uses in that they divert existing trips from established facilities to new facilities without measurably increasing trips outside the area.*

Affordable Housing

Evidence suggests that affordable housing typically generates less VMT than market-rate housing when located on infill sites. Thus, OPR states that 100 percent affordable residential developments may be presumed to have a less than significant impact on VMT. As with other OPR recommendations, cities may develop their own affordable housing screening criteria, including proportion of affordable units, based on local circumstances and evidence. For example, the City of San Jose screens out projects with 100% affordable housing units built in Planned Growth Areas at a minimum density level that supports transit and located within ½ mile of high-quality transit. Hexagon recommends that Los Altos screen out 100% affordable housing projects. The City could further define the level of affordability and other conditions required to qualify for this screening criterion.

Analysis Methodology for Residential, Office and Retail Projects

OPR's technical advisory recommends utilizing a travel demand forecast model to estimate project generated VMT for land use projects. As noted above, VTA has worked with cities to calculate existing baseline VMT data for residential and employment land uses (see Table 2). VTA has also created a VMT Evaluation Tool using the baseline VMT data from the travel demand forecast model. The VMT Evaluation Tool calculates project VMT based on the project description, location, and other attributes (e.g. multimodal network improvements, parking, TDM measures). The tool was officially launched for public use on May 22, 2020. The VMT analysis for most projects will be conducted using the VMT Evaluation Tool. However, projects that are very large, include unusual land uses, or shift travel patterns may require running the VTA travel demand forecast model to evaluate the project generated VMT.

For residential and office projects, OPR's technical advisory recommends lead agencies use an efficiency metric (reduction per capita or employee) to define thresholds of significance for residential and employment land use projects. OPR suggests a significance threshold that is 15 percent below the local or regional average VMT level. Hexagon recommends the City of Los Altos adopt a significance threshold 15 percent below the existing (2015) citywide average home-based VMT per capita for residential developments and 15 percent below the existing (2015) citywide average home-based work trip VMT per employee for office developments.

Table 2
Average Existing (2015) Residential and Employment VMT by Area

Area	2015 Average Residential Daily VMT per Capita (mi)	2015 Average Employment Daily VMT per Job (mi)
9-County Region	13.95	15.33
Santa Clara County	13.33	16.64
Los Altos	12.22	19.07

FAQ #11: Why should we pick the citywide average as the baseline? Why not the countywide or regional? The Los Altos citywide average residential VMT per capita is lower than the countywide average and the 9-County regional average. Thus, adopting a CEQA impact threshold at 15 percent below the citywide average is a more stringent criterion than an impact threshold that is 15 percent below the Countywide or 9-County average residential VMT. For purposes of discussion, Hexagon prepared VMT heat maps showing the existing baseline residential VMT relative to the countywide and 9-County regional average VMT (see Figures 3 and 4, respectively). These maps show more parcels would be considered low VMT areas (shown in green) that would be exempted from further CEQA VMT analysis. The recommended threshold based on the citywide average VMT would require more residential developments to conduct a detailed VMT analysis and implement trip reduction measures to reduce VMT.

The Los Altos citywide average employment VMT per capita is substantially greater than the countywide average and the 9-County regional average. VMT heat maps showing the existing baseline employment VMT relative to the countywide and 9-County regional

average VMT (see Figures 5 and 6, respectively) show that using these more stringent baseline values would result in proposed new employment uses in most areas being found to cause a significant unavoidable impact on VMT, thereby requiring the preparation of an Environmental Impact Report (EIR). Although the recommended CEQA impact threshold of 15 percent below the citywide average would be more permissive, it would still require all proposed new employment projects to complete a detailed analysis of VMT and implement trip reduction measures, as there are no locations where the existing baseline employment VMT is already below the CEQA impact threshold. Because more development projects would be able to mitigate their impact on VMT, fewer projects would be required to complete an EIR.

FAQ #12: Will a 15% decrease in VMT help us meet the goal of a 19% decrease in carbon emissions? The California Air Resources Board (CARB) examined the relationship between VMT and the state's GHG emissions reduction targets. In its document *California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, CARB assesses VMT reduction per capita that would achieve State climate goals. CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels. Below these levels, a project could be considered low VMT and would achieve state climate goals. Thus, based on an extensive review of the applicable research, and in light of the CARB assessment quantifying the need for VMT reduction in order to meet the State's long-term climate goals, OPR recommended that lead agencies adopt a significance threshold for VMT per capita or per employee that is 15 percent below that of existing development. OPR concluded that a 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.

For regional retail projects, OPR's technical advisory recommends utilizing the travel demand forecast model to analyze total VMT. Typically, this involves adding the proposed new retail employment in the appropriate Traffic Analysis Zone (TAZ) where the proposed project is located and subtracting an equivalent about of retail jobs from other TAZs in order to retain consistency with the regional land use assumptions. However, the model is not well suited to measure changes in VMT due to shifts in the location of retail uses because random fluctuations that occur during the trip assignment process may obscure the project's actual effect on VMT. Furthermore, the vast majority of retail trips are made by customers, which are influenced less by TDM measures. Thus, it is unlikely that TDM measures could effectively mitigate a significant impact finding based on an analysis of a retail project's effect on total VMT. It is notable that many other jurisdictions that have adopted VMT policies have chosen to evaluate retail projects based on VMT per employee (San Francisco and Oakland) or VMT per capita (Pasadena). Thus, Hexagon recommends that proposed regional retail projects be evaluated based on VMT per employee. Furthermore, the VMT analysis for retail uses should be based on employee trips only and exclude customer trips. Hexagon recommends the City of Los Altos adopt a significance threshold of 15 percent below the existing citywide average VMT per employee for regional retail projects, should any be proposed in Los Altos.

FAQ #13: Please run through an example of how this would work for a recently approved project. *Table 3 shows several examples of recent development projects in Los Altos. Note that many projects would be screened out (exempted from further CEQA VMT analysis) based on their location in a low VMT area or because they are considered small*

infill projects presumed to have a less than significant impact on VMT. The residential projects at 444-450 First Street and 425 First Street and the office project at 467 First Street would require a CEQA VMT analysis using the VTA VMT Evaluation Tool. VMT Evaluation Tool Reports for these three projects are attached. The Reports show the inputs to the tool (e.g. Assessor's Parcel #, land use, and parking) and a set of mitigation measures that would satisfactorily reduce the project VMT to below the recommended CEQA impact threshold.

Table 3
Example Project Analysis

Project	Project Type and Size (du or SF)	Estimated Daily VMT	Outcomes
5150 El Camino Real	Residential - 196 mf du	Map color: green; Less than 15% below existing average VMT per capita	Project is screened out because it is located in a low VMT area that is below the CEQA impact threshold. Therefore, the project has a less than significant transportation impact.
999 Fremont Avenue	Mixed Use - 3 mf du + 1,498 s.f. retail	Map color: orange; greater than average VMT per capita, mitigatable.	Residential analysis: Project is screened out because its size (small infill project). Retail analysis: Project is screened out as a local serving retail use. Therefore, the project has a less than significant transportation impact.
4898 El Camino Real	Residential - 21-28 mf du	Map color: green; Less than 15% below existing average VMT per capita	Project is screened out because it is located in a low VMT area that is below the CEQA impact threshold. Therefore, the project has a less than significant transportation impact.
4350 El Camino Real	Residential - 47 mf units	Map color: green; Less than 15% below existing average VMT per capita	Project is screened out because it is located in a low VMT area that is below the CEQA impact threshold. Therefore, the project has a less than significant transportation impact.
444-450 First Street	Residential - 26 mf du	Map color: yellow; between 15% below average and average	Residential analysis: project exceeds the residential infill screening threshold and does not have any other applicable screens. CEQA VMT analysis required. Mitigation measures required to mitigate impact may include incorporating affordable housing, bicycle parking, car share program, transit subsidies, unbundled parking, and voluntary travel behavior change program.
425 First Street	Residential - 20 mf du	Map color: yellow; between 15% below average and average	Residential analysis: project exceeds the residential infill screening threshold and does not have any other applicable screens. CEQA VMT analysis required. Mitigation measures required to mitigate impact may include incorporating affordable housing, bicycle parking, car share program, bike share program, transit subsidies, and voluntary travel behavior change program.
467 First Street	Office - 17,103 SF office	Map color: yellow; between 15% below average and average	Office analysis: project exceeds the infill screening threshold and does not have any other applicable screens. CEQA VMT analysis required. Mitigation measures required to mitigate impact may include bicycle parking, car share program, transit subsidies, limited parking supply, ride share program, and commute trip reduction marketing/education program.

*For the residential project at 444-450 First Street, the existing baseline VMT for residential use on this site is 12.00 miles per capita, which is just below the citywide average residential VMT (12.22 miles per capita). The project could reduce the VMT below the recommended CEQA impact threshold of 10.39 miles per capita (12.22*0.85) by implementing the following TDM measures: carshare program, VTA Smart Pass (100 percent transit subsidy),*

unbundled parking ($200/month), and a voluntary travel behavior change program. Note that this is only one possible set of TDM measures that would fully mitigate the impact. For comparison, if the project contained 50 percent affordable housing (very low income), implementation of unbundled parking alone ($100/month) would mitigate the VMT impact.

*For the residential project at 425 First Street, the existing baseline VMT for residential use on this site is 11.91 miles per capita, which is just below the citywide average residential VMT (12.22 miles per capita). The project could reduce the VMT below the recommended CEQA impact threshold of 10.39 miles per capita (12.22*0.85) by incorporating affordable housing (20% very low income and 15% low income) and implementing the following TDM measures: bike parking, carshare program, bike share program, VTA Smart Pass (100 percent transit subsidy), and a voluntary travel behavior change program.*

*For the office project at 467 First Street, the existing baseline VMT for office use on this site is 18.77 miles per worker, which is just below the citywide average employment VMT (19.07 miles per capita). The project could reduce the office VMT below the recommended CEQA impact threshold of 16.21 miles per capita (19.07*0.85) by implementing the following TDM measures: bicycle parking and showers, 100 percent transit subsidy, a car share program, a ridesharing program (5 percent participation), limited on-site parking supply (reduce from 57 to 51 spaces) and a commute trip reduction marketing and education program.*

FAQ #14: Are we going to be penalized for requiring parking, or put another way, how do parking ratios impact VMT analysis. *The parking ratio is not an input to the calculation of VMT using the VTA VMT Tool. However, the Tool will calculate a reduction in VMT for employment land uses that decrease the on-site parking supply below the standard parking minimums where allowable in the City Municipal Code. The Tool will not show an increase in VMT for excess parking above the minimum required parking ratio.*

Screening Criteria and Analysis Methodology for Other Land Use Projects

The following identifies screening criteria and thresholds of significance to be used to determine if other types of land uses occasionally reviewed by the Los Altos Community Development Department would result in significant impacts as it relates to VMT:

- Non-local serving schools (e.g. private schools, junior high schools, high schools, magnate schools, and charter schools), congregate care facilities/ assisted living, medical/dental office, research and development space, industrial, manufacturing, and warehouse uses should be treated as office for screening and analysis.

- Childcare facilities with fewer than 65 children will be considered equivalent to a local-serving retail use and be screened out from any VMT analysis. Religious institutions, business hotels, and athletic clubs should be treated as retail for screening and analysis. For these uses, projects that generate fewer daily trips than a 60,000 square foot retail use will be considered local serving and be screened out from any VMT analysis.

Mixed-Use Developments and Land Use Plans

OPR's technical advisory suggests that each component of a mixed-use project be analyzed for VMT independently. Alternatively, the advisory suggests that the dominant use of a project may be analyzed. Hexagon recommends the City evaluate each component of a mixed-use development separately, while allowing trip reductions based on the mixed-use nature of these developments. Trip reductions for internalization could reduce the project generated VMT below the adopted

CEQA impact threshold. Similarly, it is recommended that General Plan Amendments, Specific Plans, and other Area Plans be evaluated by analyzing each land use component independently and applying the significance thresholds listed above for each land use.

Screening Criteria and Analysis Methodology for Transportation Projects

Consistent with OPR guidance, transportation projects that would not likely lead to a substantial or measurable increase in vehicle travel can be screened out from further VMT analysis. Examples include transportation projects that enhance pedestrian, bike, or transit infrastructure, and transportation projects that maintain current infrastructure, without adding new automobile capacity. It is recommended that the City's VMT Policy set forth transportation project screening criteria.

Transportation projects that are not screened out would be analyzed based on the change in total VMT estimated using the VTA Travel Demand Model. A net increase in total VMT greater than that consistent with the Regional Sustainable Communities Strategy shall be presumed to cause a significant transportation impact.

Mitigation

While LOS impacts were generally mitigated by increasing roadway capacity such as street widenings or adding lanes, mitigating a VMT impact requires actions that reduce the number or the length of vehicle trips generated by a project, such as modifying the project's characteristics or location so that it generates fewer vehicle trips or trips of shorter distance. Options for reducing VMT may include locating the project closer to public transit facilities, changing from a single-use to a mixed-use development, implementing amenities to support bicycling and walking, and other possibilities such as contributing to a local transit service and/or providing transit passes. Mitigation of a significant VMT impact generally requires a shift in mode choice away from single occupant vehicles. Currently, this is typically accomplished through the preparation of a TDM Plan with a trip reduction commitment as part of the project's conditions of approval. The City has developed Transportation Checklists that set forth TDM requirements for developments above a specific size threshold regardless of the outcome of the VMT analysis. For many projects, satisfying the City's TDM Point requirement will also mitigate the project's impact on VMT. Some projects, especially those that are in high VMT locations, may need to exceed the minimum TDM Point requirement to satisfactorily mitigate the project's impact on VMT.

Consistent with OPR's technical advisory, in lieu fees also may be proposed as mitigation where there is both a commitment to pay fees and evidence that mitigation will actually occur. As an example, a project could provide in lieu fees toward a school bus program or citywide shuttle that would reduce VMT associated with existing schools or other existing uses to mitigate a significant project impact on VMT. Multimodal transportation network improvements (e.g. a new trail connection) may also be proposed as mitigation if it can be shown to reduce existing VMT by an amount equal to the project's VMT reduction goal.

Level of Service Policy

VMT does not describe the functionality of local roads and does not identify potential issues related to site access and circulation, intersection safety and queuing, bicycle/pedestrian/public transit accessibility, and neighborhood impacts or spillovers. Thus, the City of Los Altos will retain the existing level of service policy in the General Plan and continue to require development projects to conduct non-CEQA transportation analyses to manage a project's adverse effects on local roadways by imposing conditions related to design changes and operational improvements during the project review and permitting phases. The City has developed a series of Transportation

Checklists that define the study area, study scenarios, and scope of the Local Transportation Analysis based on the land use and size of the proposed development. This will ensure that the City's transportation network meets residents' circulation needs.

Conclusions and Next Steps

Hexagon recommends the City of Los Altos adopt a VMT policy for land use development projects according to the following broad framework:

1. Screening criteria for presumption of a less-than-significant VMT impact
    a. Low VMT areas
    b. Small infill projects
    c. Local-serving retail projects
    d. Local-serving public facilities
    e. Affordable Housing
    f. Transportation Projects that do not add automobile capacity
2. Methodology for analyzing project generated VMT
    a. Use the VTA VMT Evaluation Tool or VTA Travel Demand Forecast Model to estimate home-based VMT per capita for residential land use and home-based work trip VMT per employee for office and regional retail land uses
    b. Other land uses such as private schools, hotels, childcare and others will be evaluated using the screening criteria and thresholds of significance for either office or retail uses as appropriate
    c. Land Use Plans and mixed-use developments will be evaluated for each land use component separately based on the screening criteria and thresholds of significance for each individual use
    d. Evaluate transportation projects based on the change in total VMT estimated using the VTA Travel Demand Model
3. VMT significance thresholds
    a. Threshold for residential projects should be 15 percent below citywide average VMT per capita
        i. Current Level: 12.22 VMT per capita (Citywide average)
        ii. Threshold: 10.39 VMT per capita
    b. Threshold for office and regional retail projects should be 15 percent below citywide average VMT per employee
        i. Current Level: 19.07 VMT per employee (Citywide average)
        ii. Threshold: 16.21 VMT per capita
    c. Threshold for transportation projects shall be based on VMT targets set forth in the Regional Sustainable Communities Strategy
4. VMT mitigation measures
    a. Reduce single-occupant vehicle trips (TDM Plan)
    b. Multimodal transportation network improvements to reduce existing VMT
    c. In-lieu fees to implement citywide or areawide VMT reduction measures

FAQ #15: What are other cities (e.g. Mountain View) doing? *Table 4 presents a comparison of the VMT Policy Framework for other cities in California.*

A study session with the Los Altos Complete Streets Commission was held on May 11, 2020 to introduce the recommended VMT Policy framework. Similar study sessions were held with the City Council on May 12, 2020, the Planning Commission on May 21, 2020, and the Complete Streets Commission on March 31, 2021. Based on feedback from these meetings, Hexagon has been

working with staff to provide additional information to answer questions raised at the study sessions. A proposed VMT Policy has been developed based on feedback from the public meetings on this subject. Per the new CEQA guidelines, the requirement to analyze transportation impacts based on VMT went into effect statewide on July 1, 2020.

FAQ #16: What happens because we did not adopt a VMT policy before the July 1st deadline? *The City will not be subject to any penalties or other consequences enforced by the State for failure to meet the July 1st deadline. However, CEQA documents may no longer consider LOS as a measure of transportation impacts. The City of Los Altos could follow one of the following courses of action:*

1. *Adopt an interim VMT Policy based on OPR guidelines while gathering additional information to allow the City to tailor the policy to local conditions and goals.*
2. *Process any environmental documents for proposed development projects based on VMT analysis methodology and significance criteria developed by staff on a case-by-case basis.*
3. *Hold off on processing any environmental documents until the City adopts its VMT Policy.*

Table 4
VMT Policy Framework used by other Cities

	Los Altos (recommended)	San Francisco	San Jose	Oakland	Pasadena
Residential					
Methodology	VMT per resident	VMT per resident	VMT per resident	VMT per resident	VMT per capita
VMT Threshold	15% below citywide average	15% below regional average	15% below citywide average	15% below regional average	22.6 VMT/capita
Screening	Size (5 sf du, 10 mf du), map-based (low VMT), 100% affordable	Size, map-based (low VMT), transit proximity	Size, map-based (if both low VMT & near transit or if both affordable and near transit)	Size, map-based (low VMT), transit proximity	Size
Office					
Methodology	VMT per employee	VMT per employee	VMT per employee	VMT per employee	VMT per capita
VMT Threshold	15% below city average	15% below regional average	15% below regional average	15% below regional average	22.6 VMT/capita
Screening	Size (5 ksf) (no low VMT areas thus not map-based)	Size, map-based (low VMT), transit proximity	Size, map-based (if both low VMT & near transit)	Size, map-based (low VT), transit proximity	Size
Retail					
Methodology	VMT per employee	VMT per employee	Total VMT	VMT per employee	VMT per capita
VMT Threshold	15% below city average	15% below regional average	Net increase	15% below regional average	22.6 VMT/capita
Screening	local-serving (60 ksf)	Size, map-based	local-serving (100 ksf)	Map-based (low VMT), transit proximity, local-serving (determined on a case by case basis)	Size (10 ksf)
Other Land Uses					
Categories	Fitness club/hotel/school/etc.	Schools/student housing/hotels/etc.	Retail/hotel/school/etc.	Hotel/Institutions/Public services/etc.	None specified
Methodology	Treat as office/residential/retail	Treat as office/residential/retail	Varies	Treat as office/residential/retail	VMT per capita
VMT Threshold	Treat as office/residential/retail	Treat as office/residential/retail	Varies	Treat as office/residential/retail	22.6 VMT/capita
Screening	Size, map-based, local serving public facilites, transportation projects that do not increase VMT	Local-serving public facilities	Local-serving public facilities	Size, map-based, local-serving public facilities	Size

Table 4 (continued)
VMT Policy Framework used by other Cities

	Los Altos (recommended)	Mountain View	Palo Alto	Sunnyvale
Residential				
Methodology	VMT per resident	VMT per resident	VMT per resident	VMT per resident
VMT Threshold	15% below citywide average	15% below 9-County regional avg	15% below countywide avg	15% below countywide avg
Screening	Size (5 sf du, 10 mf du), map-based (low VMT), 100% affordable	Size (12 sf du, 20 mf du), map-based (low VMT), transit proximity, 100% affordable	Size (20 du), transit supportive projects, map-based (low VMT), 100% affordable	Size (10 sf du, 20 mf du), transit supportive projects, 25% affordable
Office				
Methodology	VMT per employee	VMT per employee	VMT per employee	VMT per employee
VMT Threshold	15% below city average	15% below 9-County regional avg	15% below 9-County regional avg	15% below countywide avg
Screening	Size (5 ksf) (no low VMT areas thus not map-based)	Size (10 ksf), transit proximity (no low VMT areas thus not map-based)	Size (10 ksf), transit supportive projects, map-based (low VMT)	Size (10 ksf), transit supportive projects
Retail				
Methodology	VMT per employee	Total VMT	Total VMT	Total VMT
VMT Threshold	15% below city average	Net increase	Net increase	Net increase
Screening	local-serving (60 ksf)	local-serving (50 ksf)	local-serving (10 ksf)	local-serving (100 ksf) excluding certain uses (e.g. drive-thru restaurants)
Other Land Uses				
Categories	Fitness club/hotel/school/etc.	-	-	-
Methodology	Treat as office/residential/retail	Treat as office/residential/retail	Treat as office/residential/retail	Treat as office/residential/retail
VMT Threshold	Treat as office/residential/retail	Treat as office/residential/retail	Treat as office/residential/retail	Treat as office/residential/retail
Screening	Size, map-based, local serving public facilites, transportation projects that do not increase VMT	-	transportation projects that do not increase VMT	City Facilities, transportation projects that do not increase VMT

Table 4 (continued)
VMT Policy Framework used by other Cities

	Los Altos (recommended)	Cupertino	Los Gatos	Saratoga (no VMT Policy yet)
Residential				
Methodology	VMT per resident	VMT per service population	VMT per service population	
VMT Threshold	15% below citywide average	14.4% below citywide avg; net increase total countywide VMT	11.3% below citywide avg; increase total countywide VMT by 6.5%	
Screening	Size (5 sf du, 10 mf du), map-based (low VMT), 100% affordable	Size (10 sf du, 20 mf du), transit proximity, 100% affordable	no screening	TIA required for ≥10 du
Office				
Methodology	VMT per employee	VMT per service population	VMT per service population	
VMT Threshold	15% below city average	14.4% below citywide avg; net increase total countywide VMT	11.3% below citywide avg; increase total countywide VMT by 6.3%	
Screening	Size (5 ksf) (no low VMT areas thus not map-based)	Size (10 ksf), transit proximity	no screening	TIA required for ≥16ksf
Retail				
Methodology	VMT per employee	VMT per service population	VMT per service population	
VMT Threshold	15% below city average	14.4% below citywide avg; net increase total countywide VMT	11.3% below citywide avg; increase total countywide VMT by 6.3%	
Screening	local-serving (60 ksf)	local-serving (50 ksf)	no screening	
Other Land Uses				
Categories	Fitness club/hotel/school/etc.	-	-	-
Methodology	Treat as office/residential/retail	Treat as office/residential/retail	Treat as office/residential/retail	
VMT Threshold	Treat as office/residential/retail	Treat as office/residential/retail	Treat as office/residential/retail	
Screening	Size, map-based, local serving public facilites, transportation projects that do not increase VMT	Size, transit proximity	no screening	

Figure 1

2015 Baseline VMT Residential by City Average

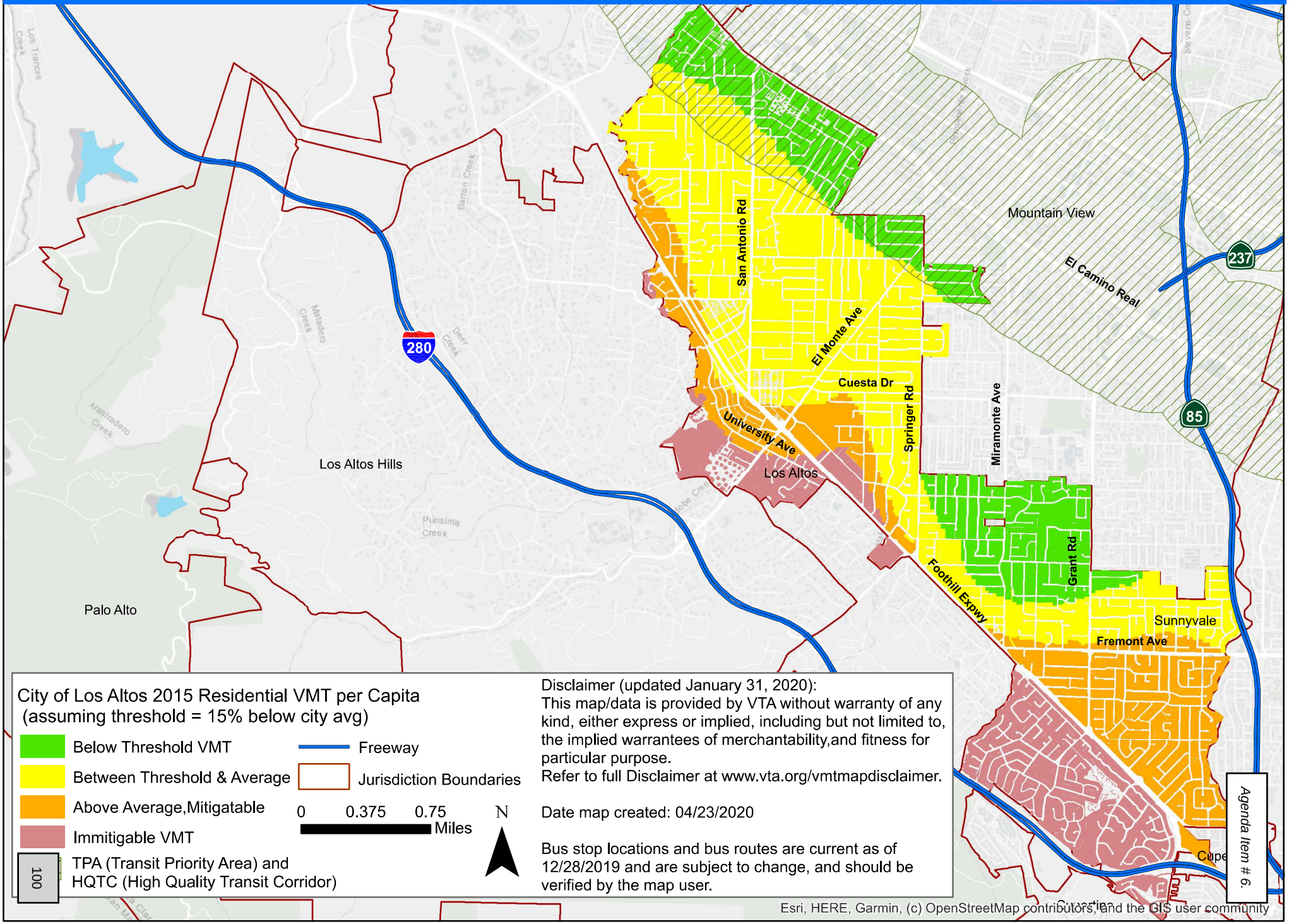

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Figure 2

2015 Baseline VMT Employment by Citywide Average

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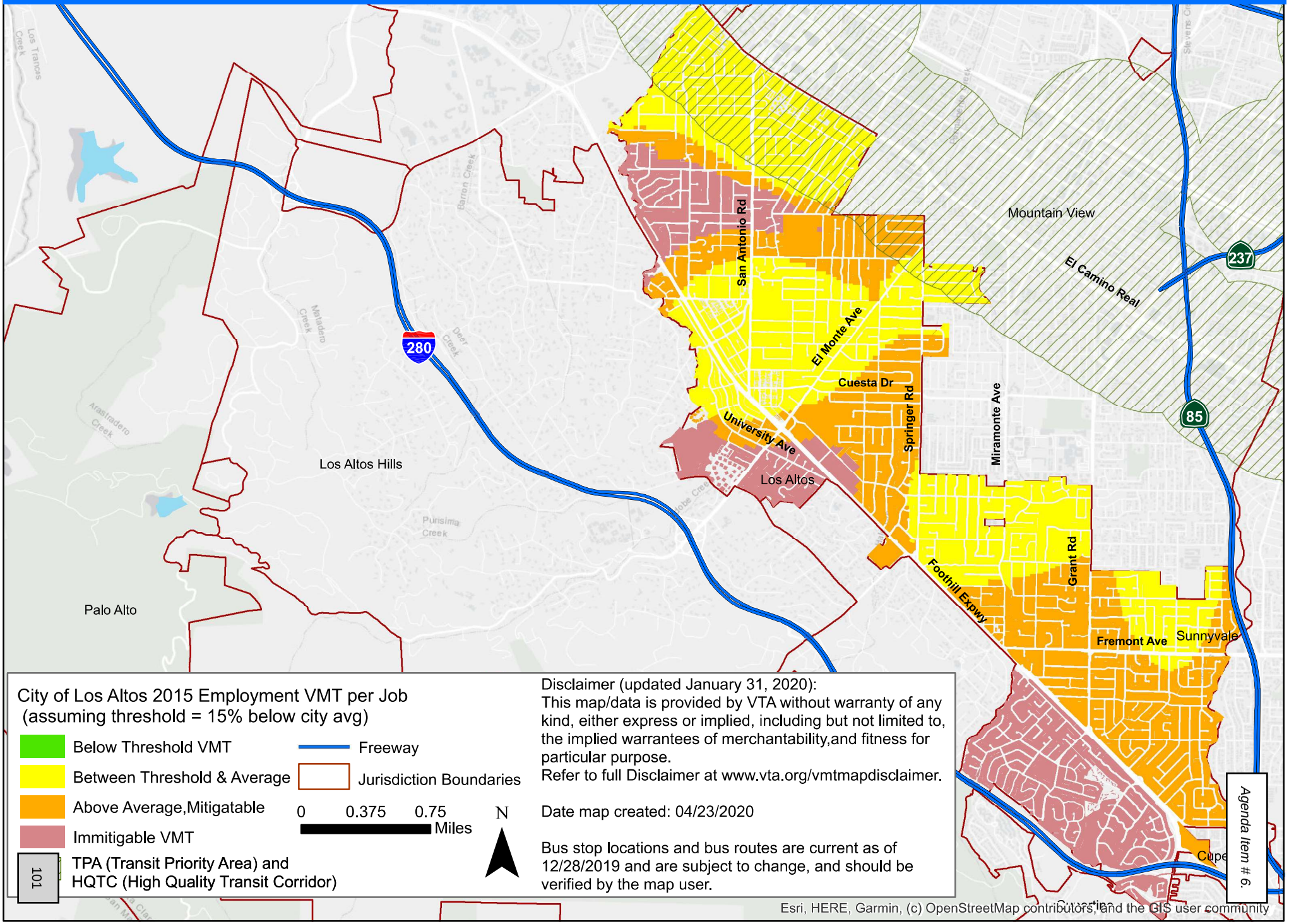


Agenda Item # 6.

Figure 3

2015 Baseline VMT Residential by County Average

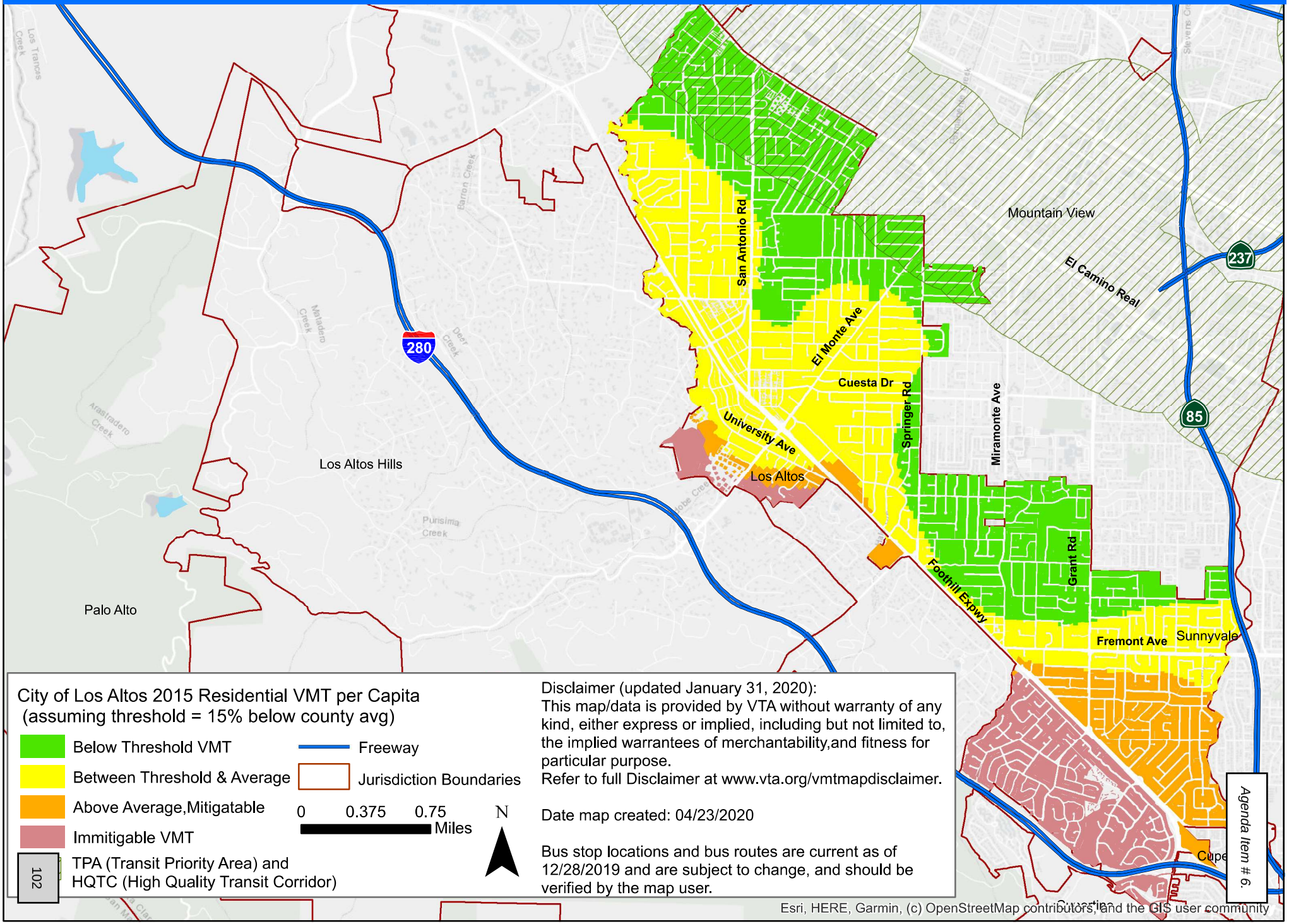
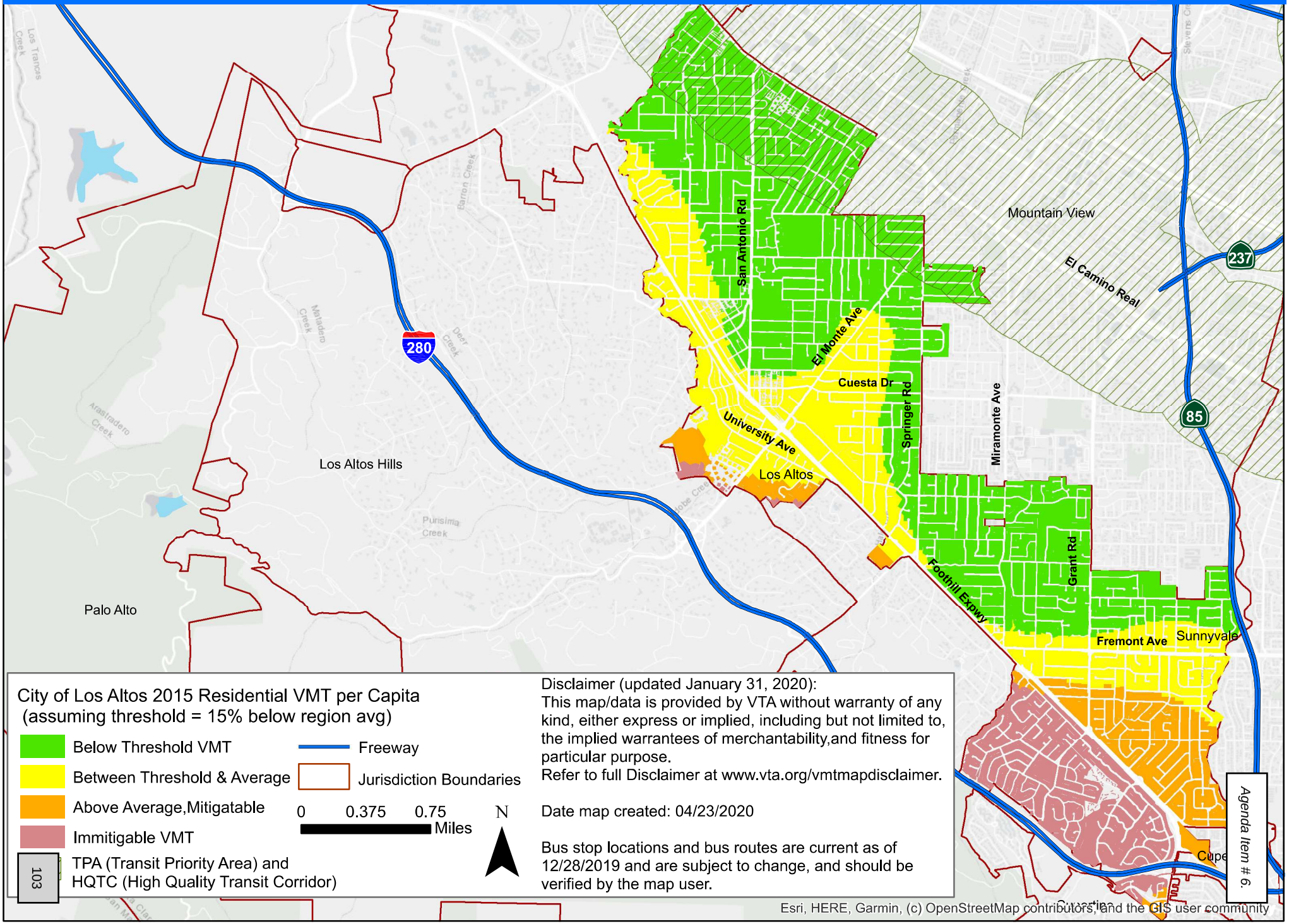


Figure 4

2015 Baseline VMT Residential by Regional Average



Agenda Item # 6.

Figure 5

2015 Baseline VMT Employment by Countywide Average

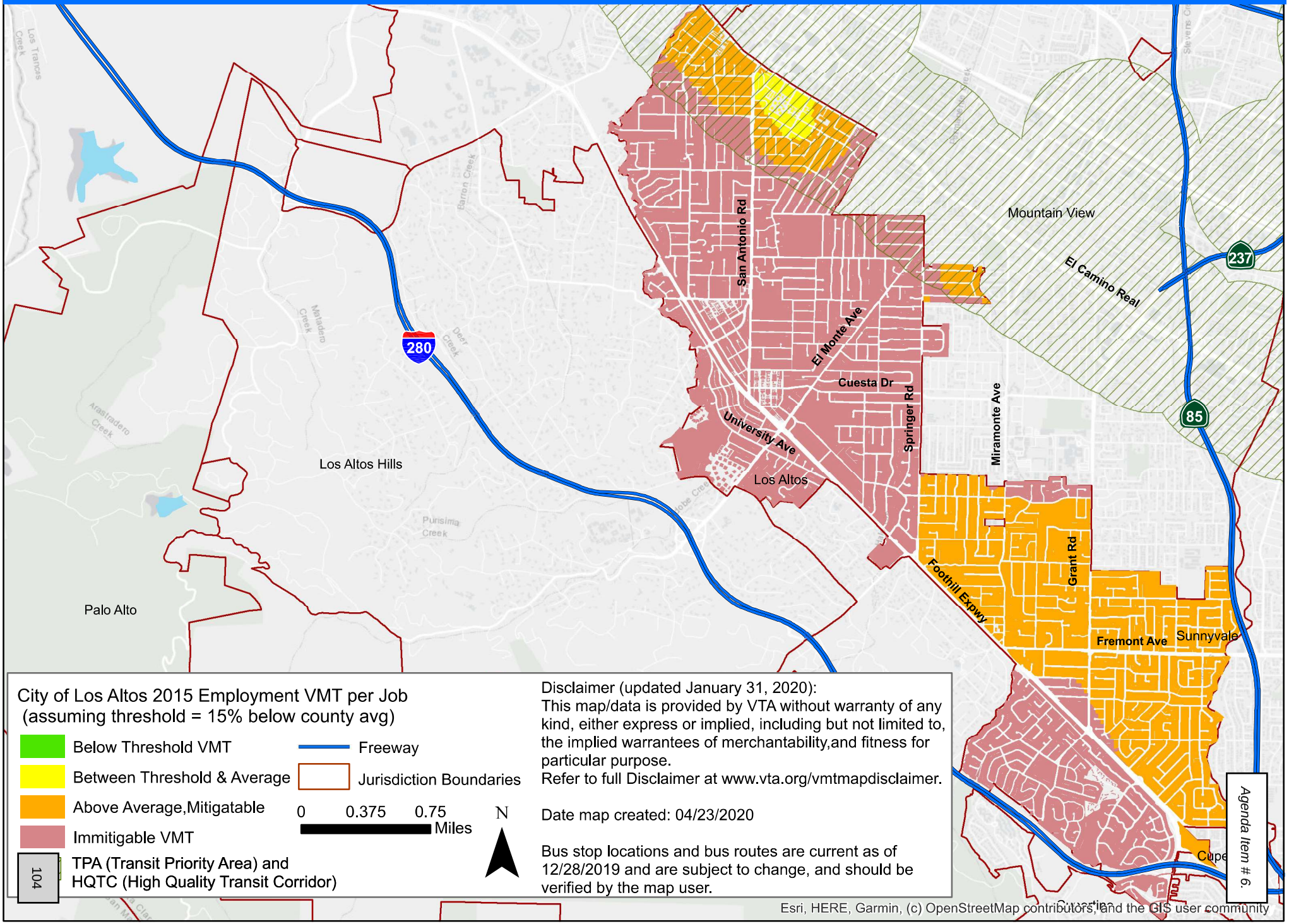
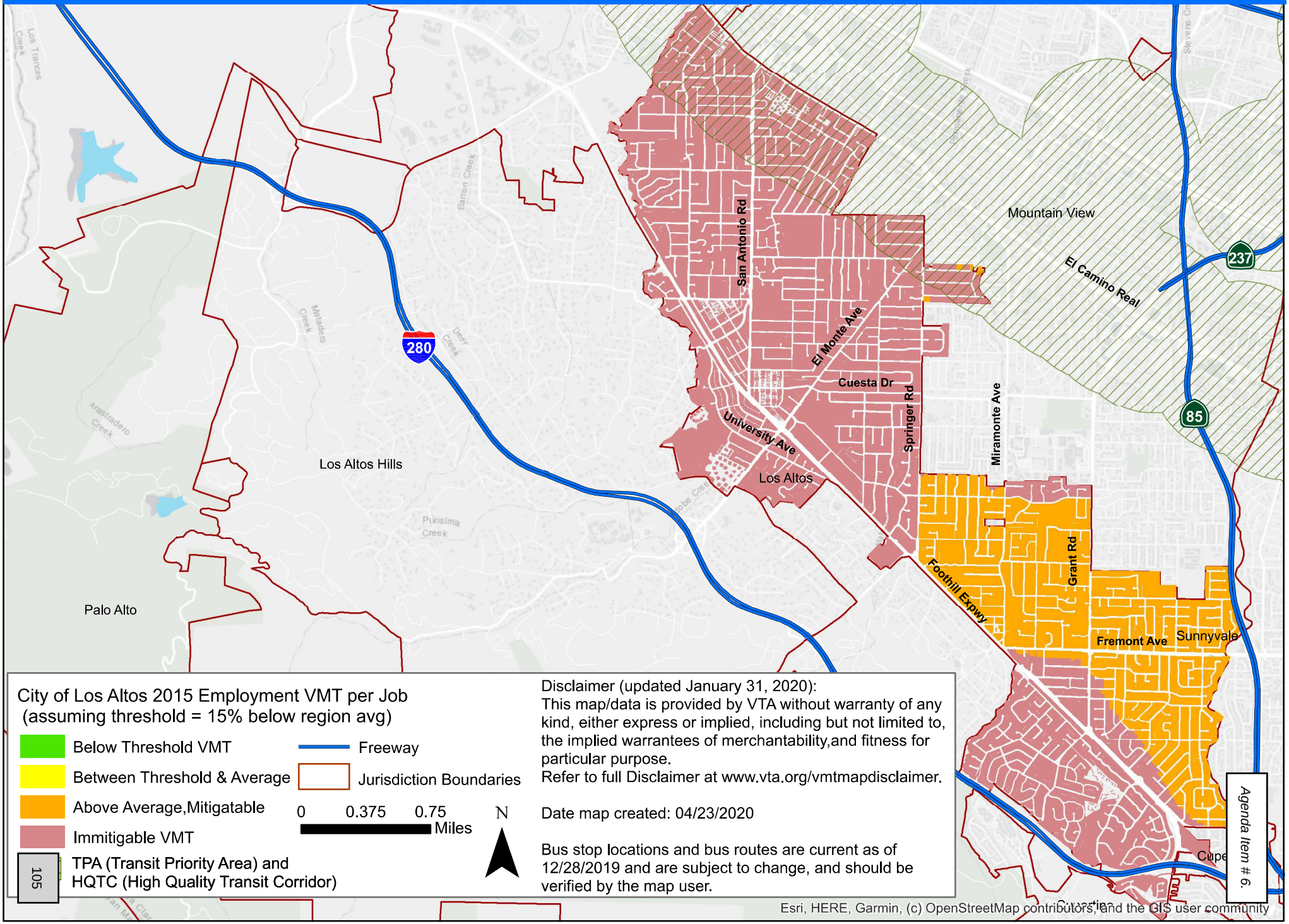


Figure 6

2015 Baseline VMT Employment by Regional Average



City of Los Altos 2015 Employment VMT per Job
(assuming threshold = 15% below region avg)

- Below Threshold VMT
- Between Threshold & Average
- Above Average,Mitigatable
- Immitigable VMT
- TPA (Transit Priority Area) and HQTC (High Quality Transit Corridor)
- Freeway
- Jurisdiction Boundaries

0 0.375 0.75 Miles

N

Disclaimer (updated January 31, 2020):
This map/data is provided by VTA without warranty of any kind, either express or implied, including but not limited to, the implied warrantees of merchantability,and fitness for particular purpose.
Refer to full Disclaimer at www.vta.org/vmtmapdisclaimer.

Date map created: 04/23/2020

Bus stop locations and bus routes are current as of 12/28/2019 and are subject to change, and should be verified by the map user.

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

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Santa Clara Countywide VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: May 26, 2020, 08:01:01 PM

Project Name: 444-450 First Street

Project Description: 26 mf du

Project Location

Jurisdiction:
Los Altos

APN	TAZ
16741010	194
16741011	194

Inside Transit Priority Area (TPA)?
No (Fail)

Analysis Details

Santa Clara Countywide VMT Evaluation Tool Version: 1

Data Version: VTA Countywide Model December 2019

Analysis Methodology: Parcel Buffer Method

Baseline Year: 2015

Project Land Use

Residential:

Single Family DU:

Multifamily DU: 26

Total DUs: 26

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

Motor Vehicle Parking: 51

Bicycle Parking: 20

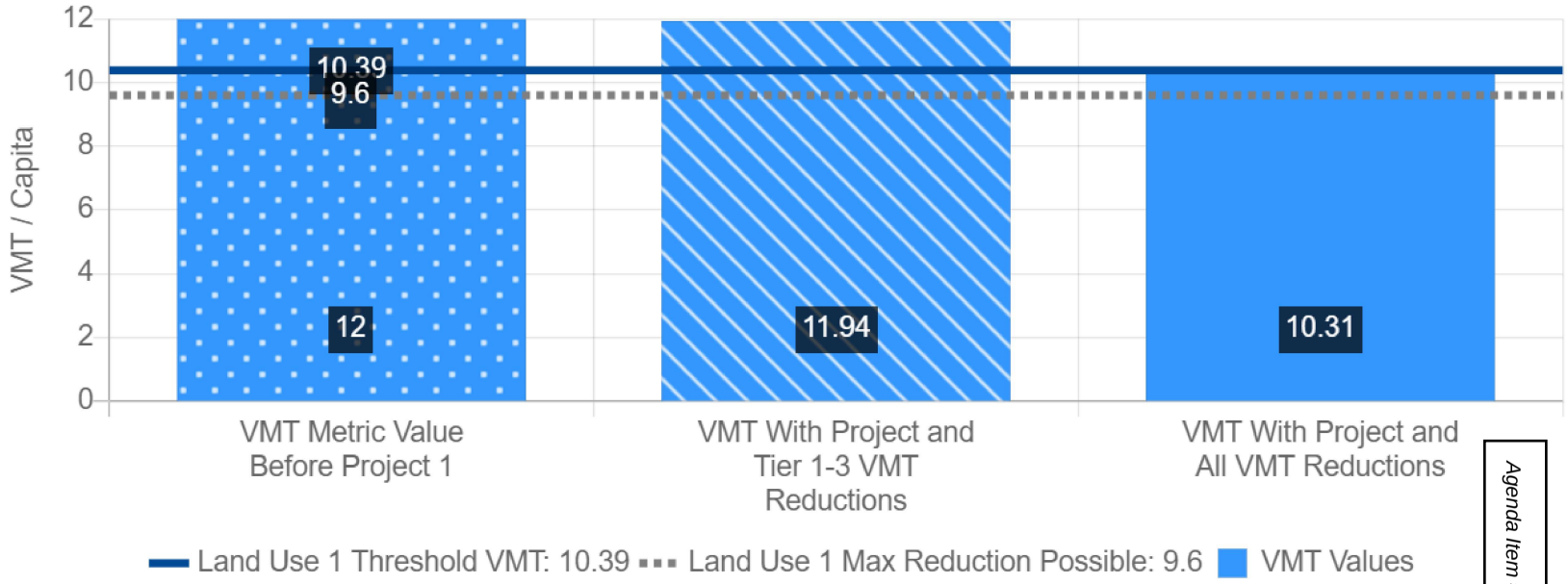
Agenda Item # 6.

Santa Clara Countywide VMT Evaluation Tool Report

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project:	Home-based VMT per Capita
VMT Baseline Description 1:	City Average
VMT Baseline Value 1:	12.22
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	12	11.94	10.31
Low VMT Screening Analysis	No (Fail)	No (Fail)	Yes (Pass)



Santa Clara Countywide VMT Evaluation Tool Report

Tier 1 Project Characteristics

PC01 Increase Residential Density

Existing Residential Density:	4.62
With Project Residential Density:	4.71

PC02 Increase Residential Diversity

Existing Residential Diversity Index:	0.87
With Project Residential Diversity Index:	0.86

PC03 Affordable Housing

PC04 Increase Employment Density

Existing Employment Density:	95.93
With Project Employment Density:	95.93

Tier 2 Multimodal Infrastructure

Tier 3 Parking

PK02 Provide Bike Facilities

Bicycle Parking:	20
Project End-of-trip Bike Facilities:	

Tier 4 TDM Programs

TP03 Car Share Programs

Car Share Program Percent of Eligible Residents/Employees:	100 %

TP07 Subsidized Transit Program

Percent of Transit Subsidy:	100 %

TP16 Unbundle Parking Costs from Property Cost (On Site Parking)

Is the Surrounding Street Parking Restricted?:	Yes
Monthly Parking Cost:	200 $USD

TP18 Voluntary Travel Behavior Change Program

Percent of Behavior Program Participants:	100 %

Agenda Item # 6.

Santa Clara Countywide VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: August 18, 2021, 11:48:54 AM

Project Name: 425 First St

Project Description: Multifamily residential project

Project Location

Jurisdiction:
Los Altos

APN	TAZ
16741019	194

Inside Transit Priority Area (TPA)?
No (Fail)

Analysis Details

Santa Clara Countywide VMT Evaluation Tool Version: 1

Data Version: VTA Countywide Model December 2019

Analysis Methodology: Parcel Buffer Method

Baseline Year: 2015

Project Land Use

Residential:

Single Family DU:

Multifamily DU: 20

Total DUs: 20

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 20 %

Low Income: 15 %

Parking:

Motor Vehicle Parking: 28

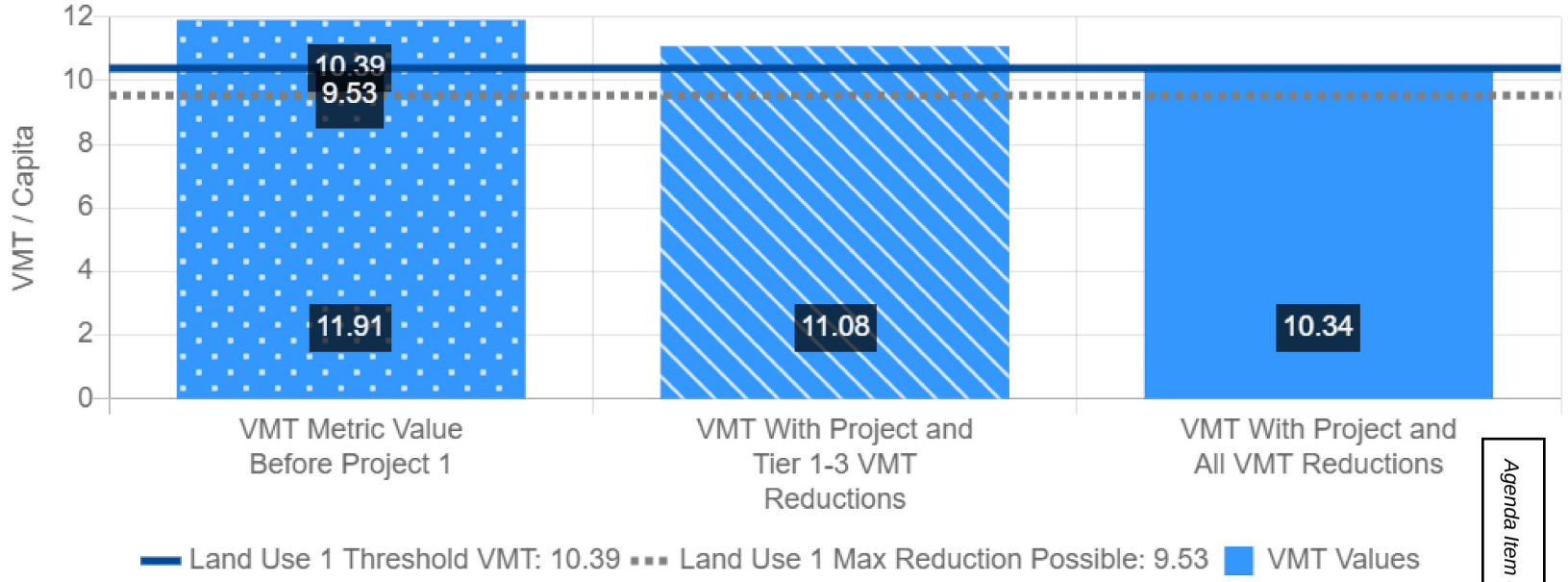
Bicycle Parking: 9

Santa Clara Countywide VMT Evaluation Tool Report

Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Without Project:	Home-based VMT per Capita
VMT Baseline Description 1:	City Average
VMT Baseline Value 1:	12.22
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	11.91	11.08	10.34
Low VMT Screening Analysis	No (Fail)	No (Fail)	Yes (Pass)



Tier 1 Project Characteristics

PC01 Increase Residential Density

Existing Residential Density:	4.73
With Project Residential Density:	4.8

PC02 Increase Residential Diversity

Existing Residential Diversity Index:	0.87
With Project Residential Diversity Index:	0.86

PC03 Affordable Housing

Very Low Income:	20 %
Low Income:	15 %

PC04 Increase Employment Density

Existing Employment Density:	95.84
With Project Employment Density:	95.84

Tier 2 Multimodal Infrastructure

Tier 3 Parking

Tier 4 TDM Programs

TP02 Bike Share Programs

Percent Change in Bike Trips:	6%

TP03 Car Share Programs

Car Share Program Percent of Eligible Residents/Employees:	100 %

TP07 Subsidized Transit Program

Percent of Transit Subsidy:	100 %

TP18 Voluntary Travel Behavior Change Program

Percent of Behavior Program Participants:	100 %

Santa Clara Countywide VMT Evaluation Tool Report

Project Details

Timestamp of Analysis: June 08, 2020, 02:51:31 PM

Project Name: 467 First Street

Project Description: 17,103 s.f. office

Project Location

Jurisdiction:
Los Altos

APN	TAZ
16741077	194

Inside Transit Priority Area (TPA)?
No (Fail)

Analysis Details

Santa Clara Countywide VMT Evaluation Tool Version: 1

Data Version: VTA Countywide Model December 2019

Analysis Methodology: Parcel Buffer Method

Baseline Year: 2015

Project Land Use

Residential:

Single Family DU:

Multifamily DU:

Total DUs: 0

Non-Residential:

Office KSF: 17

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

Motor Vehicle Parking: 51

Bicycle Parking: 8

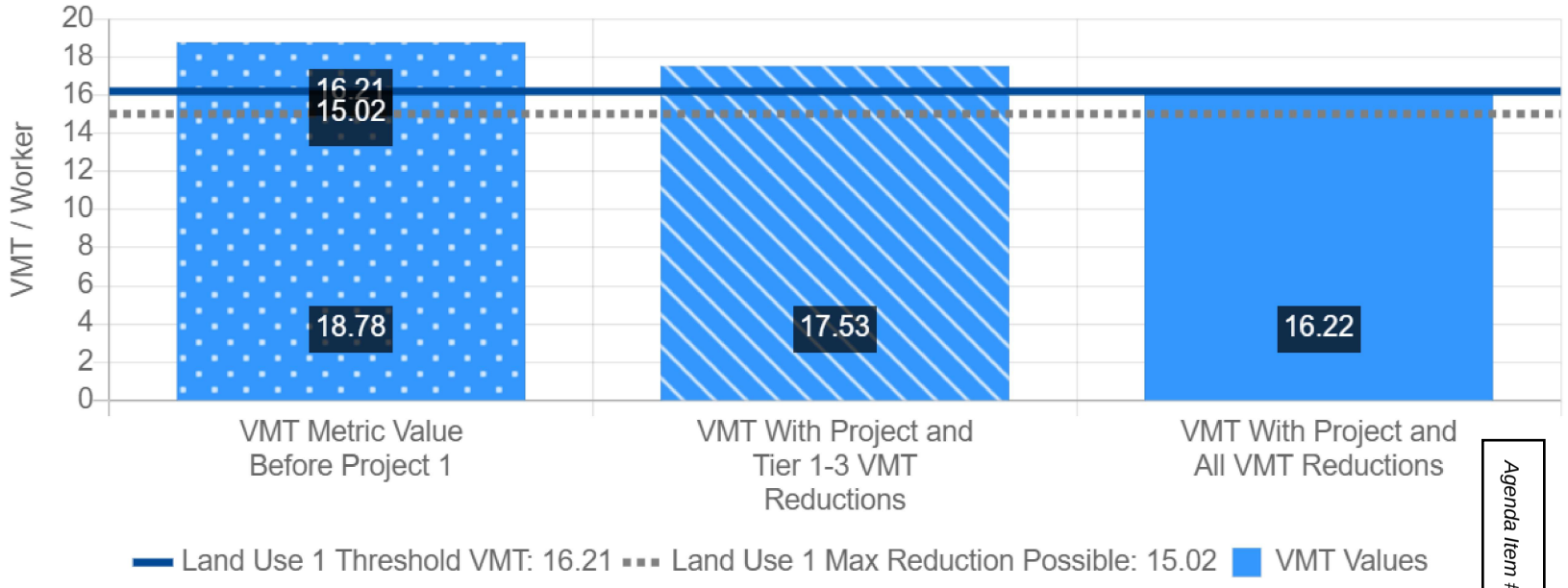
Agenda Item # 6.

Santa Clara Countywide VMT Evaluation Tool Report

Office Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Office
VMT Without Project:	Home-based Work VMT per Worker
VMT Baseline Description 1:	City Average
VMT Baseline Value 1:	19.07
VMT Threshold Description 1:	-15%
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	18.78	17.53	16.22
Low VMT Screening Analysis	No (Fail)	No (Fail)	No (Fail)



Tier 1 Project Characteristics

PC01 Increase Residential Density

Existing Residential Density:	4.7
With Project Residential Density:	4.7

PC02 Increase Residential Diversity

Existing Residential Diversity Index:	0.86
With Project Residential Diversity Index:	0.86

PC03 Affordable Housing

PC04 Increase Employment Density

Existing Employment Density:	93.29
With Project Employment Density:	94.27

Tier 2 Multimodal Infrastructure

Tier 3 Parking

PK01 Limit Parking Supply

Minimum Parking Required by City Code:	57
Total Parking Spaces Available to Employees:	51
Is the Surrounding Street Parking Restricted?:	Yes

PK02 Provide Bike Facilities

Bicycle Parking:	8
Project End-of-trip Bike Facilities:	Yes

Tier 4 TDM Programs

TP03 Car Share Programs

Car Share Program Percent of Eligible Residents/Employees:	100 %

TP04 CTR Marketing and Education

CTR Marketing/Education Percent Expected Participants:	100 %

TP07 Subsidized Transit Program

Percent of Transit Subsidy:	100 %

TP13 Ride-Sharing Programs

Expected Percent of Ride-Sharing Participants:	5 %