Draft Report

Vehicle Miles Traveled Policy

Prepared for the
Town of Windsor

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490 Mendocino Avenue, Suite 201 **SANTA ROSA**, CA 95401 707.542.9500
7901 Oakport Street, Suite 1500 **OAKLAND**, CA 94621 510.444.2600
w-trans.com

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Introduction

The California Environmental Quality Act (CEQA) establishes procedures to evaluate the environmental impacts of new development or infrastructure projects on communities, and transportation is one of several topic areas required to be evaluated. Projects that are determined to have impacts are required under CEQA to mitigate those impacts to the degree that is feasible.

Traditionally, the transportation impacts of land development and transportation projects were evaluated based on Level of Service (LOS), which, for intersections, measures the average delay that drivers experience. In 2013, Governor Brown signed SB 743, requiring amendments to the CEQA guidelines for analyzing transportation impacts, specifying that automobile delay is no longer considered to be a significant impact on the environment. The California Governor's Office of Planning and Research (OPR) determined that LOS-based significance thresholds should be replaced with a Vehicle Miles Traveled (VMT) metric, and in 2017, OPR sent the revised implementation guidelines to the Natural Resources Agency. The use of VMT as a significance threshold became mandatory in California on July 1, 2020.

The intent of SB 743 is to link the assessment of transportation impacts to other statewide goals. As described in the legislation, the use of VMT will "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

OPR developed the *Technical Advisory on Evaluating Transportation Impacts in CEQA*, 2018, as a guidance document to assist agencies in developing VMT significance thresholds and screening criteria. The publication includes recommended thresholds for certain land development projects and transportation projects. The Town of Windsor has relied upon the guidance contained within the *Technical Advisory* in establishing its own screening and significance thresholds.

Background

What is VMT?

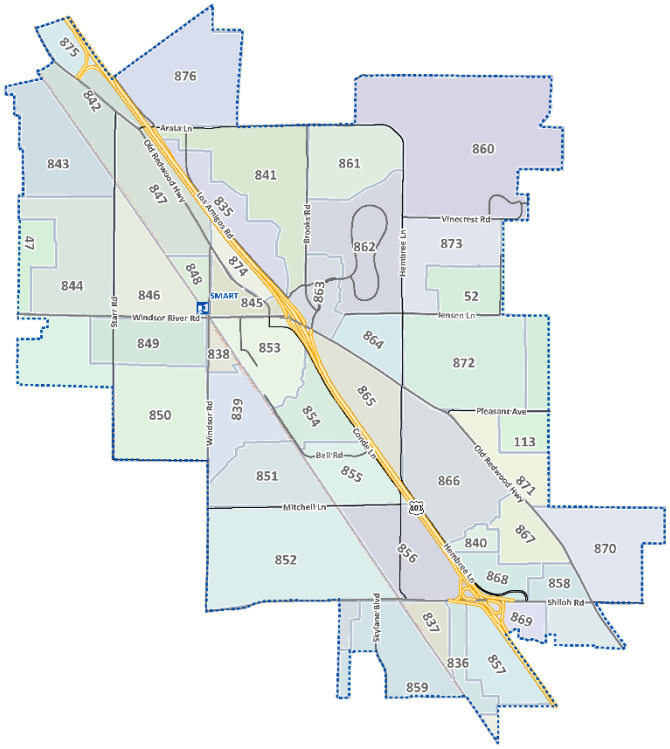
VMT is a measure of the number of daily trips multiplied by the length of those trips. While impacts measured using LOS evaluate a project's impact on delay that motorists will experience at intersections, VMT estimates the change in the amount of driving that a project will generate. In other words, LOS measures the impacts of projects on *drivers*, while VMT measures the environmental impacts of *driving*. Strategies to reduce the number and length of vehicle trips – and therefore VMT – include encouraging a more compact development pattern, providing access to a greater mix of land uses, and encouraging use of transportation modes such as transit, rideshare, bicycling, and walking.

By designing projects that result in fewer or shorter vehicle trips – and therefore lower project-related VMT – incoming development would support a broad range of goals in the General Plan and other adopted policies such as promoting active transportation, reducing greenhouse gas emissions, enhancing traffic safety, and reducing road maintenance costs.

Measuring VMT

While the concept of VMT is simple, measuring it can be complex. Generally, project VMT is estimated using travel demand models; the relevant model for Windsor is managed by the Sonoma County Transportation Authority (SCTA). The model analyzes travel patterns throughout the county, and for detailed analysis the county is divided into traffic analysis zones (TAZs). The SCTA model currently includes 42 TAZs covering the Town of Windsor.

Though VMT is typically measured using projections from a regional travel demand model, its calculation may also incorporate project-specific information (such as, for example, market research regarding the anticipated customer base of a commercial project). Online VMT calculator tools using local data are also available in some jurisdictions; such a tool is anticipated to be developed by SCTA and would be available for use in Windsor.



Windsor Traffic Analysis Zones

Types of VMT

In some cases, only certain components of VMT are analyzed. For residential projects, VMT analyses focus only on home-based trips; in other words, trips that begin or end at the home. For employment-based projects, VMT analyses focus only on the commute portion of the trip, meaning trips where either the origination or destination is the employee's home. Other uses such as retail are typically analyzed by evaluating total VMT.

For VMT transportation analyses being completed as part of California Environmental Quality Act

(CEQA) review, only the miles driven by passenger vehicles and light-duty pickup trucks are included. Note that while the VMT generated by heavy vehicles such as semi-trucks and large delivery trucks are excluded from transportation VMT analyses, they are still accounted for in other CEQA topic areas including greenhouse gas emissions analyses.

Comparisons to Regional Baseline VMT

Analyzing the VMT associated with a development or transportation project for CEQA purposes requires comparing the project's effects to those existing under baseline levels. The OPR Technical Advisory suggests that residential development should be measured against either the existing average regional VMT per capita or citywide VMT per capita, and that office/employment uses should be measured against the regional VMT per employee. The term "regional" as used by OPR generally refers to the territory within the area's regional Metropolitan Planning Organization (MPO) jurisdiction, in this case the nine-County Bay Area overseen by the Metropolitan Transportation Commission (MTC).

The Technical Advisory also states, however, that it may be appropriate to refer to a smaller geographic area such as the county if most people both live and work within that geographic area. According to data contained in the *Sonoma County Travel Behavior Study*, SCTA, 2020, approximately 97 percent of Windsor's vehicle trips remain within Sonoma County. Accordingly, using Sonoma County VMT averages rather than the nine-County Bay Area regional average is appropriate. Establishing existing VMT averages as well as project-level VMT using data produced by the SCTA travel demand model also presents a significant advantage in terms of consistency, avoiding the introduction of uncertainty arising from comparing a local model's VMT results to those produced by a regional model (i.e., mixing results from the SCTA and MTC models). It is also important to distinguish that while the SCTA model's boundary aligns with the County's, the model applies trip length adjustment factors to capture the VMT associated with external travel to the rest of the Bay Area, Mendocino County, and Lake County.

Based on these considerations, the regional baseline levels used for VMT analyses in the Town of Windsor correspond to Sonoma countywide averages produced by the travel demand model maintained and operated by SCTA.

Differences between VMT and LOS Significance Thresholds

In some cases, transportation impacts identified using VMT thresholds will be the opposite of what they were with LOS. Projects that are reflective of suburban development patterns evident in much of Windsor's growth over the past several decades may struggle to achieve VMT thresholds, while infill projects developed near the Town's core will generally perform well. Historically, development projects on urban edges tended to have low to moderate LOS impacts since these are the areas where roadway and intersection capacity is greatest, while development projects in denser activity areas such as the Town Green vicinity had greater LOS impacts given their proximity to areas already encountering auto congestion. With VMT, traffic congestion as measured by LOS is no longer considered to be an environmental impact. Activity centers perform well under VMT due to characteristics such as shorter distances between land use types, increased ease of traveling by non-auto modes (walking and biking), and proximity to transit, all of which reduce the number of miles driven by personal vehicle. In contrast, areas on urban edges generally remain reliant on auto travel, with fewer trips made by non-auto modes, generating higher levels of VMT and potential VMT impacts.

Screening Criteria

Use of Screening Criteria

CEQA allows for the use of screening thresholds or criteria to identify certain types of projects that can be expected to cause a less-than-significant impact without needing to conduct a detailed analysis (CEQA Guidelines sections 15063(c)(3)(C), 15128, and the environmental checklist included in CEQA Appendix G). The OPR *Technical Advisory* suggests that lead agencies use such criteria to "screen out" VMT impacts for qualifying projects and includes descriptions of several screening types. Projects that meet one or more screening criteria are generally required to include only a qualitative VMT assessment, in some cases substantially streamlining the amount of analysis needed to support VMT findings in CEQA.

Six VMT screening criteria for land use projects have been identified by the Town. These screening criteria identify the types and/or locations of projects where a quantitative VMT analysis may not be required or can be substantially streamlined. Five of the thresholds are referenced in the OPR *Technical Advisory*, and an additional threshold for local-serving community facilities commonly being used by jurisdictions is also presented. A table containing screening criteria for transportation projects is also provided using guidance contained in the *Technical Advisory*.

Land Use Project Screening

A. Small Project Screening

Small project VMT screening is one of the most powerful tools available in streamlining CEQA for development projects and should be carefully considered to ensure balance with other Town goals and directives. The *Technical Advisory* suggests that projects generating or attracting fewer than 110 daily trips may be presumed to have a less-than-significant VMT impact. OPR developed the 110-trip threshold in consideration of CEQA categorical exemptions for existing facilities including additions to structures of up to 10,000 square feet and standard Institute of Transportation Engineers (ITE) trip generation rates. The Town may choose to use the OPR guidance or develop its own customized screening criteria using available research. Three potential options for small project screening are outlined below.

- OPTION 1: Apply the OPR 110 daily trips threshold to all land uses.
  - Approximate screening levels by land use:
    - 11 single-family homes
    - 15 multi-family homes
    - 11 ksf office
    - 22 ksf light industrial
    - 63 ksf warehousing
    - 13 rooms lodging
  - Advantages: strong evidence and justification exists through consistency with *Technical Advisory* and practices used by many jurisdictions throughout the state; easily calculated using standard ITE trip generation rates
  - Disadvantage: Less screening potential for small residential developments compared to other approaches

- OPTION 2: Apply a threshold of 836 daily VMT and equivalency reference to 20 residential units or 10,000 square feet of nonresidential

- The 836 daily VMT value has been cited by several agencies and is based on a Fehr & Peers white paper that established an equivalency between the 110-trip threshold cited by OPR, which is rooted in a CEQA categorical exemption for expansions of nonresidential uses up to 10,000 square feet, and the equivalent VMT generated by residential units using California Household Travel Survey (CHTS) data
- Approach uses statewide data rather than Sonoma County data
- Advantages: ties threshold to VMT which, on its face, is more logical than using a trip-based threshold; allows VMT calculation to be used for screening purposes; has been applied in multiple jurisdictions
- Disadvantages: fewer nonresidential buildings would be screened compared to the 110-trip threshold (for instance, only 10 ksf of light industrial would be screened using this threshold compared to 22 ksf when using the 110-trip threshold)
- Precedence:
  - Method cited as an option by Sacramento Area Council of Governments (SACOG)
  - City of Palo Alto
  - City of Berkeley
  - City of Richmond
  - City of Walnut Creek

- OPTION 3: Apply the *OPR Technical Advisory* 110-trip threshold for nonresidential uses (same as Option 1), and a threshold of 23 units for residential uses as established using Sonoma County specific data as follows:
  - Multiply the 110-trip OPR threshold by the 9.10-mile average residential trip length in Sonoma County (obtained from SCTA model) to obtain an equivalent VMT generation of 1001 VMT/day
  - A level of 1001 VMT/day is equivalent to that generated by 23 residences based on an average household VMT generation of 42.15 VMT (42.15 VMT per household is obtained by multiplying the Sonoma countywide average of 16.53 home-based VMT per capita by 2.55 average persons per household based on census ACS data for 2019)
  - Advantages: establishes a larger threshold than OPR for residential uses, aligning with Town and State goals related to streamlining housing production; determines a VMT equivalency between the OPR 110-trip threshold, which is rooted in a CEQA exemption for nonresidential uses, to residential uses based on residential travel patterns that are specific to Sonoma County
  - Disadvantage: potential for some confusion since different thresholds are used for residential versus nonresidential uses
  - Precedence: Wide application of OPR threshold; some jurisdictions including the City of Hayward and Sacramento County have used a similar approach to establishing residential thresholds

A summary of how each option would apply to several different land use types is shown in Table 1.

Table 1 – Summary of Small Project Screening Options

Option	Approximate Screening Level			
	Residential	**Office**	**Industrial**	**Warehouse**
1. 110 daily trips (cited in *Technical Advisory*)	11 single family units 15 multifamily units	11,000 sf	22,000 sf	63,000 sf
2. 836 daily VMT	20 units	10,000 sf	10,000 sf	10,000 sf
3. 110 daily trips for nonresidential, 23 units for residential	23 units	11,000 sf	22,000 sf	63,000 sf

Notes: sf=square feet

The Town of Windsor may deny use of "small project" screening if evidence exists that the project could generate a potentially significant level of VMT.

Question for Town Decision Makers: What small project screening criteria should be applied in Windsor?

B. Map-Based Screening

The Technical Advisory indicates that residential and office projects determined to be in a low-VMT area may be screened from quantitative VMT analysis using maps. Low-VMT areas are identified using a regional travel demand model, in this case the SCTA model. Projects located in traffic analysis zones that have VMT per capita or VMT per employee metrics below the applied significance criteria (15 percent or greater below average) may qualify for screening. Projects using map-based screening should be consistent with the General Plan land use designation for the parcel.

Town staff reviewed the areas of Windsor shown by the SCTA model to have low VMT. Several areas were removed from map-based screening diagrams given staff's knowledge of the built environment and local characteristics that may not be fully captured by the countywide model, or because of the low numbers of existing residents or employees in the traffic analysis zones that may be producing skewed modeling results. Exclusion of these areas does not mean a potentially significant VMT impact exists; it simply means that projects in these areas would not be automatically screened and that a quantitative VMT analysis would be needed if no other screening provisions apply.

Screening maps showing residential and employment low VMT areas in Windsor are included in Appendix A. The maps are based on significance thresholds of 15 percent below countywide VMT per capita and VMT per employee. It is important to note that these map-based screening maps are based on projections contained within the SCTA regional travel demand model, which is routinely updated every few years, and as such they are subject to change over time. VMT analysts should confirm with the Town that the latest map versions are being used.

Note that the maps also screen areas within one-half mile of the Windsor SMART station, which may also be presumed to have a less-than-significant VMT impact (discussed in further detail below).

C. Local-Serving Uses Screening

In its recommended thresholds for retail project types, the *Technical Advisory* indicates that, unlike regional retail, local-serving retail development typically redistributes shopping trips rather than creating new trips, noting that "lead agencies generally may presume such development creates a less-than-significant transportation impact," and that lead agencies "are likely in the best position to decide when a project will likely be local-serving." The document continues by noting, "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." While many jurisdictions have used the 50,000 square foot retail size cited by OPR as their screening criteria for local-serving retail, other jurisdictions have modified this value to reflect local conditions as recommended. Town staff have determined the appropriate screening criteria size for general retail stores and services in Windsor to be 10,000 square feet per tenant. In addition to specifying screening criteria for general retail and services, the Town has established a screening level of 30,000 square feet to grocery/drug stores and local-serving medical services, recognizing the larger building/tenant space footprints of these type of uses and particularly heavy orientation to the local population.

The Town acknowledges that certain types of stores or services larger than 10,000 square feet may still be local-serving and cause no increase to regional VMT. While these uses would not be "screened" from analysis, it may be possible to evaluate them qualitatively if justified with evidence such as (but not limited to) market demand studies and consideration of the locations of "competing" similar uses. For major uses anticipated to draw a substantial customer/visitor component from the wider region, a quantitative VMT assessment would be required.

The Town of Windsor retains discretion in the applicability of local-serving uses screening criteria as well as the determination of whether sufficient evidence exists for non-screened uses to rely upon a qualitative assessment.

D. Local-Serving Community Facilities Screening

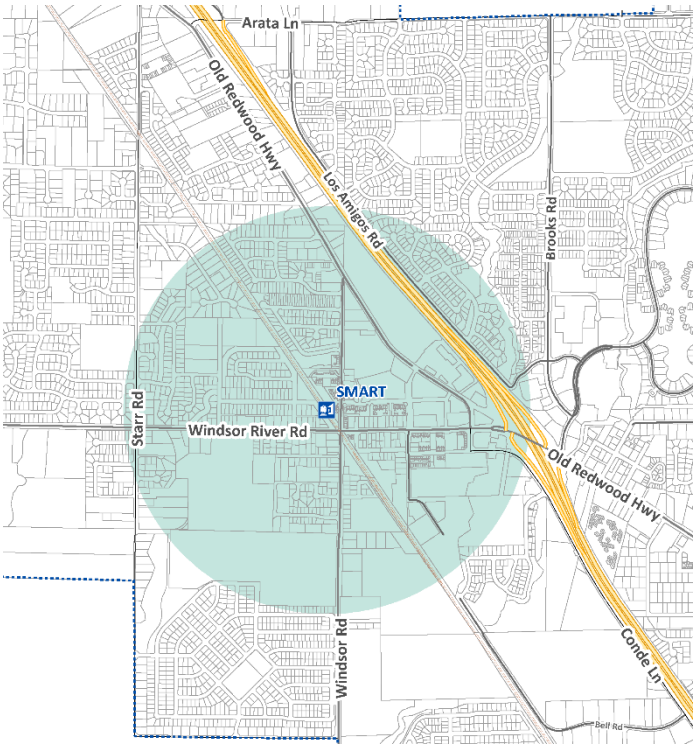
In addition to allowing VMT screening for local-serving retail uses, many jurisdictions have used guidance in the Technical Advisory to include VMT screening for local-serving community facilities. Town of Windsor staff have determined that screening for local-serving community facilities is appropriate since these uses are inherently intended to serve the Town's residents, with few trips occurring beyond the Town, leading to short trip lengths that would not substantially affect VMT. Examples of local-serving community facilities include (but are not necessarily limited to) local government facilities, libraries, neighborhood parks, community centers, post offices, and daycare facilities. The Town has determined that both private and public schools in Windsor should be excluded from this screening category. The Town also retains discretion in disallowing application of this screening criteria if it is determined that the use could potentially draw a substantial amount of vehicular traffic from beyond the Town.

E. Transit Screening

CEQA Guidelines Section 15064.3 (b)(1) and the Technical Advisory indicate that projects within one-half mile of an existing or planned major transit stop, or a stop along a high-quality transit corridor, should generally be presumed to have a less-than-significant VMT impact. In Windsor, the downtown SMART commuter rail station qualifies as a major transit stop. There are currently no bus-based routes that meet the high-quality transit corridor definition which indicates service intervals of no greater than 15 minutes during peak periods.

The *Technical Advisory* identifies several situations where transit screening should *not* be applied.

- The project has a Floor Area Ratio (FAR) of less than 0.75;
- The project includes more than the minimum number of parking spaces required by the Town's zoning code;
- The project replaces affordable residential units with a smaller number of moderate- or high-income units



Transit Screening within 1/2 mile radius of SMART Station

Transit screening in the Town of Windsor would be consistent with the guidance provided by the State in the *Technical Advisory*.

F. Affordable Residential Development Screening

The *Technical Advisory* states, "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 impacts for a 100 percent affordable residential development in infill locations." In the Town of Windsor, all projects including 100 percent deed-restricted affordable housing would be presumed to result in a less than significant VMT impact and screened from VMT analysis. Affordable housing developments including a manager's unit would also be screened.

Summary of Land Use Project VMT Screening Criteria

A summary of the draft VMT screening criteria is shown in Table 2.

Table 2 – Land Use Project VMT Screening Criteria

Screening Type	*Technical Advisory* Suggested Criteria	Windsor Criteria
A. Small Project	Projects generating fewer than 110 trips per day	To be determined; three options described above include: 1. 110 daily trips; 2. 836 Daily VMT; 3. 110 daily trips for nonresidential, 23 units for residential
B. Map-Based Screening	Residential and office projects located in low-VMT areas	Residential and employment VMT screening maps are included in Appendix A (screening maps are subject to change over time as the SCTA model is updated)
C. Local-Serving Retail	Retail projects of 50,000 square feet or less	Retail and service uses up to 10,000 square feet per tenant; grocery/drug store and local-serving medical uses up to 30,000 square feet
D. Local-Serving Community Facilities	Not directly addressed (precedent set by other jurisdictions)	Uses such as local government facilities, libraries, neighborhood parks, community centers, post offices, and daycare facilities (schools are excluded)
E. Transit Screening	Projects located within one-half mile of a high-quality transit corridor or major transit station, provided that the project does *not* a) have a floor area ratio of less than 0.75, b) exceed minimum parking requirements, or c) replace affordable units with a smaller number of moderate- or high-income units	Consistent with *Technical Advisory*, i.e., projects within a half-mile distance from the downtown SMART station
F. Affordable Residential Development	100% affordable housing in infill locations	100% deed-restricted affordable housing; manager's unit may also be screened

Transportation Project Screening Criteria

The *Technical Advisory* provides a list of transportation project types that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis. Such project types can be screened from VMT analysis. The Town of Windsor will apply these same screening criteria, adding a category for roadways primarily intended for emergency vehicle access. The transportation project screening criteria are summarized in Table 3.

Table 3 – Screening Criteria for Transportation Projects	
Category	**Project Type**
Maintenance	Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., roadways; bridges; culverts; cameras, message signs, detection, signals; and assets that serve bicycle and pedestrian facilities) and that do not add motor vehicle capacity
	Timing of signals to optimize vehicle, bicycle, or pedestrian flow
	Rehabilitation and maintenance projects that do not add motor vehicle capacity
Roadway Shoulder	Roadside safety devices or hardware installation such as median barriers and guardrails
	Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
Auxiliary and non-through 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 roadways or lanes needed primarily for emergency vehicle access
	Reduction in number of through lanes
	Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
	Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
Traffic Control Devices	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
	Installation of roundabouts or traffic circles
Traffic Calming	Installation or reconfiguration of traffic calming devices
Parking	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)
Wayfinding	Addition of traffic wayfinding signage
Non-Auto Modes	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
	Initiation of new transit service
Charging Infrastructure	Installation of publicly available alternative fuel/charging infrastructure

Thresholds of Significance

Use of Significance Thresholds

The term "threshold of significance" refers to a standardized measure used by lead agencies to assess the significance of a project's environmental effects when completing CEQA analyses. The CEQA Guidelines define a threshold of significance to be "an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant." (CEQA Guidelines section 15064.7(a)). Agencies are allowed to establish their own significance thresholds as long as such decisions are supported by "substantial evidence."

With respect to VMT analysis, the OPR *Technical Advisory* establishes recommended thresholds of significance for residential, office, retail, mixed-use, redevelopment, and transportation projects. OPR's recommended thresholds have been established using substantial evidence supporting three statutory goals specified in CEQA: reduction of greenhouse gas emissions, development of multimodal transportation networks, and a diversity of land uses (PRC section 21099(b)(1)). Jurisdictions including Windsor are generally maintaining consistency with the significance thresholds identified in the *Technical Advisory* for these project types. For other project types, the *Technical Advisory* indicates that lead agencies may develop their own thresholds, though they should continue to consider the three statutory goals from PRC section 21099 noted above.

Significance Thresholds for Land Use Projects

A. Residential Projects

Technical Advisory Guidance: 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. 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.

Application in Windsor: The guidance contained in the *Technical Advisory* has been widely applied by jurisdictions throughout the State. The Town shall be consistent with this approach and set the threshold at 15 percent below the regional home-based VMT per capita, with the region defined as the County of Sonoma.

B. Office/Employment Projects

In Windsor, this category can reasonably be used to capture the VMT characteristics of most employment-focused uses (excluding industrial, as described below).

Technical Advisory Guidance: 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.

Application in Windsor: The *Technical Advisory* guidance for office land use types has been widely adopted. The Town shall be consistent with the State's 15 percent below regional average home-based VMT per employee threshold, with "regional" being defined as the County of Sonoma.

C. Industrial Projects

Technical Advisory Guidance: The Technical Advisory provides no guidance on industrial land use types. However, during "office hours" webinars conducted by OPR in summer 2020, OPR staff acknowledged that industrial uses differ from other types of employment functions, and offered the opinion that jurisdictions looking to establish significance thresholds for industrial employment uses may benefit from reviewing the thresholds set by San Jose and other jurisdictions.

Precedence Established in Other Jurisdictions: The City of San Jose applies a VMT significance threshold for industrial projects that is equal to the regional average VMT per employee, rather than 15 percent below the regional average VMT per employee as applied to office uses. In its September 2020 *Transportation Analysis Guidelines*, the County of Sacramento also establishes a VMT significance threshold for industrial employment projects that is equal to the regional average VMT per employee instead of the 15 percent below regional average applied to offices. Sacramento County provides the following justification for applying a different VMT significance threshold for industrial employment uses.

> *Industrial uses are desired to be located in locations that are less dense and not within urban areas which typically have higher VMT per employee. Industrial land uses are land intensive; therefore, placing industrial land uses in less urban areas characterized by having higher VMT per employee allows land in efficient VMT areas to be more effectively utilized as high density residential and commercial or office/business professional uses. This threshold is consistent with achieving an overall reduction in regional VMT, as it recognizes that industrial uses, which are relatively lower total VMT generating uses, are most appropriate in areas that have a lower potential to reduce VMT because it results in more available land within areas with a high potential to achieve VMT reductions available for more dense development.*

Application in Windsor: Consistent with the approach used by San Jose and Sacramento County, a significance threshold equal to the regional average home-based VMT per employee, or in this case the countywide average home-based VMT per employee metric available from the SCTA model, shall be applied to industrial land use projects in Windsor. Types of industrial uses may include warehousing, manufacturing, and distribution uses for VMT analysis purposes. Industrial projects with a substantial office component (wherein conventional office components generate 20 percent or more of a project's daily trips) shall be treated similarly to a mixed-use project and analyze the office component separately using "office/employment" significance thresholds.

As explained in the County of Sacramento's justification, industrial-type uses are often incompatible with residential and urban areas where networks of facilities to support travel by non-auto modes exist. In Windsor, regional VMT reduction targets can be most effectively met through land use planning efforts including intensification of residential and office uses near transit and SMART; placing industrial type facilities in these types of transit-rich environments would prove much less effective at reducing regional VMT than higher-density residential and employment uses.

D. Retail Projects

Technical Advisory Guidance: 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, estimating the total change in VMT 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 have a significant impact by increasing total VMT in the region.

Application in Windsor: In Windsor, retail and service uses with tenants up to 10,000 square feet, as well as grocery, drug store, and local-serving medical uses up to 30,000 square feet, would be screened from quantitative VMT analysis. Projects exceeding these sizes will need to complete a quantitative VMT analysis using the SCTA regional travel demand model, market research, and/or other methods approved by the Town. A retail project that results in an increase to total countywide VMT would be considered a significant impact.

E. Mixed-Use Projects

Technical Advisory Guidance: 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.

Application in Windsor: Each component of a mixed-use project shall be addressed independently, and in consideration of the guidance provided for residential, office, and retail projects. In cases where one or more uses comprise only a minor portion of the overall project (i.e., a portion of a project's residential units being used for live/work purposes, or inclusion of a coffee shop in a residential project), the Town retains discretion to allow analysis of only the dominant use(s). The Town defines minor project components as being those generating no more than 20 percent of the site's total daily trip generation.

F. Redevelopment Projects

Technical Advisory Guidance: The Technical Advisory indicates that where a project replaces existing VMT-generating land uses, the project would have a less-than-significant impact if the replacement leads to a net overall decrease in VMT. An exception would be a redevelopment project that replaces affordable residential units with a smaller number of non-affordable units.

Application in Windsor: Consistent with State guidance, the Town shall apply a VMT significance threshold for redevelopment projects wherein projects that reduce total VMT may be presumed to have a less-than-significant VMT impact. Where redevelopment would result in an *increase* in total VMT, the threshold(s) applicable to the proposed land use type would then apply. Town Staff shall retain discretion in identifying the baseline VMT to be used in the comparison calculation (i.e., whether the baseline reflects a prior use, permitted use, or current use).

G. Other Land Use Project Types

Residential, office, industrial, and retail land uses are the most common types of development that occur in Windsor. VMT significance thresholds for these uses are well-established by OPR and jurisdictions throughout the State. VMT analysis methods and thresholds for other land use types continue to evolve, as do the tools and data available to analyze them. The Town shall consider VMT impacts for other land use types on a case-by-case basis, as most other jurisdictions with adopted VMT policies have chosen to do. Applicants shall consult with the Town to discuss and establish appropriate significance thresholds.

General Guidance for Hotel and Visitor-Focused Uses

Hotels and other visitor-focused uses should be considered on a case-by-case basis, with any applied analyses methods and thresholds approved by the Town. VMT assessments for such uses will generally require consideration of the project's intended customer base. Many jurisdictions treat hotel uses similarly to retail, where small- to mid-sized hotels can be expected to shift travel patterns rather than generate new VMT. Unless a hotel includes a major attraction, resort, or convention component, on its own it is unlikely to draw *new* visitors to the County; it will instead redistribute where visitors stay. In Windsor specifically, tourism-based hotels could potentially reduce visitor trip lengths if they attract guests visiting the area's Russian River and Alexander Valley wine regions that would otherwise have stayed in Santa Rosa, or those that would have traveled to the area via

"day trips" from the inner Bay Area. Business-oriented hotels may have a limited or potentially beneficial effect on regional VMT given the Town's proximity to the Sonoma County Airport, and the propensity for hotel stays to occur near where the business activity is taking place. Other visitor uses like smaller-scale wineries may also tend to generate low levels of VMT since they are typically visited along with several other wineries by visitors on the same day, particularly when located within areas like Windsor that have a concentration of wineries within and near the Town. VMT analyses for these types of visitor-serving uses may often be completed qualitatively, citing research and quantitative data as available. Major visitor-serving uses such as resort hotels, convention facilities, wineries with large visitor-attracting components beyond tasting, or major attractions like amusement parks that attract visitors from the broader region are examples of visitor-serving projects that may need to complete a quantitative VMT analysis.

Significance Threshold for Transportation Projects

H. Transportation Project

Technical Advisory Guidance: The VMT associated with transportation projects must be considered in CEQA evaluations. Roadway projects that substantially increase vehicular capacity, particularly on arterial roadways and freeways, have been shown to increase VMT through induced demand and should be analyzed quantitatively using models or accepted methodologies, such as those referenced in the *Technical Advisory*. The *Technical Advisory* also provides a list of transportation project types (summarized in Table 3) that would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis. Most of the transportation project types that would be completed in Windsor would be screened and not require a quantitative VMT analysis.

Application in Windsor: Transportation projects resulting in induced travel and an increase in countywide VMT shall be considered a significant VMT impact. The transportation project types identified in the *Technical Advisory* as being unlikely to lead to a substantial or measurable increase in vehicle travel may be presumed to have a less than significant VMT impact. Locally-serving roadways constructed as part of new development projects are not expected to directly create induced travel; in such cases VMT significance shall be assessed by evaluation of the development project's land use component.

VMT Significance Thresholds Summary Table

A summary of the VMT significance thresholds for the Town of Windsor is shown in Table 4.

Table 4 – VMT Significance Thresholds by Project Type		
Project Type	**VMT Metric**	**Significance Threshold**
A. Residential	Home-Based VMT per Capita	Project exceeds a level of 15 percent below the Countywide Average VMT per Capita
B. Office/Employment	Home-Based Commute VMT per Employee	Project exceeds a level of 15 percent below the Countywide Average VMT per Employee
C. Retail	Total VMT	Net increase in total Countywide VMT
D. Mixed-Use	Use Dependent	Evaluate each component separately using above thresholds; minor components generating no more than 20 percent of the project's daily trips may be excluded upon review and approval by the Town
E. Industrial	Home-Based Commute VMT per Employee	Project exceeds the Countywide Average VMT per Employee
F. Redevelopment	Total VMT	Project total VMT increases; in such cases project shall be analyzed using the above specified threshold(s) for the proposed use
G. Other Land Uses	Consult Town Staff	Case-by-case assessment; consult Town Staff
H. Transportation Project	Total Countywide VMT	Project results in induced travel demand that increases total countywide VMT; VMT for new or improved local-serving roadways serving a development assessed through analysis of the project's land use component

VMT Mitigation

Overall Approach to Mitigating VMT

It is possible to reduce a development project's VMT impacts through one or more of the following mitigation approaches.

1. Modify the project
2. Implement Transportation Demand Management (TDM) measures
3. Implement physical non-auto mode improvements
4. Participate in Future VMT Mitigation Programs

The publications *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity*, California Air Pollution Control Officers Association (CAPCOA), 2021, as well as its predecessor document *Quantifying Greenhouse Gas Mitigation Measures*, CAPCOA, 2010, contain strategies aimed at reducing greenhouse gas emissions including those related to transportation and VMT. The documents also contain guidelines and methodologies that serve as the primary resource used in quantifying the effectiveness of varying VMT mitigation strategies. Additional research beyond that contained in these publications may also be used as appropriate, as may new research as it is released.

The following sections describe potential mitigation strategies that could be implemented in Windsor. It is critical to note that both the number of available mitigation options as well as the effectives of individual strategies are more limited in a suburban community such as Windsor as compared to more urbanized locations. Based on guidance in the 2010 CAPCOA publication, the maximum achievable VMT mitigation in Windsor is likely to be in the 15 to 20 percent range, though achieving such levels may be challenging for most projects, particularly for those on the periphery of the Town. It is anticipated that some development projects will be unable to achieve VMT thresholds, even with mitigation.

Project Modifications

Integrate Affordable Housing

Research indicates that the VMT generated by residents of deed-restricted affordable housing is less than that generated by residents of market-rate housing. A methodology published in *Income, Location Efficiency, and VMT: Affordable Housing as a Climate Strategy*, The California Housing Partnership, 2015, can be used to determine the potential VMT reductions associated with provision of on-site affordable housing (this method is also currently used by the City of San Jose). Research indicates that the largest VMT reductions are associated with affordable units in the "extremely low" category, with lesser deductions occurring through affordable units in the "low" category. VMT generated in "moderate" income categories is generally equivalent to non-restricted units according to research so does not typically qualify for a VMT deduction. By increasing the percentage of deed-restricted affordable units in a development, a project may be able to reduce its effective per capita VMT and VMT impacts.

Increase Residential Density

As the effective residential density of a development increases, the per capita VMT is reduced. The CAPCOA publications includes a methodology to determine the VMT reductions associated with increases in residential density using conventional large-lot single-family home development as a baseline. Incorporation of accessory

dwelling units (ADU) can also be an effective way to increase the effective residential density within detached single-family residential areas, helping to reduce overall per capita VMT and VMT impacts.

Increase Mix of Uses on Project Site

Increasing the diversity of land use types within a development can reduce VMT since trips between different uses can often be made by non-auto modes, and since the distances between uses are shorter. For example, adding a small retail use (particularly grocery and food-based uses) to a large multifamily development may result in some trips being "captured" onsite, reducing VMT. Such effects are similar to those encountered at larger mixed-use developments that include a mix of residential, employment, and retail/service functions.

Transportation Demand Management Measures

Transportation Demand Management (TDM) is typically categorized as a set of strategies aimed at encouraging transit use, walking, biking, and carpooling while reducing single occupant vehicle trips, vehicle miles traveled, and parking demand. TDM primarily focuses on programmatic elements as opposed to physical infrastructure to cost-effectively reduce VMT, congestion, and parking demand, while also addressing broader community concerns such as sustainability and equity goals. The CAPCOA publications are typically relied upon as the sources of methodologies to quantify TDM effectiveness levels. Following are several different types of TDM measures that can be implemented as part of VMT mitigation strategies; note that additional measures beyond this list may also be possible depending on the specific characteristics of the proposed development.

TDM Coordination and Marketing

a. **On-Site or Contracted TDM Coordinator.** TDM Coordinators are key resources in providing education, outreach, and marketing of TDM services for both residential and commercial land uses. A person can serve as a Coordinator full-time for a large population or this role can be part of the part-time duties of someone who is employed by the company, home-owners association (HOA), or other organization in question. The Coordinator performs a key role in marketing, implementing, and monitoring the various TDM strategies intended to reduce single-occupant vehicle trips and parking demand. The TDM Coordinator is in charge of providing up-to-date information to residents and employees regarding mobility options.

b. **TDM Marketing.** The TDM Coordinator provides materials to residents and employees to increase awareness of programs available, including the benefits of trip and parking reduction, alternative mode options, and local street parking restrictions. Marketing materials include welcome packets to new residents and employees. An alternative mode kiosk to provide information about (1) transit routes and schedules, (2) carpooling and vanpooling, and (3) bicycle lanes, routes, paths, and facilities can encourage residents, employees, and visitors to use alternative modes of transportation by reducing uncertainty in their travel. Additionally, residents are provided with welcome packets that include information on transit passes, bike share options, transit maps and schedules, as well as contact information for the TDM Coordinator.

Shared Ride Measures

Carpooling and vanpooling are some of the most common and cost-effective alternative modes of transportation and are measures that both employees and residents can adopt. There are numerous benefits to ridesharing. Carpooling can reduce peak-period vehicle trips and increase commuters' travel choices. Further, it reduces congestion, road and parking facility costs and pollution emissions. Carpooling tends to have the lowest cost per passenger-mile of any motorized mode of transportation as it makes use of a vehicle seat that would otherwise be empty. Carpooling also provides financial savings to consumers by decreasing fuel and parking costs.

a. **Rideshare Matching.** The greatest barrier to carpooling is often simply being able to identify other employees or residents with the same travel route. The most effective approach is to create personalized trip planning information, regardless of mode, for employees and residents. However, personalized trip planning is often expensive. An alternative are services that can assist in ride-matching that are less customized. The most basic publicly available service is 511.org's free ridematching service, Merge. There are also various private ridematching providers (e.g., Zimride, RideAmigos, Via, Scoop) that can effectively create carpool networks while making them safe and convenient for their users. Information on a variety of programs is offered through Go Sonoma and 511.org.

b. **Vanpooling Program.** Vanpooling can provide several advantages. Vans are defined as vehicles able to carry at least six adults and in addition to reducing VMT by consolidating employee trips, can reduce the cost of commuting for employees by removing the need for workers to put mileage on their own vehicles and, depending on the level of subsidy, they may not need to pay for gas. For tax purposes, employers may be able to deduct the costs of vans as a "qualified transportation fringe benefit."

c. **School Pool Matching Program.** Residential uses generate a substantial amount of traffic associated with school pick-up and drop-off trips. A school pool program seeks to match families in carpools for these trips, thereby reducing school-related VMT. Such a program could be overseen by an HOA or potentially outsourced to a company that manages TDM programs. Although individual school pool matching programs can be implemented, a school pool matching program designed to connect project residents with others in the neighborhood would be expected to substantially increase participation.

Bicycle-Related Measures

a. **Bicycle Repair Station.** Bicycle repair stations, consisting of tools and amenities, make it convenient for residents and employees to repair bicycles on-site. These repair stations often provide basic amenities such as tire pumps and tools.

b. **Long- and Short-Term Bicycle Storage.** Multifamily residential projects can provide long-term bike parking, including facilities such as lockers or secure on-site parking areas. These sorts of storage provide a greater level of security for bicycle users traveling frequently and parking for longer periods of time. Nonresidential long-term bike parking can also incentivize bike usage at larger employment sites. Short-term bicycle parking should be provided at both multifamily and nonresidential uses and includes racks or other relatively simple facilities that allow users such as guests or visitors the opportunity to park their bikes for short periods using padlocks or other basic security measures. In general, bicycle storage alone has a minimal effect on VMT but supports a greater trip reduction program by providing opportunities for non-motorized travel.

c. **Bicycle Shower and Locker Facility.** Providing end of trip facilities to offer convenience and security for cyclists may also be considered. Commuters who bicycle or walk may arrive wet, muddy, or sweaty. Providing such facilities can encourage bicycle commuting. In general, bicycle facilities have a minimal effect on trip generation and parking demand but are critical supports for the greater trip reduction program by providing opportunities for non-motorized travel.

Parking-Related Measures

a. **Unbundled Parking.** Typically, the cost of parking that is provided with leased or owned residences is combined with the price of the unit. By doing so, it encourages auto-ownership since residents must pay for parking regardless of whether they are using it or not. In order to reduce auto-ownership and auto use, projects could "unbundle" the cost of parking from the price of residential units by charging separately for parking. In this way, residents can opt to pay for parking based on their need, in turn encouraging households with fewer vehicles to locate there based on its affordability.

b. Parking Cash-Out. As noted above, many residential buildings offer free parking for residents and the same is often given as a fringe benefit to employees. This serves as a strong disincentive for employees to not drive to work. Instead, the project should both price parking for employees on a daily basis and offer a "cash-out" to those who do not drive to work. Under a parking cash-out program, an employer offers the cash value of the parking subsidy to any employee who does not drive to work. Offering employees the option of a "cash out" incentive to use an alternative mode of transportation (transit, bike, walk, or carpool to work) will help to reduce vehicle commute trips, emissions, and parking demand.

c. Priority Parking. An easy way to promote ridesharing is to designate priority employee parking spaces for carpools and carshares. The immediate capital costs of this improvement are limited to the paint or sign used. It can help market ridesharing and carsharing as a priority in the organization and is generally seen as a supportive measure in reducing vehicle miles traveled.

d. Reduced Supply and Priced Parking. The amount of parking provided at a development can be directly correlated with its amount of VMT generated. In some cases, a reduction in parking supply below the levels established in the zoning code or through ITE parking demand rates can lower VMT. Similar to reducing a site's parking supply, charging for parking can be correlated to lower VMT generation. Areawide parking strategies such as establishment of permit parking programs or parking districts typically need to be developed prior to implementing these measures, however, in order to ensure that a development's parking demand does not simply overflow to neighboring areas where additional supply or free parking exist.

Other TDM Measures

a. Subsidized Transit Passes. To encourage transit use, residents and employees can be provided transit subsidies for use on transit operators such as Sonoma County Transit (SCT) through their HOA or employer. Benefits can be loaded onto a reusable Clipper Card that is eligible for service across multiple transit providers including SCT and SMART.

b. Emergency Ride Home Program. Emergency Ride Home (ERH) is a program that provides a "back-up" ride to employees who use transit, carpooling, biking/walking, or other alternatives as their commute mode; in Sonoma County, it is provided by the SCTA free of charge. If an employee who carpools to work, so does not have their own vehicle, needs to leave work for an emergency, such as a sick child or other unexpected need, they will be redeemed for up to four ERH trips per year. This is an important supportive measure to encourage employees to not drive alone to work and is often a welcome, but unused benefit.

c. Telework/Flex Schedules. For certain types of office/employment type uses, allowing (or requiring) employees to work from home part-time or full-time can reduce the VMT per employee associated with these types of uses.

Physical Non-Auto Mode Improvements

The *Windsor Bicycle and Pedestrian Master Plan*, 2014, identifies extensive improvements to the Town's pedestrian and bicycle network. Identified improvements will enhance the walking and biking network, making travel by non-auto modes both more convenient and more appealing, thereby reducing auto travel and VMT. Some of these pedestrian and bicycle improvements will need to be funded through private development. Individual development projects should be responsible for completing identified improvements within and abutting their sites; in addition to onsite improvements, developments could construct *offsite* pedestrian, bicycle, and transit improvements as a means of reducing VMT impacts. The effectiveness of offsite non-auto mode improvements in reducing VMT will vary considerably and is influenced by the scope of the improvement as well as its location and land use context. Establishing connectivity between a project site and the surrounding pedestrian and bicycle networks, including filling offsite gaps, should be strongly considered in selecting mitigation measures. In some

cases, construction of offsite improvements in areas where they can provide the greatest benefit (such as denser mixed-use and downtown areas) may also be a viable mitigation strategy, though quantification of such improvements is an evolving field and may prove difficult. For this reason, participation in future VMT mitigation programs (as noted below) may be a preferred mitigation strategy for improvements beyond the project's neighborhood area.

Participation in Future VMT Mitigation Programs

Effective VMT mitigation may require town wide, countywide, and/or regional strategies. Examples would include VMT-based impact fee programs, VMT exchanges, and VMT mitigation banks. A VMT impact fee program would be most effectively administered by the County or SCTA, collecting VMT-based fees to fund improvements to non-auto networks that will result in quantifiable reductions to VMT, such as construction of major bikeway facilities and funding of transit to increase route coverage and headways. A VMT exchange could be established at local or regional levels, allowing projects to fund preselected VMT-reducing projects that have established VMT "credit" values which can be applied to offset the project's localized VMT generation. A VMT bank would work similarly but allow developers to buy and sell VMT credits through a formalized exchange. While these types of programs will be challenging and time-consuming to develop and do not yet exist in Sonoma County, they may be implemented at some point in the future and could become viable mitigation strategies for future development in Windsor.

Limits on VMT Mitigation Effectiveness

It is important for project applicants and decision makers to understand that the effectiveness of VMT mitigation is limited in suburban communities like Windsor where transit options are much more limited than in urban cities, and lower-density development patterns tend to result in travel distances that are too far for most people to walk or bike. Based on guidance contained in the CAPCOA publications, it may be impossible to achieve VMT mitigation of greater than 15 to 20 percent in Windsor. The highest potential for VMT mitigation will be in the Town Green area which has the greatest transit accessibility, land use diversity, and pedestrian-oriented development patterns. It is likely to be particularly difficult to effectively mitigate VMT in areas on the Town's periphery, especially for certain types of land use types such as single-family housing developments without common ownership or management oversight. Such developments may realistically only be able to achieve VMT mitigation in the 5 to 10 percent range. In cases where a proposed development cannot reasonably achieve VMT-based CEQA thresholds, it would be necessary to prepare an environmental impact report disclosing a significant and unavoidable VMT impact, and for the Town Council to adopt a statement of overriding considerations. Per CEQA requirements, the project would still be required to mitigate VMT to the degree feasible.

Participants and References

Study Participants

Principal in Charge	Zachary Matley, AICP
Transportation Planner	Barry Bergman, AICP
Graphics	Cameron Wong
Editing/Formatting	Alex Scrobonia
Quality Control	Dalene J. Whitlock, PE, PTOE

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Appendix A

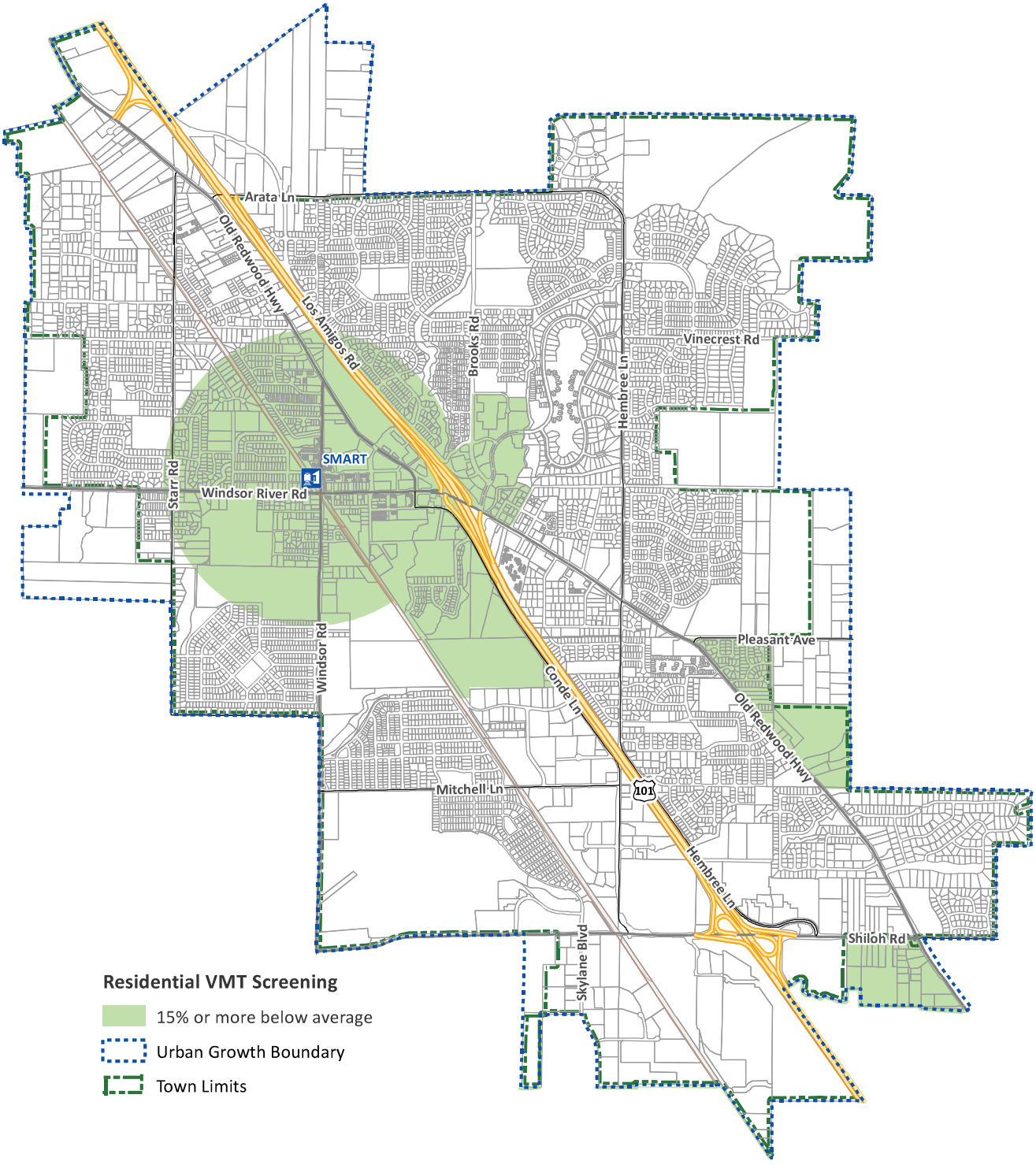
Fall 2021 VMT Thresholds and Screening Maps

Note: The following numeric VMT threshold values and screening maps are current as of Fall 2021and are subject to change over time as the SCTA regional travel demand model is updated. Consult with Town staff to obtain the most recent information.

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Numeric Performance-Based VMT Significance Thresholds – Fall 2021			
Project Type	**VMT Performance Metric**	**Countywide Average**	**Town of Windsor Significance Threshold**
Residential	Home-Based VMT per Capita	16.53	14.05
Office/Employment	Home-Based Commute VMT per Employee	12.53	10.65
Industrial	Home-Based Commute VMT per Employee	12.53	12.53

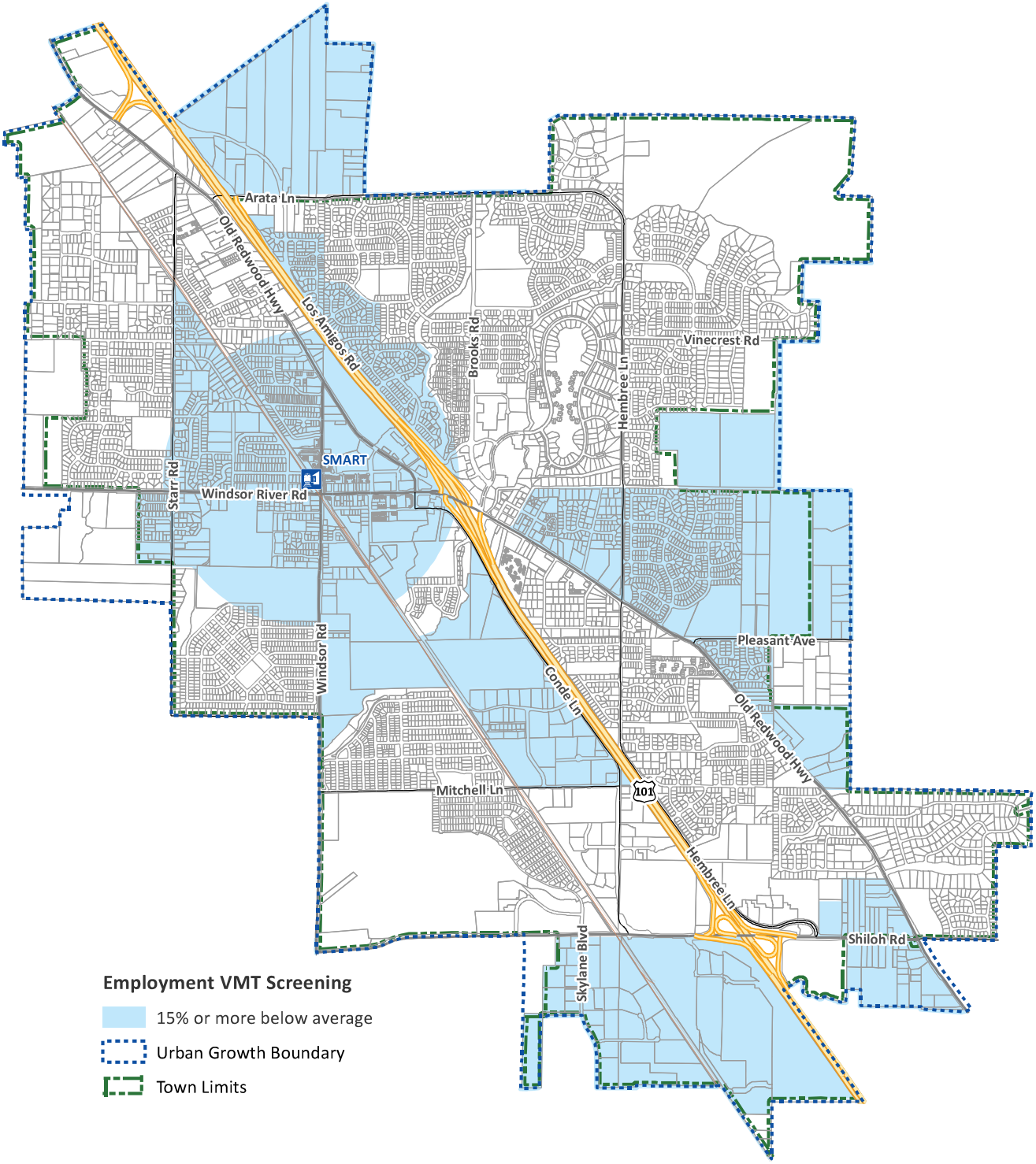
Note: Data is reflective of SCTA travel demand model as of Fall 2021



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Draft Vehicle Miles Traveled Policy

Figure 1 – Fall 2021 Residential VMT Screening Map



Draft Vehicle Miles Traveled Policy

Figure 2 – Fall 2021 Employment VMT Screening Map

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