CITY OF VISTA
CALIFORNIA

TRANSPORTATION IMPACT ANALYSIS GUIDELINES

DECEMBER 2020
FINAL

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LIST OF ACRONYMS

ADT..... Average Daily Traffic

CAP.....Climate Action Plan

CAPCOA.....California Air Pollution Control Officers Association

CARB.....California Air and Resources Board

CEQA .....California Environmental Quality Act

HCM..... Highway Capacity Manual

ITE.....Institute of Transportation Engineers

LOS .....Level of Service

LTA .....Local Transportation Assessment

LTS .....Local Transportation Study

NEPA .....National Environmental Protection Agency

OPR .....Office of Planning and Research

PIF ..... Project Information Form

SANDAG .....San Diego Association of Governments

SB 743 .....Senate Bill 743

TIS.....Traffic Impact Study

VMT .....Vehicle Miles Traveled

1.0 PREFACE

The City of Vista has adopted several documents over the years that outline the goals, policies, strategies, and objectives for the City in order to help guide development and future growth. As of July 1, 2020, public agencies are required to adhere to Senate Bill 743 which replaces the analysis of level of service (LOS) with vehicle miles traveled (VMT) for projects qualifying to meet documentational requirements under the California Environmental Quality Act (CEQA).

This document serves as a guide to analyzing transportation impacts to ensure local and state legislative requirements are met.

This document provides:

- a framework for transportation analysis based on the City's transportation policies and the General Plan
- the transportation analysis significance criteria, screening criteria, and thresholds of significance for environmental clearance for development projects, City transportation projects, and General Plan amendments
- the appropriate methodologies, procedures, and process for the preparation of a transportation analysis report within the context of CEQA
- an overview of local requirements regarding level of service (LOS).

Information provided in this document may be updated at the discretion of City Staff and based on CEQA policy updates.

2.0 INTRODUCTION

Traffic impact studies are prepared typically by private consulting firms for developers or cities when new development projects are proposed. The purpose of the traffic impact study is to identify traffic impacts of the proposed development. In the past these impacts have been measured in terms of delay, capacity, and level of service (LOS). This document explains the shift in analysis required under state law and how that will affect development in the City of Vista.

PURPOSE

The purpose of this document is to provide general instructions for analyzing the potential transportation impacts of proposed development projects (e.g., Development Plans, Conditional Use Permits, etc.). These guidelines present the recommended format and methodology that should be utilized in the preparation of transportation impact studies. In order to provide consistency with the City's adopted General Plan's Circulation Element (2012) while adhering to CEQA law, the City considers both vehicle miles traveled (VMT) and level of service (LOS) per this document to be relevant and necessary measurements for transportation impacts. Depending on the project, the City may require VMT documentation and either a Local Transportation Study or Local Transportation Assessment. Specific documentation and study requirements for VMT studies and local studies are provided further in this document in Section 6.0 and Section 9.0, respectively.

The following is an overview of CEQA and Senate Bill 743 and the relevance to adopted City policies.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

The California Environmental Quality Act was enacted in 1970 to ensure environmental protection through review of discretionary actions approved by all public agencies. The California Office of Planning and Research (OPR) develops the CEQA Guidelines to interpret CEQA statute and published court decisions. A traffic impact study (TIS) conducted for a development project, a City transportation project, or a General Plan amendment identifies potential CEQA transportation impacts and mitigation which results in a public document used to inform decision makers and the public. Therefore, a TIS should provide sufficient information to properly evaluate the impacts and the required project mitigation.

STATE SENATE BILL 743 (SB 743)

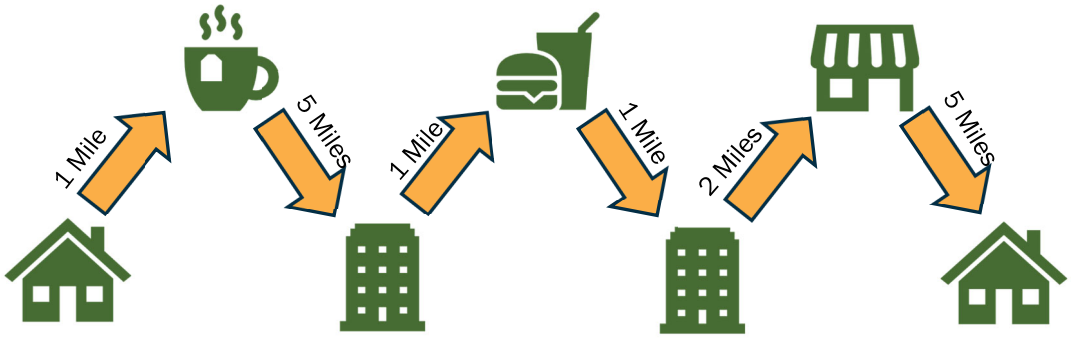
In 2013, Governor Jerry Brown signed Senate Bill (SB) 743 (Steinberg) into law and started a process that changes transportation impact analysis as part of CEQA compliance. SB 743 directs the California Office of Planning and Research (OPR) to establish new CEQA guidance for jurisdictions that removes automobile vehicle delay and other similar measures of vehicular capacity or traffic congestion from CEQA transportation analysis. Rather, vehicle-miles traveled (VMT), or other measures that "promotes the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses," shall be used as a basis for determining significant transportation impacts in California. The intent of the change is to appropriately balance the needs of congestion management with statewide goals related to infill development, the promotion of public health through active transportation, and the reduction of greenhouse gas emissions.

In December 2018, the California Natural Resource Agency certified and adopted the CEQA Guidelines update, which identifies VMT as the most appropriate measure of transportation impacts. With these changes, automobile delay, as measured by "level of service" and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA.

SB 743 changes how potential transportation impacts are analyzed from a CEQA perspective and changes the metric of significance from delay to vehicle miles traveled. To maintain the consistency between the adopted City guidelines and new legislation, the City of Vista has prepared this document to guide developers and their consultants when analyzing potential transportation impacts for their project and highlight new documentation requirements.

WHAT IS VEHICLE MILES TRAVELED (VMT)?

Vehicle miles traveled (VMT) refers to the distance a vehicle travels from each origin to destination. The following graphic demonstrates a simplified example of how VMT is derived.



In this example there is a total of 15 vehicle miles traveled.

SB 743 RELEVANCE TO CITY POLICY

The City of Vista currently has several policies that have been adopted through the Vista General Plan 2030 (adopted in 2012) and the adopted Climate Action Plan (2012) that is supported with the implementation of SB 743. Additionally, the City has prepared a Bicycle Master Plan (2014) that identifies areas of connectivity deficiencies and opportunities for improvements. These planning documents are supported with SB 743 as the City strives to reach development goals. **Table 2-1** identifies several goals and policies the City has adopted that are supported by SB 743.

Table 2-1 City of Vista Relevant Adopted Goals and Policies

LAND USE AND COMMUNITY IDENTITY ELEMENT	
Goal 4: Promote sustainable and smart growth land use patterns and development regulations and guidelines.	**Policy 4.2:** Ensure that the existing and future transportation system is interconnected with the smart growth land use patterns to serve multiple modes of travel, such as walking, biking, transit, and driving. **Policy 4.3:** Ensure that new and redeveloped projects are designed to improve pedestrian and transit connections, and connections to trail and bicycle networks. **Policy 4.4:** Encourage new and redeveloped projects to incorporate facilities that support bicycle use, such as bike racks, lockers, and /or showers, to the extent possible and appropriate. **Policy 4.5:** Designate areas for the development of mixed use projects where alternative modes of transportation, such as walking, biking, and transit, will be emphasized over vehicle use. **Policy 4.6:** Promote mixed -use development in targeted areas by developing zoning classifications, development standards, and design guidelines that are appropriate for the scale, intensity, and character desired for the particular area. **Policy 4.7:** Develop and offer incentives for mixed -use development, such as reduced parking requirements, expedited permit processing, and /or lot consolidation assistance.
Goal 5: Support Complete Street design and construction projects that complement desired land uses, provide equitable transportation options for all residents, and ensure the safety and convenience of all roadway users.	**Policy 5.1:** Provide a dense, interconnected network of local and collector streets that supports walking, bicycling and transit use, while avoiding excessive traffic in residential neighborhoods. **Policy 5.2:** Ensure that the entire right -of -way is designed to accommodate appropriate modes of transportation. **Policy 5.4:** Promote the provision of multi-modal access to activity centers such as public facilities, commercial centers and corridors, employment centers, transit stops, schools, parks, recreation areas, and tourist attractions. **Policy 5.5:** Monitor progress in implementing a multi-modal transportation network by establishing related performance measures. **Policy 5.6:** Develop policies and tools to improve Complete Streets practices. These could include place -based street typologies, a Complete Streets checklist for all new development /redevelopment projects, multi-modal analysis software, and revisions to the City' s street design guidelines to ensure the inclusion of infrastructure that benefits all roadway users.
Goal 6: Revitalize or redevelop aging or underutilized uses, properties, districts, and corridors.	**Policy 6.3:** Facilitate revitalization or redevelopment of underutilized commercial properties, districts, and corridors through promotion of compact and sustainable development patterns that allow flexibility to meet local needs and respond to market demands. **Policy 6.2:** Consider the creation of a central development zone to define the City's core and supporting residential neighborhoods so that resources may be prioritized for these areas. **Policy 6.3:** Ensure implementation of focused revitalization and changes in areas known as Opportunity Areas

Goal 7: Support the City' s economic development strategies by providing an appropriate mix of land uses and appealing urban setting to attract and retain quality businesses and institutions.	**Policy 7.4:** Promote Vista as a desirable place to do business by ensuring it has a positive image and identity, quality development, and attractive streetscapes and gateways. **Policy 7.6:** Continue to support the arts and cultural resources (public, private, and non-profit) to stimulate redevelopment and economic growth in the City.
Goal 8: Promote a positive business climate through proactive use of incentives to retain and expand the City' s economic base.	**Policy 8.5**: Participate in preparation of the region' s Sustainable Communities Strategy SCS) per Senate Bill (SB) 375 to provide opportunities for "Transit Priority Project Areas" in Vista that can benefit from California Environmental Quality Act (CEOA) streamlining as a development incentive. **Policy 8.6:** Favor developments, businesses and uses which create a vibrant retail and business environment which will encourage increased property values and uses which, on a comparative basis. provide the City with superior revenues, while avoiding or limiting the presence of developments business and uses which will have the opposite effect.
Goal 9: Promote a range of housing types and sizes for a variety of incomes and ages.	**Policy 9.2:** Provide adequate sites for affordable housing to support the policies and programs of the City's Housing Element. **Policy 9.3:** Develop zoning classifications for mixed-use development that incorporates higher density land uses along multi-modal corridors, and that is compatible with the existing community character.
Goal 12: Foster coordinated planning and cooperation with SANDAG and other local, county, regional, special purpose, state, and federal agencies to maximize the effectiveness of interagency planning, policies, and funding opportunities.	**Policy 12.1:** Work with SANDAG to achieve regional smart growth goals through implementation of the Regional Comprehensive Plan and the SANDAG Smart Growth Concept Map (North County Subregion), as identified in the Opportunity Areas and supporting goals and policies throughout the General Plan. **Policy 12.2:** Encourage SANDAG to update the SANDAG Smart Growth Concept Map (North County Subregion) to incorporate changes consistent with the Vista General Plan.
HOUSING ELEMENT	
Goal 2: Encourage Adequate Provision of a Wide Range of Housing by Location, Type of Unit, and Price to Meet the Existing and Future Needs of Vista Residents.	**Policy 2.3:** Encourage housing constructed expressly for very low, low, and moderate income households be located throughout the City.
Goal 5: Remove Governmental Constraints on Housing Development	**Policy 5.2:** Prioritize review of affordable housing projects and expedite the permitting process.

CIRCULATION ELEMENT	
Goal 1: Provide a system of roadways that meets the needs of the community through careful design of and attention to linkages between neighborhoods, schools, parks, employment centers, and activity nodes.	**Policy 1.3:** Develop multi-modal level of service analysis standards to integrate with traditional vehicular LOS modeling tools. **Policy 1.4:** Require a multi -modal traffic impact analysis for any project within the Mixed Use land use designation that generates 2,500 or more average daily vehicle trips. **Policy 1.12:** Require all new development projects to either fund or install their fair share of all required feasible transportation improvements necessary to achieve a multi-modal LOS identified in this Element as mitigation for the direct impacts on the circulation network from the proposed project.
Goal 2: Improve the safety and efficiency of existing transportation facilities by providing complete and safe connections on roadways, sidewalks, and bikeways. Facilities should be accessible to all users, with appropriate and necessary amenities.	**Policy 2.9:** Adopt a traffic calming program identifying alternatives to slow traffic speeds, improve pedestrian and bicycle safety, and enhance use of the street by multiple users.
Goal 3: Support a regional transportation system that serves existing and future travel between Vista and other population and employment centers in North San Diego County and the larger region.	**Policy 3.6**: Promote alternatives to driving alone during peak periods, such as carpooling, vanpooling, bicycling, telecommuting, flexible work hours for employees, and transportation demand management (TDM) programs.
Goal 5: Encourage alternative forms of transportation to private automobiles that meet the needs of all City residents by providing improved access to transit connections to employment and other activity centers.	**Policy 5.1:** Coordinate with NCTD to continue to expand local rail and bus service to and within Vista. Particular emphasis should be placed on improving access to transit within the downtown core and high density residential areas to achieve the regionally accepted Smart Growth principles.
Goal 6: Develop an efficient bicycle and pedestrian circulation system that improves access and linkages in a manner that is human - scaled, bicycle- and pedestrian- oriented, and transit - accessible, encourages use of these facilities for recreation, and provides alternatives to the personal automobile.	**Policy 6.1:** Implement the bicycle plan and pedestrian plan improvements identified in this Circulation Element according to their identified priorities. **Policy 6.2:** Require proposed development to provide bike facilities within the right -of -way for Class II bikeways in the project vicinity on all arterial roadways where deemed appropriate. Where Class II bikeways are not feasible, require Class III bike routes to be provided as a temporary measure. **Policy 6.7:** Require developers to provide facilities for pedestrian travel such as sidewalks, design developments to provide pedestrian access to the development via sidewalks, and avoid requiring that pedestrians use driveways to access development. **Policy 6.8:** Design and retrofit bicycle facilities in accordance with the design standards identified in the City' s Bicycle Master Plan.

RESOURCE CONSERVATION AND SUSTAINABILITY ELEMENT	
Goal 2: Reduce GHG emissions from community activities and municipal facilities and operations within the City boundaries to support the state' s efforts under Assembly Bill 32, Senate Bill 375, and other state and federal mandates, and to mitigate the community's contributions to global climate change.	**Policy 2.1:** Prepare and implement a Climate Action Plan (CAP) within 24 months of adoption of the General Plan that, through its full implementation, will reduce GHG emissions from community activities and municipal operations by at least 3. 5 percent by 2020 compared to the 2005 baseline community emissions inventory (including any reductions required by the CARB under AB 32). **Policy 2.2:** Update the City' s Greenhouse Gas Emissions Inventory periodically to incorporate improved methods, better data, and /or more accurate tools and methods, and to assess progress. **Policy 2.3:** Participate in inter - agency and /or inter - jurisdictional meetings and planning activities to share best practices and adaptation strategies to reduce GHG emissions, increase community sustainability, and educate the public about climate change. **Policy 2.4:** Develop a public outreach program to increase public awareness of climate change and climate protection challenges; publicize the importance of reducing GHG emissions; and provide information on actions community members and businesses can take to reduce their individual impacts. **Policy 2.5:** Adopt City purchasing practices and standards to support reductions in GHG emissions, including preferences for energy- efficient equipment and the use of recycled materials and manufacturers that have implemented green management practices; encourage other public agencies and private businesses within Vista to do the same, when feasible.
CLIMATE ACTION PLAN	
M-4: Provide information and incentives to City employees to increase GHG Reduction Potential: carpooling, public transit use, bicycling, and walking in order to reduce vehicle miles traveled associated with employee commute.	**Measure 4.1:** Provide information on SANDAG' s free iCommute program to develop and implement a commuter benefit program, such as discounted transit passes. **Measure 4.2:** Promote and participate in annual regional commute trip reduction events.

NATIONAL ENVIRONMENTAL PROTECTION AGENCY (NEPA)

The federal requirements for projects qualifying under NEPA remain unaffected by the state's CEQA policy update and will require projects to utilize level of service based analysis for federal environmental compliance.

3.0 TRANSPORTATION IMPACT STUDY TYPES

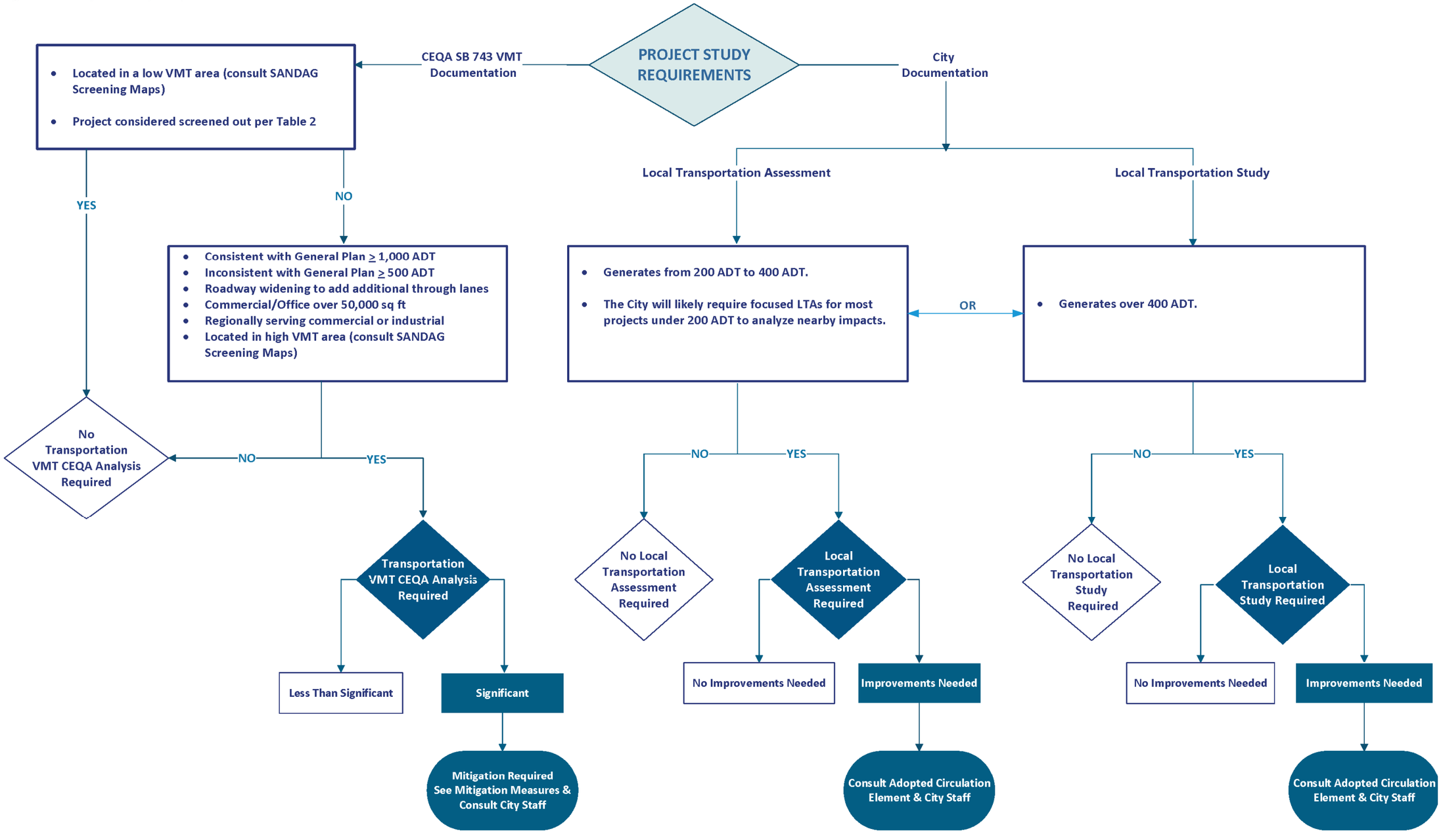
The City requires two types of analysis documentation for CEQA and General Plan compliance. The first type of analysis is vehicle miles traveled (VMT) in compliance with CEQA and the second is level of service (LOS) in accordance with the General Plan to determine and address local traffic safety and operational impacts. These guidelines present the recommended format and methodology that should be utilized in the preparation of transportation impact studies. A detailed discussion regarding CEQA VMT documentation requirements is discussed in Section 6.0. A detailed discussion regarding City level of service documentation requirements is discussed in Section 9.0.

Figure 3-1 helps guide development projects in determining the requirements from a local and state perspective in order to help determine study specifics. The screening flowchart indicates an overview of the circumstances where a detailed CEQA VMT analysis would or would not be required and when a project would require a Local Transportation Study (LTS) or Local Transportation Assessment (LTA). The City maintains the discretion to require a project to conduct additional analysis if needed.

A VMT analysis for CEQA purposes will be required if a project equals to or exceeds 1,000 average daily trips (ADT) and is consistent with the adopted General Plan. If a project is inconsistent with the adopted General Plan, a VMT analysis will be required if the project is 500 or more ADT.

An LTA is required for ADTs from 200 to 400 ADT. However, it is likely that the City will require focused LTAs for most projects with less than 200 ADT to analyze impacts on nearby street intersections and segments. For an LTS, the threshold is over 400 ADT. Projects located in a smart growth area as identified in the latest SANDAG Smart Growth Concept Map (North County Subregion) or the City of Vista Downtown Specific Plan are exempt from the local traffic impact analysis requirement.

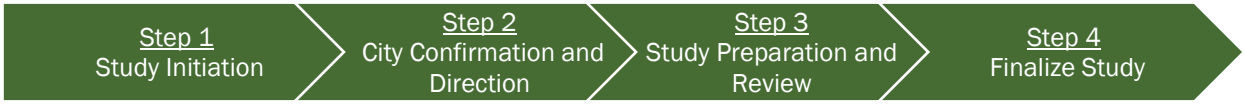
Figure 3-1 Project Study Requirements



* Projects are not confined to what is listed above and will need to be coordinated with City Staff to determine study requirements for developments not listed.
This flowchart is a generalization, it is up to the City's discretion to determine if additional analyses will be required and if potential mitigation or improvements are acceptable.

4.0 SUMMARY OF PROCESS

The following diagram summarizes the typical process for completing a transportation study in the City of Vista.



The City of Vista is available to discuss any concerns the project applicant may have throughout the process. It is important that the project applicant or consultant coordinate with City Staff early on in the planning process to determine local and State requirements are met.

Step 1: Study Initiation

In order to help guide and inform the applicant of the study requirements for CEQA transportation impact analysis, the City has developed a Project Information Form (PIF), which is included in **Appendix A**. This form helps identify the study requirements and includes information such as project location and description, estimated trip generation, trip distribution, and trip assignment. The PIF is provided in **Appendix A** and is subject to change at the City's discretion. Please see Early Coordination with the City section below for additional details.

Step 2: City Confirmation and Direction

Once the PIF has been submitted to the City, the City will review and request additional information from the project consultant or developer as needed. In addition, City staff will discuss the trip generation and distribution/assignment with the consultant as detailed in Section 5.0 below.

Step 3: Study Preparation, Submittal Requirements and City Review

Subsequent to the City's approval of the PIF and study approach, the project consultant conducts the transportation impact study. In accordance with Steps 1 and 2, the analysis may consist of a CEQA VMT study, a local transportation analysis/assessment, or both. Once a draft report is prepared, it is submitted to the City **(two hard copies with one set of all appendices and one complete PDF)** for the City's review. The City will provide the consultant with comments and revisions to the study as appropriate. The consultant shall address the City's comments and **provide a comment/response matrix to the City along with a revised draft report**. This may take several rounds of comments and/or meetings.

Step 4: Submit Final Report

The consultant will submit a final transportation study report (two hard copies with one set of all appendices and one complete PDF) to the City with all comments addressed.

EARLY COORDINATION WITH THE CITY – PROJECT INFORMATION FORM

Early consultation between the developer and the City is strongly recommended to establish the base input parameters, assumptions, and analysis methodologies for the transportation study. To avoid unnecessary delays or revisions and to streamline document preparation and the review process, **the applicant shall submit and have approved a PIF prior to the preparation and application of draft CEQA or local impact analysis documents.** The **PIF** can be found in **Appendix A**.

The applicant will be responsible for coordinating with external agencies if a proposed project is expected to affect another agency or jurisdiction such as NCTD, Caltrans, Oceanside, Carlsbad, or other entities. This should be identified early on in the process and is the responsibility of the project applicant to ensure the transportation analysis will fulfill necessary requirements for all agencies involved.

Similar to previous guidelines, transportation studies must be prepared under the supervision of a registered California Traffic Engineer who has demonstrated knowledge and experience preparing transportation analysis. All applications to the City must be stamped by a registered California Traffic Engineer or equivalent as approved by the City Traffic Engineer. It is expected any report submitted to the City for review contains objective analyses and upholds engineering ethics and standards.

5.0 TRIP GENERATION/DISTRIBUTION PROCEDURE

For the project analysis requirements, the traffic consultant for the project applicant shall identify the number of trips generated by the project using SANDAG's *"Not so Brief Guide of Vehicular Traffic Generation Rates for San Diego Region (2002)* trip generation rates. The trip generation rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual may be used with approval from the City Traffic Engineer. The most recent versions of the aforementioned documents should be used.

In the event the land use is unique, the project applicant, in agreement with the City Traffic Engineer, should collect trip generation data at a minimum of two similar project sites. The project sites and method of collection shall be approved by the City Traffic Engineer prior to data collection initiation. The City Traffic Engineer has the discretion to request additional sites to be studied.

TRIP REDUCTION

Based on the project improvements in relation to bicycle and pedestrian infrastructure and proximity to transit, trip reductions may be applicable and must be discussed with the City Traffic Engineer prior to proceeding with analysis. If the project is eligible for a trip reduction, the reduction rates outlined in *SANDAG's Not So Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region (2002)* or ITE's Trip Generation Manual shall be utilized unless another methodology is justified and more appropriate. In addition to a thorough discussion in the transportation report, backup documentation related to trip reduction rates shall be included in the report appendices.

TRIP DISTRIBUTION / ASSIGNMENT PROCEDURE

Typically, two methods are used to determine trip distribution and assignment for transportation analysis and are considered acceptable by the City.

- The first method utilizes engineering judgement based on existing traffic data and land use patterns. This method requires the consultant to provide a map with project distribution and trip assignments to the City for review prior to conducting analysis.

- The second method utilizes the SANDAG Regional Travel Demand Model to perform a select zone or link analysis**. This approach is typically used for larger projects and shall be used for any project that generates over 2,400 ADT**.

Once trip distribution and assignment assumptions are submitted to the City, the City will review and provide feedback on assumptions. If necessary, the developer or consultant may coordinate with the City Traffic Engineer to discuss trip distribution and assignment for any clarification or considerations to travel patterns that are not readily apparent.

Based on the project type and number of trips generated the project's study documentation requirements will be determined. The following sections demonstrate the types of documentation required by the City of Vista for CEQA and local compliance.

6.0 CEQA VMT Analysis

The City of Vista utilizes the Institute of Transportation Engineers (ITE) Guidelines for Transportation Impact Studies in the San Diego Region (originally developed in May 2019) to establish thresholds and methodology for VMT analysis. The guidelines have been used successfully for over 19 years in the San Diego region and have received wide acceptance from the transportation profession, decision makers, and the public. The guidelines developed are based on engineering judgment of professionals who are local experts in determining the effect of projects within San Diego County. For analysis purposes, the most recent version of these guidelines shall be utilized. The following sections summarize the VMT thresholds requirements for Vista in alignment with ITE. Thorough analysis explanation can be found in the most recent ITE guidance.

MINIMUM THRESHOLD FOR VMT ANALYSIS

Based on the recommendations of the Institute of Transportation Engineers (ITE) for the San Diego section, **Table 6-1** indicates when a VMT analysis for CEQA is required. This is based on keeping consistent with the thresholds previously used and *SANDAG's Not So Brief Guide Trip Generation (2002)*. These thresholds are based on the understanding that SANDAG trip generation rates differ from ITE trip generation rates which OPR's recommendations are based on.

PROJECTS CONSISTENT WITH THE ADOPTED GENERAL PLAN

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that support these goals will adhere to the VMT analysis thresholds identified in Table 6-1.

Table 6-1 Threshold for VMT Analysis for Projects Consistent with the Adopted General Plan

	VMT Analysis Not Needed	VMT Analysis Needed
Average Daily Traffic Volume (ADT)	Less than 1,000 ADT	Greater than or equal to 1,000 ADT

PROJECTS INCONSISTENT WITH THE ADOPTED GENERAL PLAN

Projects that are not in support of the General Plan, requiring a General Plan Amendment are considered inconsistent with the General Plan. The VMT analysis thresholds for projects that are inconsistent are identified in **Table 6-2**.

Table 6-2 Threshold for VMT Analysis for Projects Inconsistent with the Adopted General Plan

	VMT Analysis Not Needed	VMT Analysis Needed
Average Daily Traffic Volume (ADT)	Less than 500 ADT	Greater than or equal to 500 ADT

The thresholds identified in Table 6-1 and Table 6-2 stem from the professional expertise and judgement of the ITE San Diego section. These thresholds reflect what is appropriate for the San Diego region to use for VMT and have previously helped determine LOS impacts.

VMT TYPES AND ANALYSIS THRESHOLDS

This section identifies two ways in which VMT can be measured and expressed. The selected VMT types used in the analysis that is required is based on the land use and thresholds identified in the previous section. The VMT calculated for a project can be compared to established VMT thresholds developed for the San Diego Region. The method of comparison shall be agreed upon by the City Traffic Engineer and shall be appropriate based on the land use of the site.

The following defines the two types of VMT metrics. It is important that the appropriate metrics are applied for each project.

VMT/Capita:

Includes all vehicle-based person trips grouped and summed to the home location of individuals who are drivers or passengers on each trip. It includes home-based and non-home-based trips. The VMT for each home is then summed for all homes in a particular census tract and divided by the population of that census tract to arrive at Resident VMT/Capita.

VMT/Employee:

Includes all vehicle-based person trips grouped and summed to the work location of individuals on the trip. This includes all trips, not just work-related trips. The VMT for each work location is then summed for all work locations in a particular census tract and divided by the number of employees of that census tract to arrive at Employee VMT/Employee.

The VMT for a project is determined based on the size of the project as explained below.

Small Projects

Small projects, under 2,400 ADT, shall utilize the most recent version of the SANDAG SB 743 Concept Maps. SANDAG has prepared an online mapping system that calculates average VMT/capita and VMT/employee at the census tract level. This tool determines the project's VMT/employee or VMT/capita to be compared to community, city, and/or regional averages. **Appendix B** provides a complete example of a VMT analysis including how to use the SANDAG Concept Maps to determine the project's VMT.

Large Projects

Projects consisting of 2,400 ADT or higher will require a model run for the regional travel model conducted by SANDAG to determine VMT. The SANDAG transportation model provides a systematic analytical platform so that different alternatives and inputs can be evaluated in an iterative and controlled environment.

Table 6-3 identifies the significance thresholds for the various land uses. Projects that exceed the significance thresholds are considered significant and will require VMT analysis and mitigation.

Table 6-3 City of Vista Project Threshold

Project Type	Metric	Significance Threshold (1)
Residential	Resident VMT / Capita	15 % below regional average
Commercial	Employee VMT / Employee	15 % below regional average
Industrial	Employee VMT / Employee	15 % below regional average
Retail (2)	Net increase in the regional VMT	Net increase in regional VMT
Mixed-Use	Evaluate each land use separately	Based on proposed land use
Redevelopment (3)	Based on the proposed land use	Based on the proposed land use

1. The City may request the applicant to analyze VMT using a more localized threshold if the project requires.
2. Locally serving retail is presumed to decrease VMT however retail projects over 50,000 square feet are considered regionally serving.
3. A redevelopment project that reduces VMT is presumed to have less than a significant impact and is screened out. The removal of affordable housing will require VMT analysis.

7.0 SCREENED OUT PROJECTS

Some projects for CEQA purposes qualify as screened out. If a project is screened out, that means the project has VMT reducing characteristics and is assumed to decrease VMT. SB 743 eliminates the need for these projects to be analyzed for CEQA purposes since they support VMT reduction. Screened out is defined as projects not needed to be analyzed for CEQA purposes that already support VMT reduction.

The projects listed in **Table 7-1** are presumed to be considered VMT-reducing projects. The projects listed are either locally serving or are based on substantial evidence provided by the OPR Technical Advisory Committee supporting SB 743 implementation. A project may be required to conduct a VMT analysis at the discretion of City Staff if it is unclear the project qualifies as screened out or based on the City Traffic Engineer's discretion.

Table 7-1 Screened Out Projects

Project Type
Projects located in a Transit Priority Project Areas or Smart Growth Opportunity Area as identified in the most recent SANDAG Regional Plan and is consistent with the General Plan at the time of project application. (1)(2)
Projects located in a low-VMT generating area identified on the most recent SANDAG SB 743 VMT Screening map
Locally serving K-12 schools
Day care centers
Local parks
Locally serving retail uses less than 50,000 square feet, including: gas stations, banks, restaurants, grocery stores, and shopping centers
Community institutions (Public libraries, fire stations, local government)
Locally serving hotels (e.g. non-destination hotels, non-regionally serving)
Student housing projects on or adjacent to college campuses
Local serving community colleges that are consistent with the assumptions noted in the most recent SANDAG Regional Transportation Plan/Sustainable Communities Strategy
Affordable housing projects (3)
Assisted living facilities
Senior housing (as defined by HUD)
Transit projects
Bike projects
Pedestrian projects
Safety improvement projects (e.g. RRFBs and high visibility crosswalks at uncontrolled locations, pedestrian count down timers, additionally projects identified through the Highway Safety Improvement Program)
Safe Routes to School
Projects generating less than 500 daily vehicle trips (if inconsistent with adopted General Plan)
Projects generating less than 1,000 daily vehicle trips (if consistent with adopted General Plan)

1. Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or a 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station 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 (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017).
2. Look up in the most recent SANDAG Transit Priority Project Areas map and the SANDAG Smart Growth Concept Map (North County Subregion).
3. If a project is a mix of affordable housing and market rate housing or unscreened use, only the affordable housing component would qualify as screened out. Additionally, any removal of affordable housing automatically requires CEQA VMT analysis.

8.0 MITIGATION MEASURES AND STRATEGIES FOR VMT REDUCTION

A project that exceeds the thresholds identified in the previous tables is considered to have a significant impact and will require mitigation measures and strategies. With appropriate mitigation the project may be able to apply VMT reductions to part or all of the project depending on the land use and strategy chosen. It is critical to implement strategies that are appropriate for the land use. For example, a residential project would not implement a telecommute strategy but may include providing a bike facility and amenities on-site.

MITIGATION MEASURES

The purpose of the mitigation measures and strategies is to reduce the VMT generated by the project through a reduction of the distance driven or the number of vehicle trips. It is recommended the SANDAG Mobility Management Guidebook (2019 or latest edition) be consulted to determine mitigation measures for a project.

The guidebook consists of the following resources:

- Mobility Management Guidebook
- VMT Reduction Calculator Tool
- Calculator Design Document
- Recommendations for Application
- User Training Videos

Figure 8-1 identifies the potential mobility management strategies included in the guidebook that are recommended for a project exceeding the VMT thresholds. It is also recommended the SANDAG iCommute and MTS programs be utilized for projects generating employment. Several opportunities included in these programs are identified in **Table 8-1**. **Table 8-2** identifies additional mitigation measures provided by the Office of Planning and Research (OPR).

The VMT Reduction Calculator Tool evaluates the VMT impact of more than 20 mobility management strategies. The calculator can be utilized to determine how a strategy, when implemented, can reduce a project's VMT. Appendix B contains a complete example of a VMT analysis including the use of the SANDAG VMT Reduction Calculator Tool. The calculator is available on the SANDAG website. All VMT reduction strategies utilized should be discussed with the City and provided with backup documentation. Any changes or overrides to input parameters should be discussed and approved by the City.

The City may decide to implement a VMT mitigation fee bank to fund projects that would help the City reduce GHG emissions and promote VMT reduction. This would need to be developed specifically for VMT reduction projects for the City and cannot be preexisting to this document. Mitigation measures are not limited to this document and may be discussed with City Planning and Traffic Engineering provided appropriate reduction methodologies are applied using documentation published by SANDAG, the California Air Resources Board (CARB), or the California Air Pollution Control Officers Association (CAPCOA). These resources provide quantifiable measures that may be used for project mitigation. Mitigation and reduction measures utilized should be documented and easily referenced in the document's appendix.

Figure 8-1 Mobility Management Strategies

	Strategy Type	Strategy Name	Included in VMT Calculator?
Project/Site Level	Employer Commute Programs	Comprehensive Employer Commute Program	√
		Employer Carpool Program	√
		Employer Transit Pass Subsidy	√
		Employer Vanpool Program	√
		Employer Telework Program	√
		Employer Guaranteed Ride Home Program	
		On-Site Bike Amenities	
	Land Use Strategies	Higher-Density Development	
		Transit-Oriented Development	√
		Mixed-Use Development	√
	Parking Management	Parking Pricing	√
		Parking Cash-Out	√
		Reduced Parking	
		Unbundled Parking	
		Smart Parking	
		Shared Parking	
		Shared Mobility Parking	
		Flexible Curb Space	
Community/City Level	Neighborhood Enhancements	Street Connectivity Improvement	√
		Pedestrian Facility Improvement	√
		Bikeway Network Expansion	√
		Bike Facility Improvement	√
		Bikeshare	√
		Carshare	√
		Community-Based Travel Planning	√
	Transit Strategies	Transit Service Expansion	√
		Transit Frequency Improvements	√
		Transit-Supportive Treatments	√
		Transit Fare Reduction	√
		Microtransit NEV Shuttle	√
		Microtransit Commuter Shuttle	
	Transportation System Management	Adaptive Traffic Signal Systems	
		Smart Signals and Intersections	
		Optimized Signal Timing for Bicycles	
		Advanced Bicycle Detection	
		Real-Time Traveler Information	
		Active Traffic Management	
		Traffic Incident Management	
		Roadway Weather Management	

Source: SANDAG Mobility Management Strategy Guidebook, June 2019

Table 8-1 Additional VMT Reduction Strategies for Employers

Additional VMT Reduction Strategies for Employers
Establish and maintain participation in SANDAG's iCommute services for employers.
Provide a monthly employer subsidy/pretax payroll deduction toward transit passes, carpool, or vanpool.
Encourage employees to register in SANDAG's iCommute program for rideshare matches.
Provide a monthly employer subsidy or incentives for employees or patrons who regularly commute by bicycle.
Host or sponsor regional events such as Bike to Work day, Rideshare Month.
Participate in NCTD and MTS promotions such as Free Ride Day and EcoPass.
Implement an internal carpool program for employees.
Designate an on-site point of contact for employee commute inquiries.

Table 8-2 OPR Recommended Mitigation Measures

Additional Mitigation Measures
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 a neighborhood electric vehicle network.
Orient the project toward transit, bicycle, and pedestrian facilities.
Improve pedestrian or bicycle networks, or transit service.
Implement or provide access to a commute reduction program.
Unbundle parking costs.
Provide bicycle parking.
Provide traffic calming as a way to incentivize bicycling and/or walking.
Provide partially or fully subsidized transit passes.
Shift single occupancy vehicle trips to carpooling or vanpooling by providing ride-matching services or shuttle services.
Provide telework options.
Provide incentives or subsidies that increase the use of modes other than a single-occupancy vehicle.
Provide on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, showers and locker rooms, and bicycle repair services.
Provide employee transportation coordinators at employment sites.
Provide a guaranteed ride home service to users of non-auto modes.
Contribute to a mobility fee program that funds multimodal transportation improvements, such as those described above.

SIGNIFICANT AND UNAVOIDABLE IMPACTS

Projects that are unable to mitigate to a less than significant level of impact must provide a detailed statement of overriding considerations in accordance with CEQA Guidelines Sections 15091 and 15093. The following are direct quotes from the legislation to help project applicants understand CEQA law.

Section 15091 Findings:

" (a) No public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding.

The possible findings are:

(1) Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the final EIR.

(2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.

(3) Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

(b) The findings required by subdivision (a) shall be supported by substantial evidence in the record.

(c) The finding in subdivision (a)(2) shall not be made if the agency making the finding has concurrent jurisdiction with another agency to deal with identified feasible mitigation measures or alternatives. The finding in subdivision (a)(3) shall describe the specific reasons for rejecting identified mitigation measures and project alternatives.

(d) When making the findings required in subdivision (a)(1), the agency shall also adopt a program for reporting on or monitoring the changes which it has either required in the project or made a condition of approval to avoid or substantially lessen significant environmental effects. These measures must be fully enforceable through permit conditions, agreements, or other measures.

(e) The public agency shall specify the location and custodian of the documents or other material which constitute the record of the proceedings upon which its decision is based.

(f) A statement made pursuant to Section 15093 does not substitute for the findings required by this section."

Section 15093 – Statement of Overriding Considerations:

" (a) CEQA requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project. If the specific economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposal project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered "acceptable."

(b) When the lead agency approves a project which will result in the occurrence of significant effects which are identified in the final EIR but are not avoided or substantially lessened, the agency shall state in writing the specific reasons to support its action based on the final EIR and/or other information in the record. The statement of overriding considerations shall be supported by substantial evidence in the record.

(c) If an agency makes a statement of overriding considerations, the statement should be included in the record of the project approval and should be mentioned in the notice of determination. This statement does not substitute for, and shall be in addition to, findings required pursuant to Section 15091."

9.0 LOCAL TRANSPORTATION STUDY AND LOCAL TRANSPORTATION ASSESSMENT DESCRIPTION

City Planning, in coordination with Traffic Engineering, determines the need for a transportation analysis in conformance with the CEQA guidelines and City policies. The City recognizes the changes to CEQA regarding SB 743 implementation and the requirements for VMT analysis. Additionally, the City recognizes the need to maintain consistency with the most recently adopted General Plan's Circulation Element and may require a Local Transportation Study or Local Transportation Assessment.

An LTS will analyze the project's influence on the surrounding intersections and roadway network utilizing level of service (LOS) for all project scenarios. The document also includes the identification of pedestrian, bicycle, and transit amenities. The purpose of an LTS is to ensure the goals, objectives, and policies adopted by the City are supported and implemented while monitoring the traffic safety, capacity, and daily operations of the roadway network.

MINIMUM THRESHOLD FOR LOCAL ANALYSIS

The thresholds below are based on the recommendations of the Institute of Transportation Engineers (ITE) for the San Diego Section. This is keeping consistent with the thresholds previously used and *SANDAG's Not So Brief Guide (2002) Trip Generation*.

Projects located in a smart growth area as identified in the latest SANDAG Smart Growth Concept Map (North County Subregion) or the City of Vista Downtown Specific Plan are exempt from the local traffic impact analysis requirement.

Local Transportation Study:

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that support these goals will adhere to the following LTS thresholds identified in **Table 9-1**.

Table 9-1 Threshold for LTS for Projects Consistent with the Adopted General Plan

	LTS Analysis Not Needed	LTS Analysis Needed
Average Daily Traffic Volume (ADT)	400 ADT or less	Greater than 400 ADT

An LTS is required if a project exceeds 400 ADT.

The City's adopted General Plan represents the vision and goals the City has for the community.

An LTS will be required to analyze existing conditions, existing conditions plus project, existing conditions plus near-term cumulative projects, and existing conditions plus near-term cumulative projects plus project.

If a project adds peak hour trips to any existing on- or off-ramp it is recommended to consult with the City and Caltrans to determine if an LTS would be required.

Local Transportation Assessment:

An LTA may be required instead of an LTS depending on the size of the project. An LTA helps the City monitor development impacts on the transportation network and is similar to an LTS. The main difference between the two studies is that an LTA analyzes fewer scenarios than an LTS. An **LTA is**

required for ADTs from 200 to 400 ADT. However, it is likely that the City will require focused LTAs for most projects with less than 200 ADT to analyze impacts on nearby street intersections and segments.

An LTA will be required to analyze existing conditions and existing conditions plus project.

The LTS/LTA thresholds identified above stem from the professional expertise and judgement of the ITE San Diego section. These thresholds keep consistent with regional practice and will help ensure developments will not overburden the transportation network.

The study requirements are subject to the discretion of the City Traffic Engineer.

10.0 LOCAL TRANSPORTATION STUDY AND LOCAL TRANSPORTATION ASSESSMENT GUIDELINES

The City of Vista utilizes the Institute of Transportation Engineers (ITE) San Diego Regional Guidelines (May 2019) to establish thresholds and methodology for an LTS. An LTS is different from VMT analysis for CEQA purposes and is required in addition to the VMT analysis or individually. An LTS will analyze the project's influence on the surrounding intersections and roadway network utilizing level of service (LOS) for all project scenarios. The purpose of the LTS is to help quantify the local Impacts of the development and expected changes in transportation conditions. The LTS should include roadway, bicycle, pedestrian, and transit evaluations. The following sections identify the project requirements for an LTS. The LTS helps the City ensure the goals, objectives, and policies adopted by the City are supported and implemented while monitoring the traffic safety, capacity and daily operations for the roadway network.

Data should be collected during typical peak hours in the morning midday and evening. Data should be recent and no more than 2 years old for an LTS or LTA. **The acceptable level of service for the City of Vista that is consistent with the adopted Circulation Element is LOS D.**

STUDY SCENARIOS

The following scenarios are included in an LTS and may be modified in agreement with the City Traffic Engineer.

1. **Existing Conditions:** this scenario analyzes existing traffic conditions. This scenario establishes a baseline of traffic performance within the study area.

2. **Existing Conditions Plus Project:** this is an analysis of existing traffic conditions with the addition of traffic that is projected to be generated by the proposed project.

3. **Existing Conditions Plus Near-Term Cumulative Projects:** analysis from this scenario establishes a near-term non-project baseline against which traffic generated by the proposed project can be compared. The near-term year represents the projected opening year of the project. The near-term base condition is determined by first applying a 1% annual growth factor to existing traffic volumes to account for background ambient growth in traffic. Next, traffic volumes generated by other approved or pending development projects anticipated to be constructed by the proposed project opening year are added to the adjusted existing traffic volume. The resulting traffic volumes are used in analyzing traffic operations under this scenario.

4. **Existing Conditions Plus Near-Term Cumulative Projects Plus Project:** traffic volumes generated by the proposed project are added to the near-term base condition baseline traffic to determine traffic operation performance for this scenario.

5. **Horizon Year Conditions:** this scenario represents projected long-range non-project cumulative baseline traffic conditions for the horizon year. Volumes for the horizon year base conditions are obtained from the City's General Plan.

6. **Horizon Year Conditions Plus Project:** the combination of horizon year base condition traffic volumes and traffic projected to be generated by the proposed project are used to conduct performance analysis for this scenario.

TRANSPORTATION MODES TO BE INCLUDED FOR DISCUSSION IN THE LTS/LTA

Pedestrian:

- An assessment of existing pedestrian facilities directly connected to project access points and adjacent to the project development, extending in each direction to the nearest intersection with a classified roadway or connection with a Class I bike path.
- Facilities connecting to transit stops within two blocks of the project.
- Additional geographic areas may be included in certain cases to address special cases such as schools, retail centers or other land uses.

Bicycle:

- The LTS/LTA shall include a discussion of existing bicycle infrastructure available including any opportunities or deficiencies such as bike lanes, bike buffers, or other bike facilities. This section must also include discussion of what is planned based on City and regional documentation. The extents are as follows:
    - All roadways adjacent to the project, extending in each direction to the nearest intersection with a classified roadway or with a Class I bike path.
    - Both directions of travel should be evaluated.

Transit:

- The LTS/LTA shall identify any transit stops or routes existing and planned near the project site. This section shall also include a discussion and evaluation of transit stop amenities within ½ mile of each pedestrian access point.

Vehicle:

- All signalized intersections and signalized project driveways shall be analyzed at the discretion of the City Traffic Engineer.
- All unsignalized intersections and unsignalized project driveways shall be analyzed at the discretion of the City Traffic Engineer.
- All freeway ramp intersections and signalized project driveways shall be analyzed if the project will add 20 or more peak hour (new trips) trips in either direction.

INTERSECTION LOS ANALYSIS

Signalized Intersections:

The analysis of signalized intersections utilizes the operational analysis procedure as outlined in the latest edition of the Highway Capacity Manual (HCM). This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane (VPHPL) as the maximum saturation flow rate of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage trucks) and shared lane movements (i.e. through and right-turn movements originating from the same lane). With this methodology, the average control delay per vehicle is estimated for each lane group and aggregated for each approach and for the intersection as a whole.

The LOS criteria used for the analysis of signalized intersections are described in **Table 10-1**, identifying the thresholds of control delays and the associated LOS.

The signalized intersections and signalized project driveways to be analyzed shall be at the discretion of the City Traffic Engineer. Freeway ramp intersections and signalized project driveways shall be analyzed if the project will add 20 or more peak hour (new trips) trips in either direction.

Table 10-1 HCM Level of Service Description for Signalized Intersections

Level of Service	Description of Traffic Conditions	Control Delay (sec/veh)
A	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication	≤ 10
B	Minimal delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 – 20
C	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 25 – 35
D	Tolerable delays: Drivers may wait through more than one red indication. Queues may develop but dissipate rapidly without excessive delays.	> 35 – 55
E	Significant delays: Volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues form upstream.	> 55 – 80
F	Excessive delays: Represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2010.

Unsignalized Intersections:

Unsignalized intersections, including two-way and all-way stop controlled intersections are analyzed using the latest edition of the Highway Capacity Manual unsignalized intersection analysis methodology. The LOS for a two-way stop controlled (TWSC) intersection is determined by the computed or measured control delay and is defined for each minor movement. **Table 10-2** summarizes the LOS criteria for unsignalized intersections.

Unsignalized intersections and unsignalized project driveways to be analyzed shall be at the discretion of the City Traffic Engineer.

Unsignalized freeway ramp intersections shall be analyzed if the project will add 20 or more peak hour (new trips) trips in either direction.

Table 10-2 HCM Level of Service Description for Unsignalized Intersections

Level of Service	Description of Traffic Conditions	Control Delay (sec/veh)
A	No delay for stop-controlled approaches.	≤ 10
B	Operations with minor delay.	> 10 – 15
C	Operations with moderate delays.	> 15 – 25
D	Operations with some delays.	> 25 – 35
E	Operations with high delays and long queues.	> 35 – 50
F	Operation with extreme congestion, with very high delays and long queues unacceptable to most drivers.	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2010.

Roadway Segments:

Roadway segment Level of Service (LOS) standards and thresholds provide the basis for analysis of roadway segment performance. The analysis of roadway segment LOS is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. **Table 10-3** from the Vista 2030 General Plan Circulation Element presents the City's roadway segment capacity and LOS standards utilized to analyze roadways.

The standards shown in Table 10-3 are generally used as long-range planning guidelines to determine the functional classification of roadways. The roadway capacities are "rule of thumb" estimates for planning purposes and are affected by such factors as intersections (spacing, configuration and control features), degree of access control, roadway grades, design geometrics (horizontal and vertical alignment standards), sight distance, vehicle mix (truck and bus traffic) and pedestrian bicycle traffic. The actual capacity of a roadway facility varies according to its physical attributes. Typically, the performance and LOS of a roadway segment is heavily influenced by the ability of the intersections to accommodate peak hour volumes. The more detailed peak hour intersection analysis explicitly accounts for factors that affect roadway capacity. **Therefore, roadway segment widening is typically only recommended if the peak hour intersection analysis indicates the need for additional through lanes and/or to meet the street cross sections in the Circulation Element adjacent to the project boundary.** Within the City of Vista and the region as a whole, intersection performance, rather than roadway segment performance, is a more accurate and realistic indicator of true traffic operations and is used as the basis for defining traffic impacts.

Table 10-3 Circulation Element Roadway Classifications – Capacity and Levels of Service

Roadway Classification	ADT Level of Service (LOS)				
	A	B	C	D	E
6-Lane Prime Arterial (divided)	< 36,000	< 42,000	< 48,000	< 54,000	< 60,000
6-Lane Urban Major	< 30,000	< 35,000	< 40,000	< 45,000	< 50,000
4-Lane Major Arterial (divided)	< 24,000	< 28,000	< 32,000	< 36,000	< 40,000
4-Lane Collector (undivided)	< 15,000	< 17,500	< 20,000	< 22,500	< 25,000
2-Lane Collector with TWLTL(1)	< 9,000	< 10,500	< 12,000	< 13,500	< 15,000
2-Lane Collector (divided)	< 5,280	< 6,160	< 7,040	< 7,920	< 8,800
2-Lane Semi-Rural(2)					< 7,900

1. TWLTL= Two-Way Left-Turn Lane (striped center median).
2. Semi-Rural Streets: capacities identified are the maximum recommended volumes to maintain this classification. If volumes exceed this capacity, either a classification modification should be considered or measures should be taken to reduce through traffic.

IMPROVEMENT THRESHOLDS

A project will need to implement improvements to operation of an intersection when one of the following occurs:

1. **In either the Existing Conditions Plus Project and Existing Conditions Plus Near-Term Cumulative Projects scenarios, the addition of project traffic results in a service drop from LOS D or better to LOS E or F.** Under this condition, the project is responsible for improvements necessary to restore the intersection to LOS D conditions or better.

2. **In either the Existing Conditions Plus Project and Existing Conditions Plus Near-Term Cumulative Projects scenarios, an intersection is operating at LOS E or F under the no-project scenario and the project adds more than an additional two seconds of average vehicle delay.** Under this condition, the project is responsible for improvements necessary to restore the intersection LOS to pre-development conditions or better.

3. In the longer-range cumulative condition, if the addition of project traffic results in a service drop from LOS D or better to LOS E or F, or if an intersection is operating at LOS E or F and the project contributes to the average vehicle delay (regardless of time), the project is determined to have a cumulative impact. Under this condition, the project applicant is responsible for mitigating the intersection LOS to pre-development conditions or better. Identified cumulative transportation related impacts can be mitigated by participation in the City of Vista's Impact Fees for Arterials Streets and Traffic Signals program.

11.0 RESOURCES

The following resources were used in the development of these guidelines. It is recommended the consultant develop a plan of action that aligns with the City Traffic Engineer's expectation prior to conducting any analyses.

City of San Diego. "Transportation Study Manual (TSM) Draft." June 2020.

Institute of Transportation Engineers (San Diego Section). " Guidelines for Transportation Impact Studies (TIS) in the San Diego Region." May 2019. Accessed July 10, 2020.

Governor's Office of Planning and Research (OPR). "Technical Advisory on Evaluating Transportation Impacts in CEQA." December 2018. Accessed July 10, 2020.

Governor's Office of Planning and Research (OPR). "Key Resources on SB 743: Studies, Reports, Briefs, and Tools." April 2018. Accessed July 12, 2020.

California Air Resources Board (CARB). "2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals." January 2019. Accessed July 12, 2020.

California Air Pollution Control Officers Association (CAPCOA). "Quantifying Greenhouse Gas Mitigation Measures." August 2010. Accessed July 10, 2020.

San Diego Association of Governments (SANDAG). "TDM Planning Resources." 2019. Accessed July 1, 2020.

APPENDIX A
PROJECT INFORMATION FORM (PIF)

PROJECT INFORMATION FORM (PIF)

THE FOLLOWING IS TO BE COMPLETED BY THE PROJECT APPLICANT:

PROJECT INFORMATION FORM			
1.	**PROJECT DESCRIPTION:**		
2.	**PROJECT LOCATION:**		
3.	**LAND USE:** _____ **SIZE/DENSITY:** _____		
4.	**ZONING AND LAND USE CONSISTENT WITH ADOPTED GENERAL PLAN?**	☐ Yes	☐ No
5.	**PROJECT LOCATED IN TRANSIT PRIORITY AREA[1], SMART GROWTH AREA, OR LOW VMT AREA[2]?**	☐ Yes	☐ No
6.	**PROJECT TRIP GENERATION:** _____**ADT**	☐ < 200 ADT ☐ > 400 ADT ☐ ≥ 500 ADT ☐ ≥ 1,000 ADT ☐ ≥ 2,400 ADT	
ATTACHMENTS			
A.	**PROJECT LOCATION MAP**	☐ Attached	
B.	**PROJECT TRIP DISTRIBUTION**	☐ Attached	
C.	**PROJECT TRIP ASSIGNMENT**	☐ Attached	

1. Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station 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 (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017).
2. Based on the most recent SANDAG SB 743 Screening Map. Example shown in Appendix B.

TO BE COMPLETED BY CITY STAFF AND RETURNED TO PROJECT APPLICANT

PROJECT STUDY REQUIREMENTS				
1)	**Does the project require a CEQA VMT analysis?** **A. If yes, does the project require a SANDAG Model Run?**	☐ Yes ☐ Yes	☐ No ☐ No	☐ Incomplete[(1)]
2a)	**Does the project require a Local Transportation Study?**	☐ Yes	☐ No	☐ Incomplete[(1)]
OR				
2b)	**Does the project require a Local Transportation Assessment?**	☐ Yes	☐ No	☐ Incomplete[(1)]

[(1)] Incomplete application or additional information is needed to determine study requirements.

APPENDIX B
VMT ANALYSIS EXAMPLES

The most recent version of the screening maps and model shall be utilized unless otherwise directed by City Staff. SANDAG currently has two maps, one expressing VMT per capita (for each person) and one VMT per employee.

VMT Steps for a Residential Project Hypothetical Example (Per Capita)

VMT Analysis:

Step 1 : Determine the Project's Trip Generation utilizing the SANDAG *Not So Brief Trip Generation Guide (2002)*:

Proposed Land Use	Size	Unit	Rate	Daily Trips (ADT)
Single Family Residential	200	Dwelling Unit	10/Unit	2,000

*Based on SANDAG Not So Brief Guide (2002)

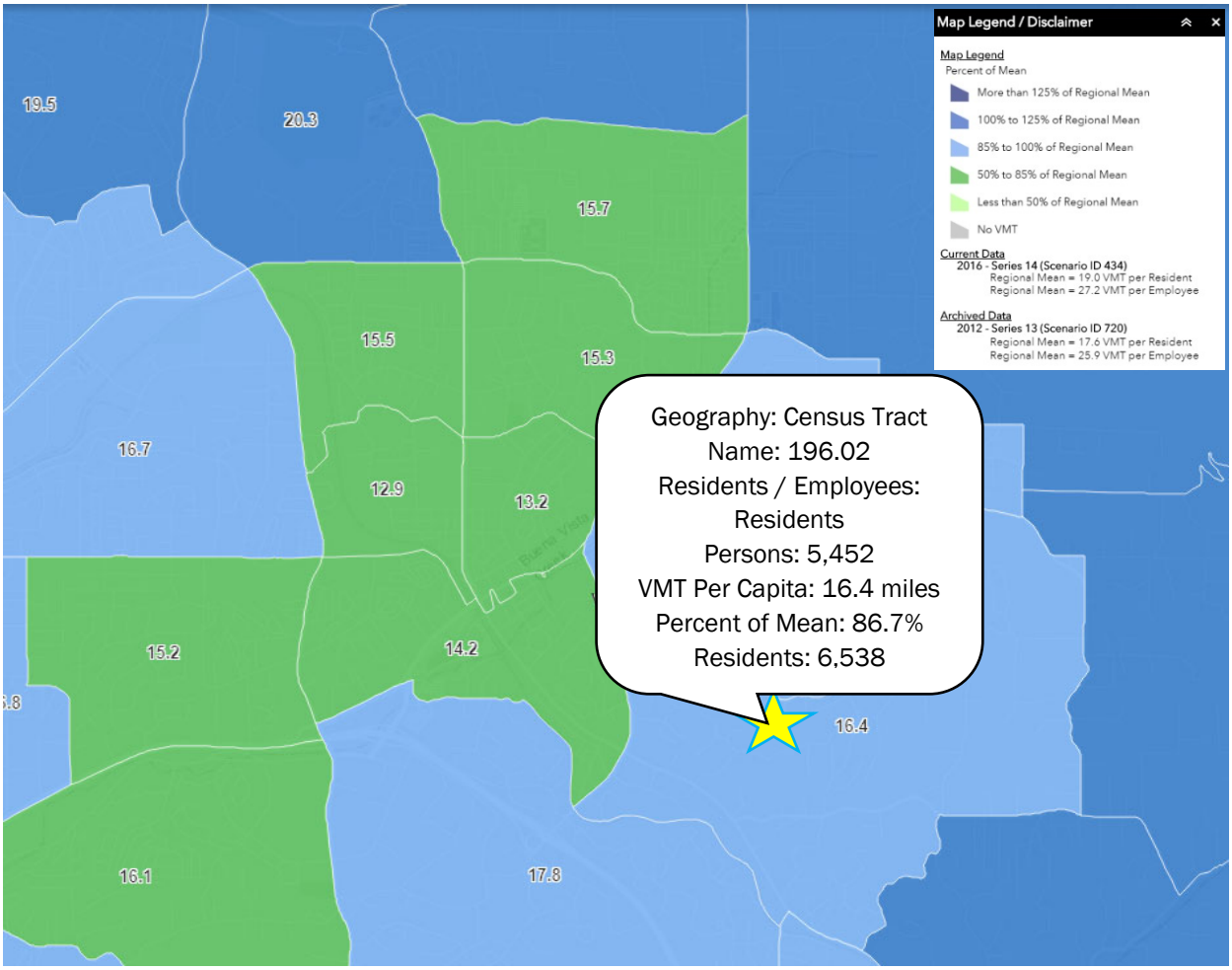
A VMT analysis for CEQA purposes will be required if a project equals or exceeds 1,000 average daily trips (ADT) and is consistent with the adopted General Plan. If a project is inconsistent with the adopted General Plan, a VMT analysis will be required if the project equals to or exceeds 500 ADT.

Since this example generates 2,000 ADT, a VMT analysis is required based on the threshold of 1,000 ADT.

Step 2: Utilize the SB 743 Concept Map provided by SANDAG for the appropriate metric.

Locate the project's location and click the census tract as shown in **Figure 1**. An information callout pops up that identifies the characteristics of the project's location (based on the existing land use).

Figure 1



For this example, VMT Per Capita is utilized and compared to the regional mean. Based on the screening map, the project is not located in a low VMT area and will require further evaluation. The following table identifies the project and regional VMT. Additionally, it demonstrates how to interpret the SANDAG SB 743 Concept map.

Proposed Land Use	Project VMT	Regional VMT	% of Regional Mean
Single Family Residence (200 units)	16.4 per resident	19.0 per resident	86.7

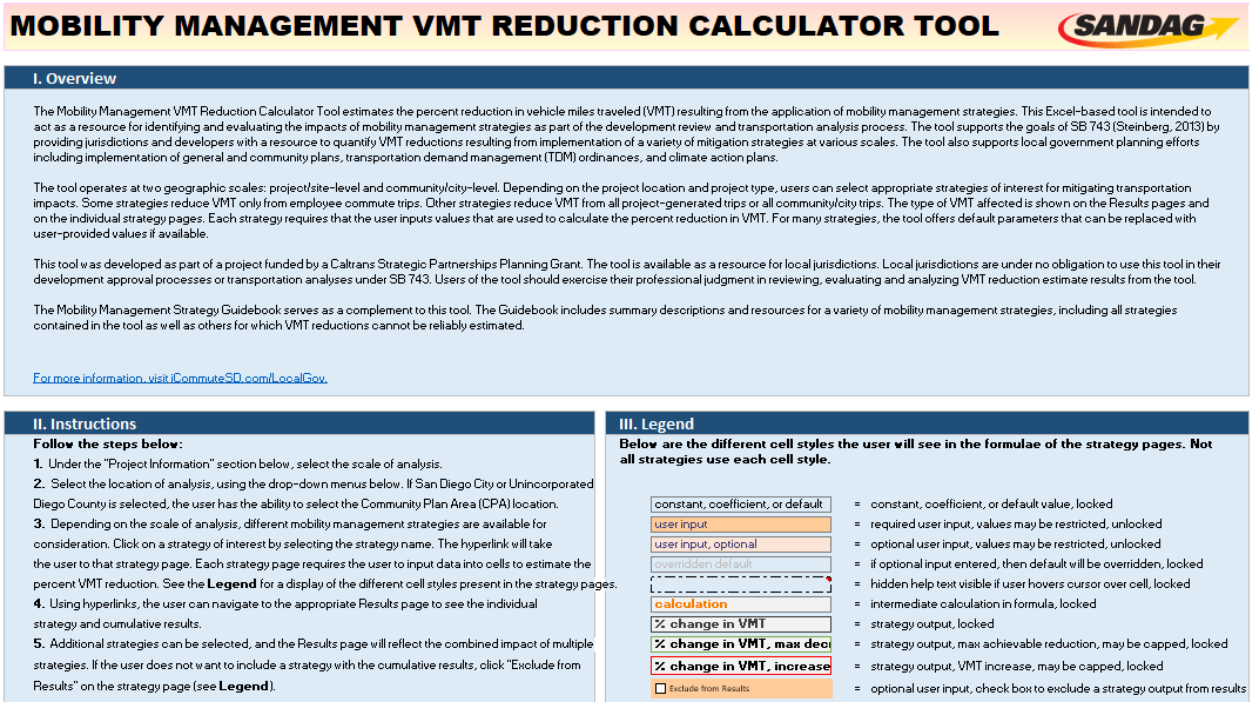
Step 3: Is the project 15 % below regional average? In other words, is the percent of the regional mean less than 85%?

For this example, the answer is no as the project is 86.7% of the regional mean. Therefore, mitigation will be required.

Note: Projects above 2,400 ADT will need to use the SANDAG model to complete the VMT analysis.

Mitigation:

Since this hypothetical example is to develop single family homes, the use is not VMT reducing in nature. Instead, the project will need to implement VMT reducing strategies. The Mobility Management VMT Reduction Calculator Tool is available on the SANDAG website. VMT reducing strategies can be utilized for this effort. The tool is an Excel spreadsheet available for download that calculates the VMT reduction for several strategies. The spreadsheet is based on the SANDAG model input parameters and contains information for each jurisdiction in the San Diego Region.



MOBILITY MANAGEMENT VMT REDUCTION CALCULATOR TOOL SANDAG

I. Overview

The Mobility Management VMT Reduction Calculator Tool estimates the percent reduction in vehicle miles traveled (VMT) resulting from the application of mobility management strategies. This Excel-based tool is intended to act as a resource for identifying and evaluating the impacts of mobility management strategies as part of the development review and transportation analysis process. The tool supports the goals of SB 743 (Steinberg, 2013) by providing jurisdictions and developers with a resource to quantify VMT reductions resulting from implementation of a variety of mitigation strategies at various scales. The tool also supports local government planning efforts including implementation of general and community plans, transportation demand management (TDM) ordinances, and climate action plans.

The tool operates at two geographic scales: project/site-level and community/city-level. Depending on the project location and project type, users can select appropriate strategies of interest for mitigating transportation impacts. Some strategies reduce VMT only from employee commute trips. Other strategies reduce VMT from all project-generated trips or all community/city trips. The type of VMT affected is shown on the Results pages and on the individual strategy pages. Each strategy requires that the user inputs values that are used to calculate the percent reduction in VMT. For many strategies, the tool offers default parameters that can be replaced with user-provided values if available.

This tool was developed as part of a project funded by a Caltrans Strategic Partnerships Planning Grant. The tool is available as a resource for local jurisdictions. Local jurisdictions are under no obligation to use this tool in their development approval processes or transportation analyses under SB 743. Users of the tool should exercise their professional judgment in reviewing, evaluating and analyzing VMT reduction estimate results from the tool.

The Mobility Management Strategy Guidebook serves as a complement to this tool. The Guidebook includes summary descriptions and resources for a variety of mobility management strategies, including all strategies contained in the tool as well as others for which VMT reductions cannot be reliably estimated.

For more information, visit iCommuteSD.com/LocalGov.

II. Instructions

Follow the steps below:

1. Under the "Project Information" section below, select the scale of analysis.
2. Select the location of analysis, using the drop-down menus below. If San Diego City or Unincorporated Diego County is selected, the user has the ability to select the Community Plan Area (CPA) location.
3. Depending on the scale of analysis, different mobility management strategies are available for consideration. Click on a strategy of interest by selecting the strategy name. The hyperlink will take the user to that strategy page. Each strategy page requires the user to input data into cells to estimate the percent VMT reduction. See the **Legend** for a display of the different cell styles present in the strategy pages.
4. Using hyperlinks, the user can navigate to the appropriate Results page to see the individual strategy and cumulative results.
5. Additional strategies can be selected, and the Results page will reflect the combined impact of multiple strategies. If the user does not want to include a strategy with the cumulative results, click "Exclude from Results" on the strategy page (see **Legend**).

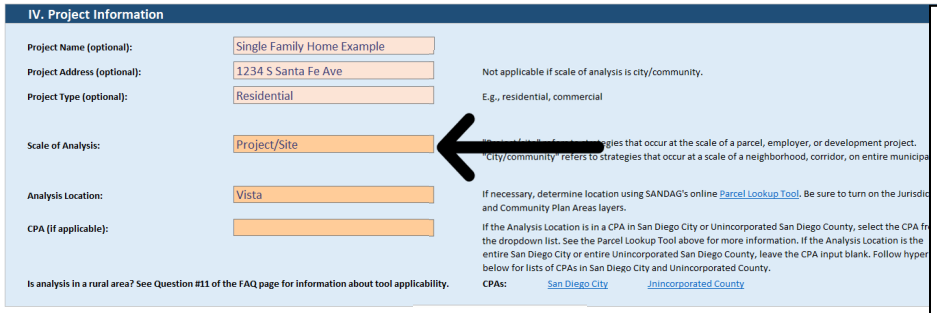
III. Legend

Below are the different cell styles the user will see in the formulae of the strategy pages. Not all strategies use each cell style.

constant, coefficient, or default	=	constant, coefficient, or default value, locked
user input	=	required user input, values may be restricted, unlocked
user input, optional	=	optional user input, values may be restricted, unlocked
overridden default	=	if optional input entered, then default will be overridden, locked
	=	hidden help text visible if user hovers cursor over cell, locked
calculation	=	intermediate calculation in formula, locked
% change in VMT	=	strategy output, locked
% change in VMT, max dec	=	strategy output, max achievable reduction, may be capped, locked
% change in VMT, increase	=	strategy output, VMT increase, may be capped, locked
☐ Exclude from Results	=	optional user input, check box to exclude a strategy output from results

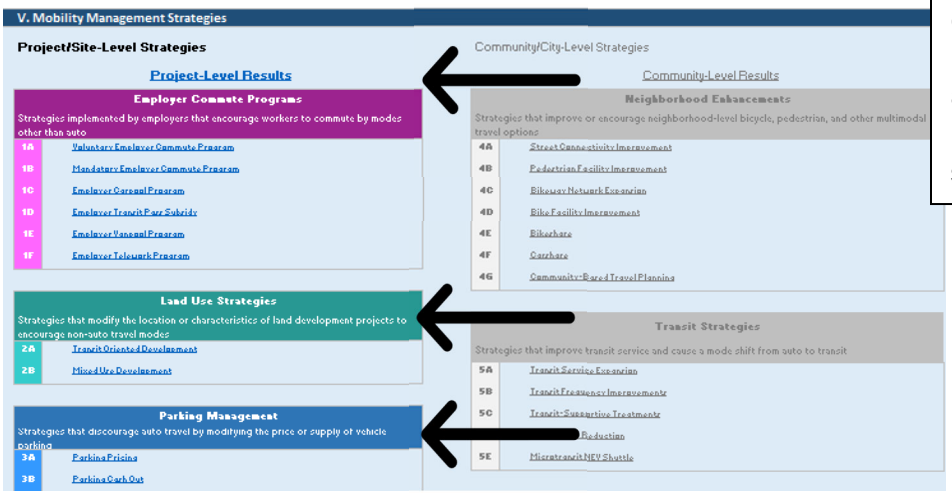
Using the same hypothetical example, VMT mitigation is required. To mitigate this project, the project will need to reduce VMT by 1.54%, down to a project VMT of 16.15 (85% of the Regional Mean).

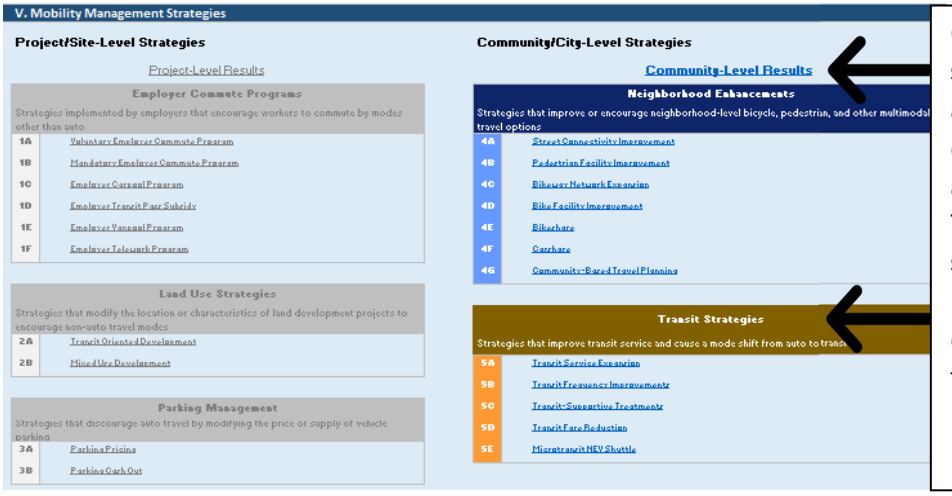
On the first page of the tool, the user provides project information and chooses the land use and scale of the analysis (Project/Site or Community/City). Depending on the user's selection, the tool will supply a variety of mitigation measures to choose from and lock improvements that are not applicable given the land use and scale of analysis.



Project level strategies available are highlighted based on the scale of analysis selection.

The strategies at this scale are employer commute programs, land use strategies, and parking management strategies.





Community level strategies available are highlighted based on the scale of analysis selection. The strategies at this scale are neighborhood enhancements and transit strategies.

Based on the strategies listed and the hypothetical example, the project is not able to implement project level improvements and will implement community level strategies instead to reduce VMT. For this oversimplified example, street connectivity and pedestrian improvements have been chosen. Using a combined strategy, the strategies of **4A (Street Connectivity Improvement (max VMT reduction of 6.0%)) and 4B (Pedestrian Facility Improvement (max VMT reduction of 1.4%)) have been identified to reduce VMT. The maximum VMT reduction possible with the combined strategies for this project is 7.4%.** The maximum VMT reduction is identified in the top left corner of the spreadsheet.

The following is a breakdown of both strategies implemented for the hypothetical project.

Using the calculator, the user fills in the sheet with the applicable information for 4A. Street Connectivity Improvement.

4A. Street Connectivity Improvement

Level of application: **City/CPA**
Type of VMT affected: **All city/CPA trips**
Max VMT reduction: **6.0%**

Return to Main
Results Summary

Description: A connected and complete street network improves accessibility, safety, and livability of the community. Traditional grid street patterns with short blocks offer a high degree of connectivity compared to street networks with curvilinear designs and cul-de-sacs. This strategy uses intersection density as a proxy for street connectivity improvements, which help to facilitate a greater number of short trips. Example projects that increase intersection density would be building a new street network in a subdivision or retrofitting an existing street network to improve connectivity (e.g. cul-de-sacs converted to grid streets).

Default Vista intersection density (int/sq mi)	101	calculated using current data, source (1)
User override of existing intersection density (int/sq mi)		user input, optional
Intersection density used for calculation (int/sq mi)	101	calculated
Intersection density with strategy (int/sq mi)	109	user input
% change in intersection density	8%	calculated
Elasticity	-0.12	constant, source (2, 3)
Change in VMT	-1.0%	☐ Exclude from Results

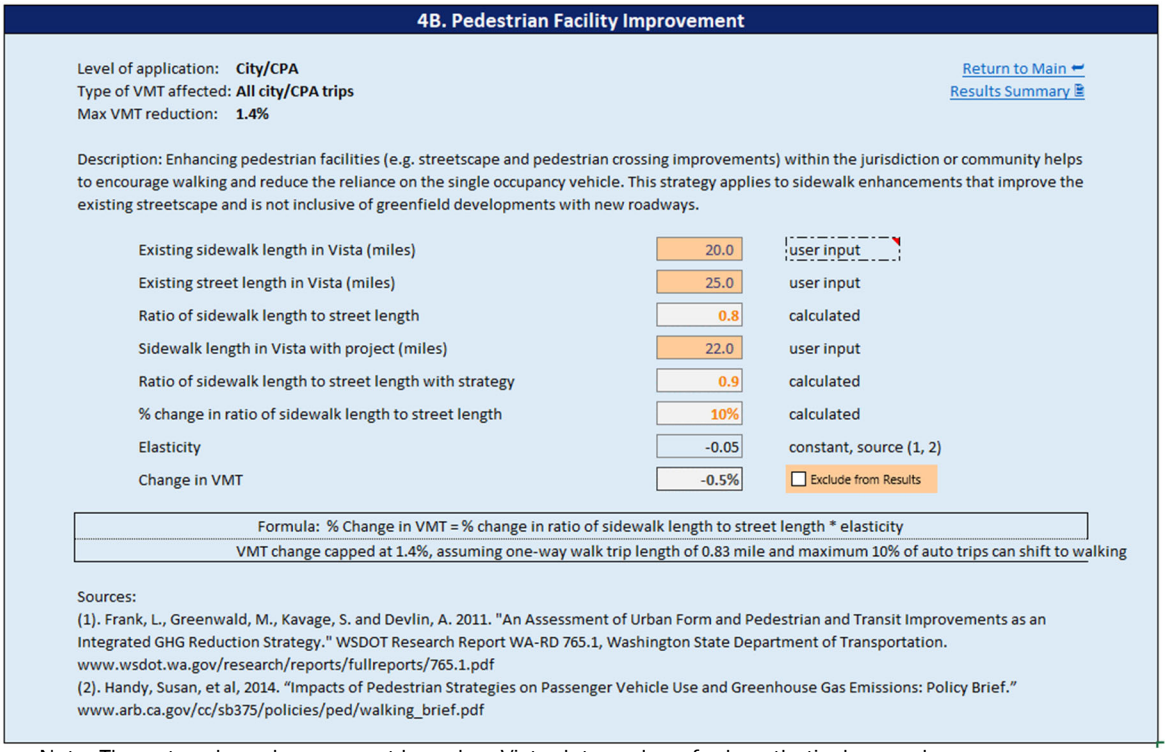
Formula: % Change in VMT = % change in intersection density * elasticity
% change in intersection density is capped at minimum of -50% and maximum of 50%

Sources:
(1). San Diego Geographic Information Source (SanGIS). 2016. "Roads_All." San Diego Geographic Information Source - JPA.
(2). Ewing, R., and Cervero, R. 2010. "Travel and the Built Environment - A Meta-Analysis." Journal of the American Planning Association.
(3). Handy, Susan, et al, 2014. "Impacts of Network Connectivity on Passenger Vehicle Use and Greenhouse Gas Emissions: Policy Brief." www.arb.ca.gov/cc/sb375/policies/connectivity/network_connectivity_brief.pdf

Note: The entered numbers are not based on Vista data and are for hypothetical example purposes.

Using this method and providing new intersections to increase street connectivity the project is able to reduce VMT by 1.0%.

Using the calculator, the user fills in the sheet with the applicable information for strategy 4B. Pedestrian Facility Improvement.



4B. Pedestrian Facility Improvement

Level of application: **City/CPA**
Type of VMT affected: **All city/CPA trips**
Max VMT reduction: **1.4%**

Return to Main
Results Summary

Description: Enhancing pedestrian facilities (e.g. streetscape and pedestrian crossing improvements) within the jurisdiction or community helps to encourage walking and reduce the reliance on the single occupancy vehicle. This strategy applies to sidewalk enhancements that improve the existing streetscape and is not inclusive of greenfield developments with new roadways.

Existing sidewalk length in Vista (miles)	20.0	user input
Existing street length in Vista (miles)	25.0	user input
Ratio of sidewalk length to street length	0.8	calculated
Sidewalk length in Vista with project (miles)	22.0	user input
Ratio of sidewalk length to street length with strategy	0.9	calculated
% change in ratio of sidewalk length to street length	10%	calculated
Elasticity	-0.05	constant, source (1, 2)
Change in VMT	-0.5%	☐ Exclude from Results

Formula: % Change in VMT = % change in ratio of sidewalk length to street length * elasticity
VMT change capped at 1.4%, assuming one-way walk trip length of 0.83 mile and maximum 10% of auto trips can shift to walking

Sources:
(1). Frank, L., Greenwald, M., Kavage, S. and Devlin, A. 2011. "An Assessment of Urban Form and Pedestrian and Transit Improvements as an Integrated GHG Reduction Strategy." WSDOT Research Report WA-RD 765.1, Washington State Department of Transportation. www.wsdot.wa.gov/research/reports/fullreports/765.1.pdf
(2). Handy, Susan, et al, 2014. "Impacts of Pedestrian Strategies on Passenger Vehicle Use and Greenhouse Gas Emissions: Policy Brief." www.arb.ca.gov/cc/sb375/policies/ped/walking_brief.pdf

Note: The entered numbers are not based on Vista data and are for hypothetical example purposes.

Using this strategy and providing ample sidewalk the project is able to reduce the project's VMT by 0.5%.

Summary of Results:

The total VMT reduction with the implementation of these strategies is 1.6% which would meet the minimum VMT reduction needed for this hypothetical project to achieve 85% of the regional mean for VMT. The calculator provides several summary sheets for the user to export as evidence.

Community/City Results				
Community/City-Level Strategies		**VMT Type**	**Change in VMT**	**Exclusions**
Neighborhood Enhancements				
4A	Street Connectivity Improvement	All city/CPA trips	-1.1%	
4B	Pedestrian Facility Improvement	All city/CPA trips	-0.5%	
4C	Bikeway Network Expansion	All city/CPA trips		
4D	Bike Facility Improvement	Trips on roadway with bikeway addition		
4E	Bikeshare	All city/CPA trips		
4F	Carshare	All city/CPA trips		
4G	Community-Based Travel Planning	All city/CPA trips		
Transit Strategies				
5A	Transit Service Expansion	All city/CPA trips		
5B	Transit Frequency Improvements	All city/CPA trips		
5C	Transit-Supportive Treatments	All city/CPA trips		
5D	Transit Fare Reduction	All city/CPA trips		
5E	Microtransit NEV Shuttle	All city/CPA trips		
	All City/CPA Trips - Total Change in VMT		**-1.6%**	
	Trips on Roadway Affected by Bikeway Addition - Total Change in VMT			

The overall methodology, inputs, and data sources used to develop the VMT Reduction Calculator Tool are available in the Mobility Management VMT Reduction Calculator Tool – Design Document on the SANDAG website.

It is important to note the measures implemented must be appropriate for the project. Additional VMT reduction measures are available through the Office of Planning and Research (OPR) and CAPCOA as discussed in Section 8.0 of this document.

VMT Example Project (Office)

The most recent version of the screening maps and model shall be utilized unless otherwise directed by City Staff. SANDAG currently has two maps, one expressing VMT per capita (for each person) and one VMT per employee.

VMT Steps for an Office Project Hypothetical Example (Per Employee)

VMT Analysis:

Step 1 : Determine the Project's Trip Generation utilizing the SANDAG *Not So Brief Trip Generation Guide (2002)*:

Proposed Land Use	Size	Unit	Rate	Daily Trips (ADT)
Office	2,000 SF	Square Feet	10 /1,000 SF	2,000

*Based on SANDAG Not So Brief Guide (2002)

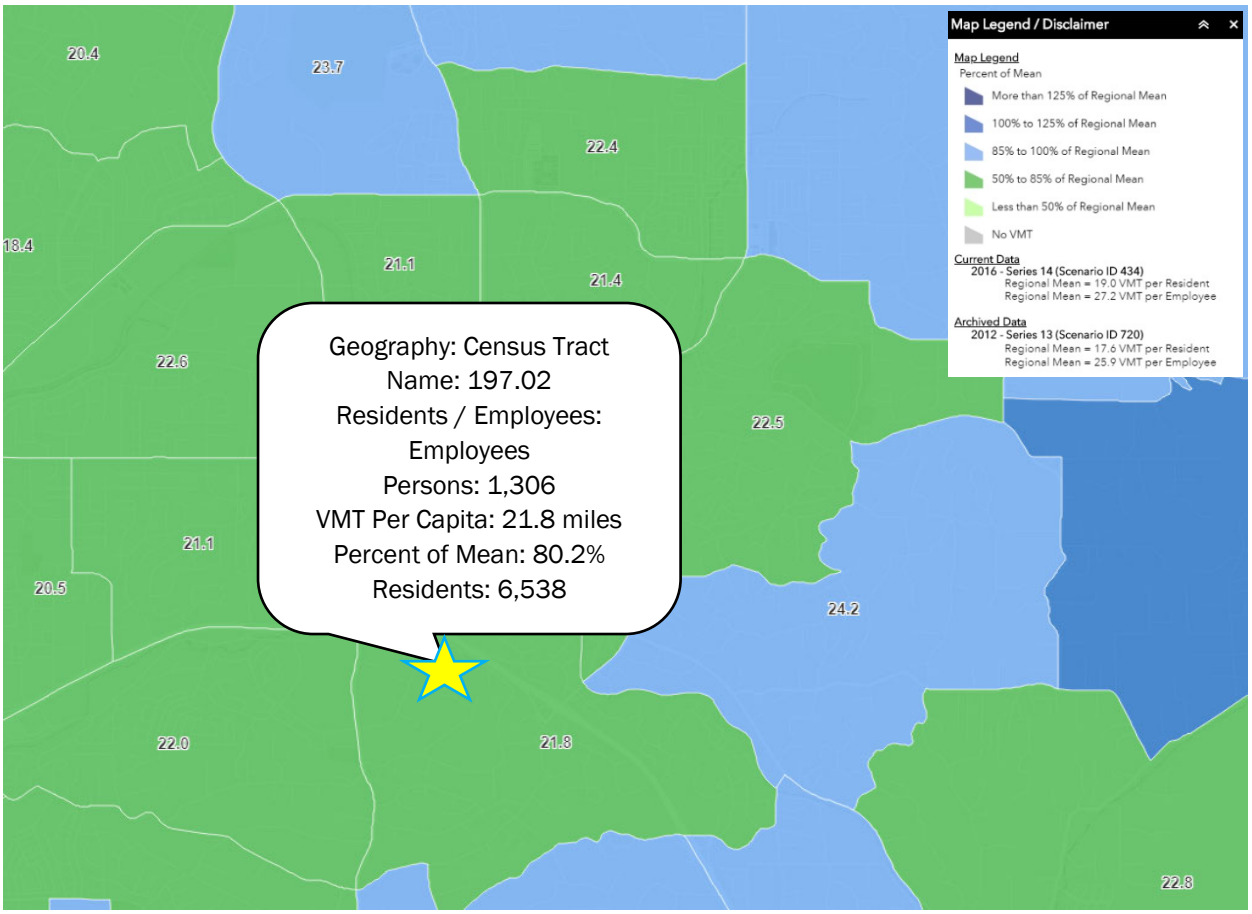
A VMT analysis for CEQA purposes will be required if a project equals to or exceeds 1,000 ADT and is consistent with the adopted General Plan. If a project is inconsistent with the adopted General Plan, a VMT analysis will be required if the project equals to or exceeds 500 ADT.

Since this example generates 2,000 ADT, a VMT analysis is required based on the threshold of 1,000 ADT.

Step 2: Utilize the SB 743 Concept Map provided by SANDAG for the appropriate metric.

Locate the project's location and click the census tract as shown in **Figure 2**. An information callout pops up that identifies the characteristics of the project's location (based on the existing land use).

Figure 2



For this example, VMT Per Employee is utilized and compared to the regional mean. Based on the screening map, the project is located in a low VMT area and will not require further evaluation. The following table identifies the project and regional VMT. Additionally, it demonstrates how to interpret the SANDAG SB 743 Concept map.

Proposed Land Use	Project VMT	Regional VMT	% of Regional Mean
Office	21.8 per employee	27.2 per employee	80.2

Step 3: Is the project 15 % below regional average? In other words, is the percent of the regional mean less than 85%?

For this example, the answer is yes. The project is 80.2% of the regional mean. Therefore, no mitigation is required.

Note: Projects above the 2,400 ADT will need to use the SANDAG model to complete the VMT analysis.