CITY OF CHULA VISTA

Transportation Study Guidelines

June 10, 2020

ACKNOWLEDGEMENTS

City Council

Mary Casillas Salas, Mayor

John McCann, Councilmember District 1

Jill Galvez, Councilmember District 2

Stephen Padilla, Councilmember District 3

Mike Diaz, Councilmember District 4

City Staff

Kelly Broughton, Director of Development Services

Tiffany Allen, Assistant Director of Development Services

Kim Elliott, Facilities Financing Manager

Eddie Flores, City Traffic Engineer

Paul Oberbauer, Senior Civil Engineer - Traffic

Scott Barker, Transportation Engineer

Consultant Team

Fehr & Peers Transportation Consultants, Prime Consultant

Gatzke Dillon & Ballance LLP, Legal

Chen Ryan Associates, Transportation Planning

ICF Jones & Stokes, Inc., Environmental

City Context Working Group

Gary Halbert, City Manager

William Valle, City Engineer, Director of Engineering & Capital Projects

Scott Donaghe, Principal Planner

Steve Power, Principal Planner

Frank Rivera, Principal Civil Engineer

Mike Shirey, Deputy City Attorney

Cheryl Goddard, Senior Planner

TABLE OF CONTENTS

Introduction 1

1.1 Background 2

1.2 Purpose of the TSG 3

1.3 TSG Objectives 3

1.4 CEQA vs. Non-CEQA Transportation Analysis 4

1.5 Process Overview 5

Transportation Study Initiation 8

2.1 Types of Transportation Studies 9

2.2 Transportation Study Screening Criteria 12

2.3 Completing the Project Information Form 12

2.4 Submittal Instructions 13

CEQA Requirements for Transportation VMT 15

3.1 Overview 16

3.2 Metrics and Methodology for Calculating VMT 16

3.3 VMT Analysis for Land Use Projects 17

3.4 VMT Analysis for Transportation Projects 21

3.5 VMT Reduction and Mitigation Measures 21

3.6 Cumulative VMT Impacts 23

Local Mobility Analysis 25

4.1 Overview 26

4.2 Process 26

4.3 Requirements 27

4.4 LMA Outline 28

LIST OF FIGURES

Figure 1 - Transportation Study Process for Projects in the City of Chula Vista 11

LIST OF TABLES

Table 1: Local Mobility Analysis – Projects Consistent with the General Plan 30

Table 2: Local Mobility Analysis – Projects Inconsistent with the General Plan 31

Table 3: Threshold for Determining a Project's Substantial Traffic Effect on Vehicular Intersections 32

Table 4: Local Mobility Analysis – Potential Improvements to Accommodate a Project's Vehicular Traffic 33

Table 5: Local Mobility Analysis – Potential Improvements to Accommodate the Project's Active Transportation Needs 34

APPENDICES

Appendix A: Scoping Agreement for Transportation Studies

Appendix B: Transportation Study Required Content Form

Appendix C: VMT Screening Maps – VMT/Capita and VMT/Employee

Appendix D: Land Use Designations

Appendix E: Screening Criteria and Threshold Evidence

Appendix F: Transportation Project Screening

Appendix G: Summary of Desired Transit Stop Feature & Local Mobility Analysis Specifications

1.0

Introduction

1.1 Background

The City of Chula Vista previously required projects undergoing California Environmental Quality Act (CEQA) review to conduct a transportation impact analysis that focused primarily on metrics related to vehicle delay and Level of Service (LOS). These analysis requirements involved a quantitative analysis to determine whether or not a project may have a significant impact on the roadway network pursuant to CEQA.

CEQA Changes

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743 into law and started a process intended to fundamentally change transportation impact analysis as part of CEQA compliance. SB 743 mandates a change in the way that public agencies evaluate transportation impacts. A key element of this law is the removal of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts under CEQA. The basis for the change was to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and the reduction of greenhouse gas (GHG) emissions.

As a result, the Governor's Office of Planning and Research (OPR) updated the CEQA Guidelines to establish new criteria for determining the significance of transportation impacts. Based on feedback with the public, public agencies, and various organizations, OPR decided that Vehicle Miles Traveled (VMT) would be the primary metric for evaluating transportation impacts under CEQA. VMT refers to the amount and distance of automobile travel attributable to a project.

SB 743 does not prevent a city or county from continuing to analyze traffic delay or LOS as part of other plans (i.e., General Plans), studies, congestion management and mitigation, etc., but, with limited exception, a project's effect on automobile delay may no longer constitute a significant environmental impact under CEQA.

CEQA refers to the California Environmental Quality Act. This statute requires identification of any significant environmental impacts of state or local action, including discretionary approval of new development or infrastructure projects. The process of identifying these impacts is typically referred to as the environmental review process.

LOS refers to "Level of Service," a metric that assigns a letter grade to network performance. The typical application of LOS in cities is to measure the average amount of delay experienced by vehicle drivers at an intersection during the most congested time of day and to assign a report card range from LOS A (fewer than 10 seconds of delay for signalized intersections) to LOS F (more than 80 seconds of delay for signalized intersections).

VMT refers to "Vehicle Miles Traveled," a metric that accounts for the number of vehicle trips generated and the length or distance of those trips. For transportation analysis, VMT is generally expressed as VMT per Capita (VMT/Capita) or VMT per Employee (VMT/Employee) for a typical weekday.

Overall, SB 743 includes the following two legislative intent statements:

1. More appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions.
2. Ensure that the environmental impacts of traffic, such as noise, air pollution, and safety concerns continue to be properly addressed and mitigated through the California Environmental Quality Act.

VMT does not directly measure traffic operations; instead it is a measure of network use or efficiency, especially if expressed as a function of population or employment (i.e., "VMT/Capita"). VMT tends to increase as land use density decreases and travel becomes more reliant on the use of automobiles due to the long distances between origins and destinations. VMT can also serve as a proxy for impacts related to energy use, air pollution emissions, GHG emissions, traffic safety, and roadway maintenance. The relationship between VMT and energy or emissions is based on fuel consumption. The traditional use of VMT in environmental impact analysis is to estimate mobile air pollution emissions, GHGs, and energy consumption.

General Plan Goals and Policies

The City of Chula Vista's General Plan (Adopted 2005, and its subsequent amendments, form the foundation upon which all land use decisions in the City are based. The General Plan and its associated Sectional Planning Area (SPA) Plans include goals and policies that guide the City's growth. The General Plan currently includes many policies that relate to and support the intent of SB 743.

SB 743-Related Policies

The General Plan and SPA Plan policies that are most consistent with the intent of SB 743 are those regarding planned improvements, including new roadways and new pedestrian and bicycle facilities, and policies and programs to enhance and encourage bicycle, pedestrian, and transit modes. For example, the evaluation of existing transit services in order to enhance mobility and accessibility within Chula Vista, providing the provision of sidewalks along arterial roadways, providing the provision of shuttle services on some local roads, and the encouragement of the development of high-density mixed land use projects are among the existing Chula Vista policies that align with SB 743.

1.2 Purpose of the TSG

The City of Chula Vista's goal is to achieve a safe, efficient, accessible, and sustainable transportation system that meets the needs of all users. Transportation improvements and mitigation from proposed land development projects should be consistent with City-adopted plans and policies, as well as regional and state environmental and legislative requirements. The Transportation Study Guidelines document (TSG) provides criteria to evaluate projects for consistency related to the City's transportation goals, policies, and plans, and through procedures established under CEQA. The TSG establishes the content requirements and procedures for preparing a Transportation Study in Chula Vista.

The purpose of the TSG (and a Transportation Study) is to provide applicants, transportation professionals, and City personnel with standard procedures and guidelines to support CEQA review of a project's transportation impacts and a project's effects on local mobility through a Local Mobility Analysis (LMA).

Reasons to perform a Transportation Study include the following:

- To determine the significance of a proposed project's transportation impacts and associated mitigation for CEQA Review
- To determine the project's effect on traffic congestion, transit, and active transportation modes, and provide guidance for implementing improvements
- To implement City plans and policies related to transportation

1.3 TSG Objectives

The following objectives are intended to provide consistency between local, regional, and state

policies in forecasting, describing, and analyzing the effects of land development on transportation and circulation for all transportation modes and users:

- Provide clear direction to applicants and consultants to better meet expectations, increase the efficiency of the review process, and minimize delays.
- Provide scoping procedures and recommendations for early coordination during the planning/discretionary phases of a land development project.
- Provide guidance for determining when, what type, and how to prepare a Transportation Study.
- Enhance consistency, uniformity, and accuracy in the preparation of a Transportation Study.
- Promote quality assurance in transportation studies by establishing the assumptions, data requirements, study scenarios, and analysis methodologies.
- Provide consistency and equity in the identification of measures to mitigate the transportation impacts generated by land development.
- Assist City staff in developing objective recommendations and project conditions of approval as part of the land development discretionary review process.
- Ensure that Chula Vista transportation studies are in conformance with all applicable City, regional, and state regulations, including legislative requirements as part of CEQA.

1.4 CEQA vs. Non-CEQA Transportation Analysis

The City of Chula Vista TSG is a comprehensive manual for conducting both CEQA VMT analysis and non-CEQA Local Mobility Analysis (LMA) for both discretionary and ministerial projects. The TSG provides guidance for these two components of the Transportation Study.

CEQA Transportation Analysis - VMT Analysis

CEQA requires VMT analysis for compliance with state policies to evaluate a project's potential impacts related to VMT significance criteria. The VMT analysis will accomplish the following:

- Enable proposed projects to comply with current CEQA requirements as a result of the implementation of SB 743.
- Specify the City's VMT significance thresholds, screening criteria, and methodology for conducting the transportation VMT analysis.
- Determine if mitigation is required to offset a project's VMT impacts.
- Identify VMT reduction measures and strategies to mitigate a project's impacts below a level of significance.

Non-CEQA Transportation Analysis – Local Mobility Analysis (LMA)

An LMA is required by the City of Chula Vista to assess a project's localized effects on roadway traffic congestion and transit, bicycle, and pedestrian facilities. The authority for requiring this non-CEQA transportation analysis resides in the City's police power to protect public health, safety, and welfare, and aligns with Section 5.3 of the Land Use and Transportation Element of the City of Chula Vista's General Plan. The LMA analysis will accomplish the following:

- Ensure that the local transportation facilities will have sufficient capacity to accommodate the project's demand on various modes of travel, and that improvements identified by the City are constructed when needed consistent with the City's adopted standards and policies.
- Address issues related to operations and safety for all transportation modes.
- Ensure consistency with the City's Active Transportation Plan for bicycle and pedestrian facilities, as may be amended from time to time.

- Identify the necessary transportation entitlement conditions for land development projects.
- Specify the City's screening criteria, study area, and methodologies to assess the potential need for off-site operation and safety improvements to the project study area transportation network.
- Establish measures of effectiveness to maintain transportation LOS consistent with the City's Land Use and Transportation Element, as may be amended from time to time.
- Facilitate site project access and roadway frontage infrastructure improvements to serve the project vicinity.

1.5 Process Overview

Preparer Qualification Requirements

The CEQA portion of Transportation Studies must be prepared under the responsible charge of a registered Traffic Engineer or a registered Civil Engineer with expertise in transportation engineering, or an AICP with expertise in transportation planning. The LMA portion must be prepared under the responsible charge of a registered Traffic Engineer, or a registered Civil Engineer with expertise in transportation engineering. Other certifications may be appropriate and should be confirmed with City staff during the Project Information Form[1] phase of preparing the study.

City Review and Outside Agency Coordination

Transportation Studies will be reviewed by appropriate City of Chula Vista staff.

If a project will affect another agency or jurisdiction, such as the California Department of Transportation (Caltrans), San Diego Association of Governments (SANDAG), San Diego Metropolitan Transit System (MTS), or neighboring cities, coordination with that agency or jurisdiction may be required and will be identified in the scoping review process. City of Chula Vista staff can provide guidance and contact information for other agencies or jurisdictions.

Outline of Study Preparation and Review Process

The following summarizes the typical process for completing a Transportation Study in the City of Chula Vista:

- **Step 1 – Determine Study Requirements:** The applicant's consultant will complete a Project Information Form (PIF) (**Appendix A** – Project Information Form) that summarizes the proposed project description, location, site plan, site access, estimated trip generation (both total and net), and methods for completing the Transportation Study. The PIF also includes preliminary screening criteria to determine if the project is screened out from detailed VMT analysis, and information to determine the extent of LMA required.
- **Step 2 – Complete Scoping Review:** The completed PIF will be submitted to the City of Chula Vista, along with the required fee deposit for review and approval. The PIF will preliminarily specify the type of Transportation Study that will be needed. The City will either provide a letter or email confirming the scoping identified in the PIF or communicate other project-specific requirements. The applicant's consultant may request a meeting to clarify the draft scope and the City's feedback.
- **Step 3 – Conduct Transportation Study and Submit Draft:** The applicant's consultant will prepare the Transportation Study consistent with the requirements established in Steps 1 and 2 (and as outlined in the TSG), and will submit a draft to the City. The City will provide written comments on the draft study. During this process, the applicant's consultant may request a meeting with City staff to clarify study requirements and/or comments received on the draft study.
- **Step 4 – Submit Revised Transportation Study:** The applicant's consultant will address all City comments and produce a revised

[11] The Project Information Form will determine what analysis is required for a project. See **Chapter 3** and **Appendix A** for additional details.

Transportation Study to be reviewed and, if complete, approved by staff. The submittal will include a comment resolution table, which lists each City comment and the proposed response to each comment, and a track changes version of the document to facilitate review. Multiple iterations of study review may be necessary in order to adequately address all staff comments. It is critical that staff and the transportation consultant/applicant coordinate closely during the review process to ensure productive and efficient communication in achieving the mutual goal of finalizing the Transportation Study. Depending on whether the Transportation Study included a VMT analysis, the final mitigation recommendations or required improvements will be incorporated into the CEQA Findings and/or the discretionary Conditions of Approval.

It should be noted that the City may update the TSG on an as-needed basis to reflect the state-of-practice methodologies and changes in CEQA requirements. Updates and revisions will be approved by the City Manager or designee. As such, the City will continually review the TSG for applicability and coordinate with other jurisdictions and professionals to ensure the most recent guidance and best practices are being applied for land development review and transportation analysis. Additional information regarding the applicability of the procedures outlined in this document for various project types are provided in Chapter 2.

The TSG is not binding on any decision maker and should not be substituted for the use of independent professional judgment and evaluation of evidence in the record. The City also reserves the right to request further, project- specific information in its evaluation that may not be identified or described in the TSG.

2.0

Transportation
Study Initiation

If a project requires a discretionary or ministerial action, the applicant, through coordination with City staff, will determine the Transportation Study requirements.

The Transportation Study process begins by filling out a PIF (**Appendix A**), which outlines the requirements for the transportation study.

2.1 Types of Transportation Studies

CEQA and LMA requirements should be determined separately, as CEQA VMT analysis and/or LMA may apply to any type of transportation study. The following types of transportation studies (or a combination thereof) may be required:

1. **No Transportation Analysis Required**: If CEQA does not apply to a project (i.e. the project is ministerial) and the PIF indicates that LMA is not required, the completed PIF would be the extent of Transportation Analysis for that project.
2. **LMA Only:** These are Transportation Studies in which only an LMA is required, because the project is ministerial and therefore not subject to CEQA review.
3. **No Detailed CEQA VMT Analysis or LMA Required**: If a project meets screening criteria for CEQA VMT analysis and LMA, a detailed CEQA VMT analysis would not be required. The findings of the screening analyses must be documented in the Transportation Study.
4. **No Detailed CEQA VMT Analysis, but LMA Required:** If the project meets screening criteria for CEQA VMT analysis but triggers an LMA as described in **Chapter 4** of this TSG, only an LMA would be required. The findings of the screening analysis must be documented in the Transportation Study.
5. **LMA and Detailed CEQA VMT Analysis:** Transportation Studies that include both an LMA and CEQA VMT analysis are required for projects that are not screened out based on the City's screening criteria, as outlined in following sections.

Figure 1 illustrates the expected process for ministerial and discretionary projects. A land development project or a City-initiated plan review should review **Chapter 3** and **Chapter 4** to determine if the project is screened from CEQA analysis and/or the LMA. If the project has an existing environmental document, the project should only complete an updated CEQA analysis and/or an LMA if the project will change the land use or substantially increase the project trip generation, at the discretion of City staff.

Types of LMAs

The LMA study requirements in the City of Chula Vista are dependent on two project characteristics (refer to **Chapter 4**):

1. Project Consistency with the City of Chula Vista General Plan, and
2. Average Daily Trips (ADT) generated by the project or the net new ADT generated by the project after removing any existing development on the project site (regardless of any entitled trip generation for the site's planned land use).

If a project is consistent with the City's General Plan, the study extents and analysis scenarios are limited. As net ADT generated by the project increases, both the study extents and the analysis scenarios will expand. The most extensive LMAs will be for projects that are inconsistent with the City's General Plan and whose traffic generation exceeded the maximum ADT threshold listed in Table 2 in Section 4.3.

The Transportation Study should be submitted to the City with the Project Information Form and the Transportation Study Required Content Form, Appendix B. As specified in Appendix B, the Transportation Study should be prepared in two volumes, the first including only CEQA VMT analysis and the second including only LMA analysis.

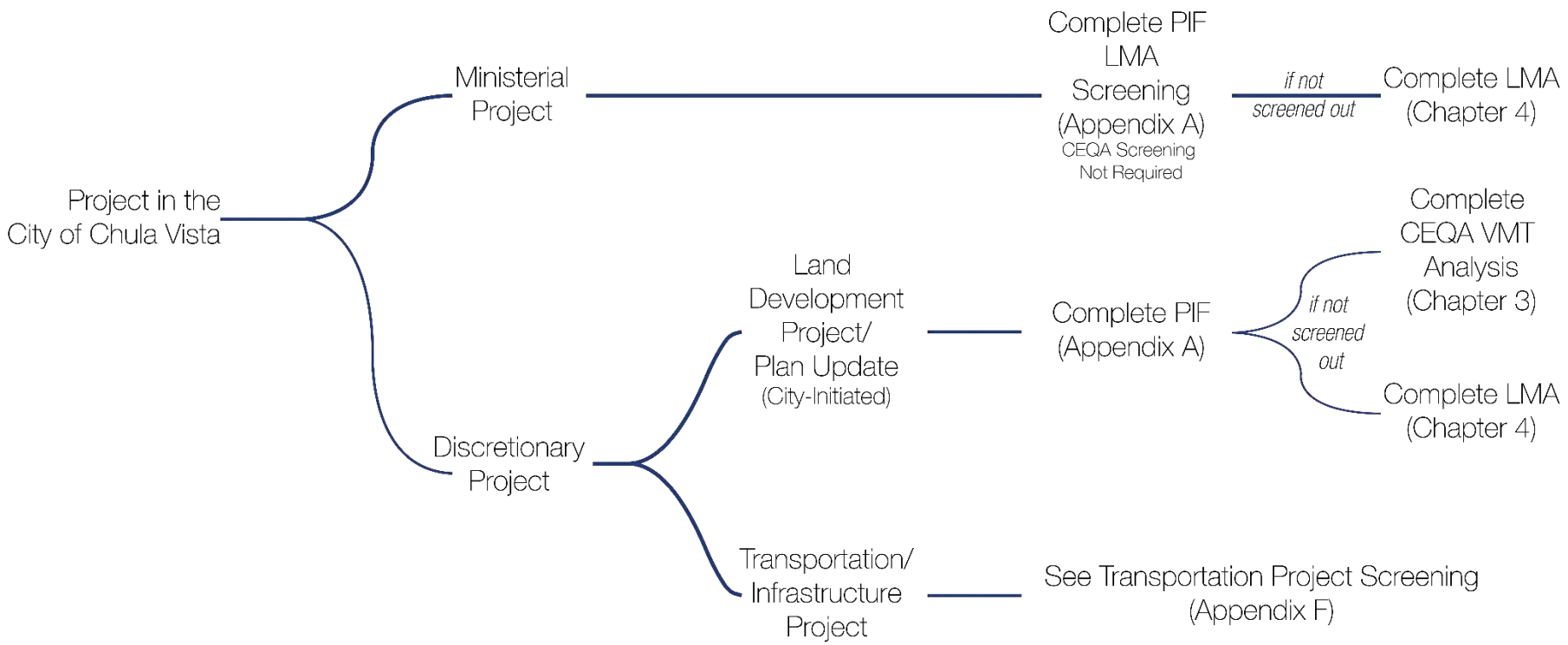


Figure 1 - Transportation Study Process for Projects in the City of Chula Vista

2.2 Transportation Study Screening Criteria

Discretionary projects will need to complete a Transportation Study as identified in **Section 3.3**. A project's location, land use, and other project characteristics will determine the type of study that is required based on CEQA VMT screening criteria.

Projects whose traffic generation exceeds the minimum ADT threshold described in **Section 4.3** will be required to provide an LMA, although the requirements for small projects are limited and local in nature. LMA study requirements are specified in **Chapter 4,** which describes the scenarios and study extents of an LMA based on the project's consistency with the City's General Plan and trip generation. Developers and consultants must consider both the CEQA study requirements and the LMA requirements when scoping transportation studies.

2.3 Completing the Project Information Form

The applicant's consultant will prepare a PIF (**Appendix A**) before coordinating with the City. This ensures that all the information necessary to determine study requirements is compiled and readily accessible.

The following main items are required to complete the PIF:

Project Location

- Project location and vicinity map
- Zoning and General Plan land use designation of the project site (to demonstrate consistency)

Detailed Project Description

- Land uses and intensities
- Gross and developable acreage, building square footage, or number of proposed residential units
- Number of parking spaces: vehicle, accessible, bicycle (racks and secure storage), motorcycle, and electric vehicle

Site Plan

- Driveway locations and access type (e.g. full access, partial access, right in/out only)
- Pedestrian access, bicycle access, and on-site pedestrian circulation
- Location/distance of closest existing transit stop (measure as walking distance to project entrance/or middle of parcel)
- Location of any planned sidewalks or bikeways identified in the City of Chula Vista Active Transportation Plan within ¼ mile of the project location

Trip Generation

- The applicant's consultant should identify the number of new daily and peak hour driveway vehicle-trips added by the project as described in this section.
- Trip generation rates are commonly expressed in trips per unit of development - for example, trips per housing unit or trips per thousand square feet - and are derived by averaging trip generation data collected from existing land uses.

For the City of Chula Vista, the following trip generation sources should be used:

- The current version of SANDAG's *(Not So) Brief Guide of Vehicle Traffic Generation Rates for the San Diego Region*. The SANDAG guide provides average trip generation rates for a wide variety of land use categories.
- If the proposed use is not included in the SANDAG *(Not So) Brief Guide of Vehicle Traffic Generation Rates for the San Diego Region*, City staff, at their sole discretion, may consider an applicable rate published by the Institute of Transportation Engineers (ITE) in the most recent edition of the *ITE Trip Generation* manual.
- Where uses are not included in either the SANDAG or ITE documents, trip generation should be derived from locally observed data that includes trip generation samples from at least three (3) similar facilities at the City's

discretion. The facilities selected as samples, and the timing and methods of data collection, must be approved by City staff prior to data collection.

- For existing facilities that are being expanded, trip generation should be determined by surveying the existing use to generate a project-specific trip generation rate. The survey of the existing use should be conducted using driveway counts or SANDAG/ITE published rates at the City's discretion.
- For existing facilities that are being redeveloped, the trip generation rate of the existing site development (provided that it was active and occupied within the two years prior to the PIF submittal date at the City's discretion[2]) may be deducted from the proposed project trip generation rate to create the net proposed trip generation. Proposed net trip generation rates that result in negative numbers shall be considered net zero for trip generation.
- The most detailed project information should be used to determine a project's trip generation estimate. For example, if the project's building square footage and the project acreage are both known, the building square footage is more detailed; therefore, it should be used to estimate the trip generation.
- Pass-by trips should be deducted from the number of daily project trips used to determine if small project screening is appropriate and what level of detail the LMA should include. Pass-by trips should be assigned to the driveway intersections when determining appropriate improvements at these locations.

2.4 Submittal Instructions

The Scoping Agreement will be submitted as follows:

- Applicant/Consultant submits a completed PIF including a fee deposit to the Development Services Department.
- Staff begins the PIF review processes.
- Staff sends a completed and approved PIF to the Consultant.

[2] Two years prior to the start of a transportation study is the industry standard for the limit at which the trip generation rate of the existing site development may be deducted from the proposed trip generation rate to create the net proposed trip generation rate.

3.0

CEQA Requirements for Transportation VMT

3.1 Overview

SB 743 changes the focus of transportation impact analysis in CEQA from measuring the delay related impacts (LOS), to measuring the impact of the distance travelled (VMT). New *CEQA Section 15064.3*, subdivision (b), requires all transportation analyses to consider VMT, rather than LOS, as the metric for determining if vehicle-travel related impacts associated with a development project are considered significant within the meaning of CEQA. The purpose of conducting a VMT analysis is to determine the significance of the project's impacts per *criterion b, CEQA Guidelines Appendix G, Section XVII*.

This chapter presents the methodology, screening criteria, and analysis procedures that should be considered when conducting an analysis pursuant to the referenced Criterion B in the City of Chula Vista.

CEQA VMT analysis prepared in accordance with the requirements outlined in this chapter should be included in Volume 1 of the Transportation Study.

3.2 Metrics and Methodology for Calculating VMT

Detailed VMT analysis for CEQA review should be conducted using the latest SANDAG Regional Activity-Based Model. The model outputs can be used to produce both existing and project VMT/Capita, VMT/Employee, and Total VMT.

VMT/Capita

VMT/Capita is established by summing up the total daily VMT generated by residents of a geographic area and dividing the resulting number by the population of that geographic area. Total daily VMT includes all trip tours made by residents: home-based and non-home-based trip tours (i.e. all VMT for a resident for the entire day regardless of trip purpose or origin/destination).

To calculate the VMT/Capita for a proposed project, total daily VMT generated by project residents is divided by the project resident population.

SANDAG has a procedure to produce VMT/Capita; however, it is important to note that the SANDAG procedure to produce this metric only includes VMT generated within the SANDAG region by residents of the SANDAG region. Thus, depending on the project type, it may be necessary to account for VMT generated from outside the region.

This metric is used to evaluate residential projects

VMT/Employee

VMT/Employee is established by summing the total daily VMT generated by resident employees[3] of a geographic area and dividing the resulting number by the number of employees of that geographic area. Total daily VMT includes all trip tours made by employees, not just trips related to work (i.e., includes all VMT for a resident employee for the entire day regardless of trip purpose or.

[3] Resident employees both live and work in the SANDAG region.

origin/destination). Employees whose work locations are specified as home are not included in the calculations. To calculate the VMT/Employee for a proposed project, the total daily VMT produced by the project's employees is divided by the total number of employees. Note that the procedure developed by SANDAG to calculate VMT/Employee by Transportation Analysis Zone (TAZ) only accounts for VMT generated within the SANDAG region by employees who are also residents of the SANDAG region. Employees that live outside of the region and travel into the SANDAG region for work are not accounted for because of the nature of the calculation.

This metric is used to evaluate employment projects.

Total VMT

Total VMT can be calculated by either of two methods – Boundary Method or Origin Destination Method.

Boundary Method

Total daily VMT (Boundary Method) within a given area can be measured by multiplying the daily volume on every roadway segment by the length of every roadway segment within the area. This is called Boundary Method VMT. Examples of Total VMT (Boundary Method) are VMT within the SANDAG region, VMT within a defined planning area, or VMT within the market area to be served by the project.

This metric is used to analyze regional retail, service, recreational, regional public facilities, and transportation infrastructure projects.

Origin-Destination Method

Total daily VMT (Origin-Destination Method) within a given area can be calculated directly from model outputs by multiplying the origin-destination (O-D) trip matrix by the final assignment skims[4] (O-D Method VMT). The total VMT value should be appended to include VMT from all trips that enter or exit the SANDAG region.

This metric is used to evaluate a regional project if that project is expected to draw trips from outside the region (for example, an amusement park).

3.3 VMT Analysis for Land Use Projects

Screening Criteria for CEQA VMT Analysis

The requirements to prepare a detailed transportation VMT analysis apply to all discretionary land development projects, except those that meet at least one of the following screening criteria. A project that meets at least one of the screening criteria below is presumed to have a less than significant VMT impact due to project characteristics and/or location. Note, however, that the City staff may, in its discretion, require project applicants to provide evidence that the presumption is in fact applicable in a given case, and may ultimately determine the presumption is not applicable. Thus, screening will be determined at the City's discretion on a case-by-case basis.

1. Small Residential and Employment Projects

Projects generating 200 or less daily vehicle trips may be presumed to have a less than significant impact absent substantial evidence to the contrary. Trips are based on the number of vehicle trips calculated using SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* with any alternative modes/location-based adjustments applied.

2. Projects Located in a Transit-Accessible Area

Projects located in a transit priority area (TPA) or half-mile walkshed of an existing stop along a high-

[4] Final assignment skims is the distance associated with each trip in the origin-destination trip matrix.

quality transit corridor[5] may be presumed to have a less than significant impact, absent substantial evidence to the contrary. This presumption is only appropriate if the project meets the following conditions:

a. Has a Floor Area Ratio (FAR) of more than 0.75;
b. Includes no more than the minimum parking for use by residents, customers, or employees of the project as required by the City of Chula Vista;
c. Is consistent with the City of Chula Vista General Plan; and
d. Does not include a smaller number of units that previously on the project site
e. Does not replace affordable residential units with moderate- or high-income residential units.

Projects must be entirely within a TPA or have a half-mile walkshed from all points within the project site to qualify for this screening. Screening will be determined at the City's discretion.

3. Projects Located in a VMT-Efficient Area

A VMT-efficient area is any area within the city with an average VMT/Capita or VMT/Employee below the thresholds as compared to the baseline regional average for the census tract it is located within, as shown in **Appendix C**[6].

Residential projects located within a VMT-efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT-efficient area for residential projects is any area with an average VMT/Capita 15% below the baseline regional average for the census tract it is located within.

For purposes for CEQA VMT analysis, "baseline" is determined using the Base Year of the current SANDAG travel demand forecasting model. All baseline average VMT is therefore the average VMT produced from the Base Year SANDAG model.

Employment projects located within a VMT-efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT-efficient area for employment projects (excluding industrial employment projects) is any area with an average VMT/Employee 15% below the baseline regional average for the census tract it is located within.

Industrial Employment projects located within a VMT-efficient area may be presumed to have a less than significant impact absent substantial evidence to the contrary. A VMT-efficient area for industrial employment projects is any area with an average VMT/Employee at or below the baseline regional average for the census tract it is located within.

Mixed-Use projects located within a VMT-efficient area for each of its land uses may be presumed to have a less than significant impact absent substantial evidence to the contrary. Refer to the appropriate section for each land use included as a part of the mixed-use project in order to determine the definition of a VMT-efficient area for each land use.

[5] A transit priority area is the area within ½ mile of a major transit stop, that is, an existing or planned Pub. Resources Code § 21099(a)(7). A "major transit stop" means a site containing any of the following: (a) an existing rail or bus rapid transit station, (b)a ferry terminal served by either a bus or rail transit service, or (c) 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. Pub. Resources Code § 21064.3. A high-quality transit corridor is defined as a corridor with fixed-route bus service having service intervals no longer than 15 minutes during peak commute hours. *Pub. Resources Code* § 21155(b).

[6] The VMT/Capita and VMT/Employee screening maps are created using information from the current version of the SANDAG model. As SANDAG updates the model to reflect development and planning throughout the region, the screening maps will be updated and may change resulting in development that may have at one time been screened to no longer be screened and vice versa. As the model is updated, earlier versions of the model will also cease to be supported by SANDAG, meaning that model runs can no longer be completed with the previous versions of the model. If a project begins the transportation study process using one version of the model that becomes unsupported during the process, the project can utilize model outputs from the older model version, as long as no additional modeling work will be done. Projects cannot complete their transportation analysis using multiple model versions.

4. Locally Serving Retail Projects

Local serving retail projects less than 125,000 square feet[7] and that would serve the local community may be presumed to have a less than significant impact absent substantial evidence to the contrary. The City may request a market capture study that identifies local market capture to the City's satisfaction. Local serving retail generally improves the convenience of shopping close to home and has the effect of reducing vehicle travel.

5. Local Serving Public Facilities and Community Purpose Facilities

Public facilities that serve the surrounding community or public facilities that are passive uses may be presumed to have a less than significant impact absent substantial evidence to the contrary. The following are examples of locally serving facilities:

- Transit centers
- Public schools
- Libraries
- Post offices
- Park-and-ride lots
- Police and fire facilities
- Parks and trailheads
- Government offices
- Passive public uses, including communication and utility buildings, water sanitation, and waste management
- Other public uses as determined by City staff

Community Purpose Facility is a land use designation in a planned community intended for non-profit and certain for-profit land uses as listed in the Chula Vista Municipal Code Section 19.48.025(C).

6. Redevelopment Projects with Greater VMT Efficiency

A redevelopment project may be presumed to have a less than significant impact absent substantial evidence to the contrary if the proposed project's total project VMT is less than the existing land use's total VMT.

7. Affordable Housing

Any portion of a project that is composed of deed-restricted affordable housing units may be presumed to have a less than significant impact absent substantial evidence to the contrary. This presumption is only appropriate if the project meets the following conditions:

- Is an infill project;
- Is close to a transit stop or station; and
- Project-provided parking does not exceed parking required by the Chula Vista Municipal Code.

If an infill project includes both deed-restricted affordable housing units and market-rate housing units, the deed-restricted affordable housing units would be screened from further VMT analysis under this screening criteria. If applicable, the remaining market-rate housing units would be considered for screening using other applicable screening criteria. If the market-rate housing units were not screened out, the applicant is required to conduct a complete VMT analysis for VMT associated with the project's market-rate housing units only.

Additional information regarding the screening criteria presented here is provided in Appendix E.

VMT Thresholds of Significance

Projects that do not meet the above screening criteria must include a detailed evaluation of the VMT produced by the project. The significant thresholds and specific VMT metrics used to measure VMT are described by land use type below.

[7] 125,000 square feet is the maximum size that a commercial development can be while still being considered Neighborhood Shopping Center by SANDAG's *(Not So) Brief Guide of Vehicular Trip Generation Rates for the San Diego Region.*

- **Residential**: 15% below regional average VMT/Capita
- **Employment**: 15% below regional average VMT/Employee
- **Industrial Employment:** At or below regional average VMT/Employee
- **Mixed-Use**: Each project component evaluated per the appropriate metric based on land use type (i.e. residential, employment, and retail)
- **Regional Retail, Regional Recreational, or Regional Public Facilities:** A net increase in total regional VMT using the boundary method
- **Other Project Types**: **Appendix D** provides a list with unique land use categories and their appropriate VMT metric or thresholds of significance

For large land use plans, such as Specific Plans or General Plan Amendments: The land use plan should be compared to the region overall. Comparison to the region is appropriate because large land use plans can have an effect on regional VMT (akin to how a regional retail project affects regional VMT). The following procedures and thresholds apply to large land use plans:

- **Residential:** Aggregate all residential land uses for the build-out year of the plan and compare the resulting build-out year VMT/Capita to the existing regional average. The threshold is 15% below the existing regional average VMT/Capita.
- **Employment:** Aggregate all employment land uses for the build-out year of the plan and compare the resulting build-out year VMT/Employee to the existing regional average. The threshold is 15% below the existing regional average VMT/Employee.
- **Industrial Employment**: Aggregate all employment land uses for the build-out year of the plan and compare the resulting build-out year VMT/Employee to the existing regional average. The threshold is at or below the existing regional average VMT/Employee.
- **Retail**: Evaluate the effect that adding these land uses has on regional VMT. The threshold is any increase in regional VMT.

Additional information regarding the significance thresholds presented her is provided in **Appendix E**.

VMT Analysis Procedures

For projects that meet one of the screening criteria for CEQA VMT analysis, no detailed VMT analysis is necessary. The Transportation Study must document the screening process and findings, including attaching screening maps, market studies, and/or other relevant supporting data. Additionally, a conclusion that the transportation impact in accordance with criterion b, Section XVII of the Appendix G to the CEQA Guidelines is presumed to be less than significant must be included. For projects that are not screened and must provide a detailed evaluation of the VMT produced by the project, guidance is provided below on how to conduct transportation VMT analysis given the project type.

1. Residential Projects

For projects that generate less than 2,400 daily unadjusted driveway trips: Identify the location of the project on the City's VMT/Capita map. The project's VMT/Capita will be considered the same as the VMT/Capita of the census tract it is located in. Alternatively, the project's VMT can be determine by inputting the project into the SANDAG Regional Travel Demand Model as described in the following paragraph. Whether either method is used, compare the project's VMT/Capita to the threshold to determine if the impact is significant.

For projects that generate greater than 2,400 daily unadjusted driveway trips: Input the project into the SANDAG Regional Travel Demand Model to determine the project's VMT/Capita. To perform the analysis, all project land uses should be inputted, and the VMT/Capita should be determined using the same method/scripts that SANDAG utilizes to calculate the VMT/Capita metric.

2. Employment Projects

For projects that generate less than 2,400 daily unadjusted driveway trips: Identify the location of the project on the City's VMT/Employee map. The

project's VMT/Employee will be considered the same as the VMT/Employee of the census tract it is located in. Alternatively, the project's VMT can be determined by inputting the project into the SANDAG Regional Travel Demand Model in the manner previously described. Compare the project's VMT/Employee to the threshold to determine if the impact is significant.

For projects that generate greater than 2,400 daily unadjusted driveway trips: Input the project into the SANDAG Regional Travel Demand Model to determine the project's VMT/Employee. To perform the analysis, all project land uses should be inputted, and the VMT/Employee should be determined using the same method/scripts that SANDAG utilizes to develop the VMT/Employee metric.

3. Regional Retail Projects

Calculate the change to area VMT using the latest SANDAG Activity-Based Model. To calculate the change in area VMT, the regional retail component of the project should be inputted into the model. The "with project regional retail" area VMT produced by the model run is compared to the "no project" area VMT.

4. Mixed Use Projects

Evaluate each individual project component per the appropriate metric based on land use type (i.e. residential, employment, and retail) as described above.

5. Application of VMT Reductions

If the project includes transportation demand management (TDM) measures, the reduction in VMT due to each measure shall be calculated and can be applied to the project analysis. See **Section 3.5**(VMT Reduction and Mitigation Measures) for a discussion of TDM measures and resources.

The VMT reductions associated with project TDM should be applied to the appropriate metric(s) based on the project land uses. If the project does not include any TDM, then no reduction would be taken.

The resulting VMT values should be compared to the appropriate threshold in **Section 3.3** to determine whether the project results in a significant CEQA transportation impact due to VMT.

3.4 VMT Analysis for Transportation Projects

For transportation projects, any project that results in an increase in additional motor vehicle capacity (such as constructing a new roadway or adding additional vehicle travel lanes on an existing roadway) has the potential to increase vehicle travel, referred to as "induced vehicle travel." As described above, many types of transportation projects that enhance travel for bicyclists, pedestrians, and transit vehicles are presumed to have a less than significant impact on VMT and are screened from performing analysis. A list of transportation projects that do not require VMT analysis is provided in **Appendix F**.

If a transportation project is not screened from performing analysis, a VMT analysis must be done. To calculate the change in VMT (Boundary Method), the project should be input into the travel demand model. The "with project" area VMT produced by the model run is compared to the "no project" area VMT. A net increase in area VMT indicates that the project has a significant impact.

3.5 VMT Reduction and Mitigation Measures

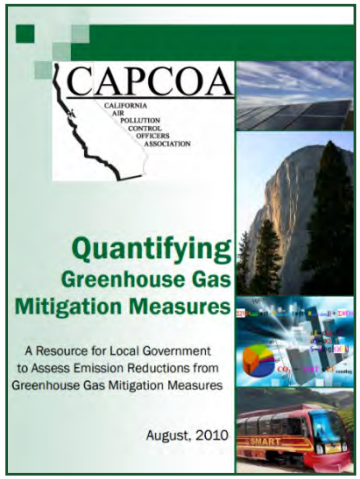
To mitigate VMT impacts, the project applicant must reduce VMT, which can be done by either reducing the number of automobile trips generated by the project or by reducing the distance that people drive. The following strategies are available to achieve this:

1. Modify the project's built environment characteristics to reduce VMT generated by the project.
2. Implement TDM measures to reduce VMT generated by the project.

Strategies that reduce single-occupant automobile trips or reduce travel distances are called TDM strategies. There are several resources for determining the reduction in VMT attributable to TDM measures, such as the *CAPCOA Quantification*

Report and the *SANDAG Mobility Management Guidebook/VMT Reduction Calculator Tool*.

- CAPCOA Quantification Report
- SANDAG Mobility Management Guidebook/VMT Reduction Calculator Tool



CAPCOA Quantification Report which includes quantification of VMT reducing measures.

SANDAG Mobility Management Guidebook which includes recommendations of VMT reducing measures.

Both of the resources above include equations that dampen the effectiveness of TDM measures when those measures are used in combination. The equation below should be used by applicants to accurately quantify the effectiveness of a proposed TDM program.

$$Total\ VMT\ Reduction = (1 - P_a) * (1 - P_b) * (1 - P_c) * \ldots$$

Where:

P_x = percent reduction of each VMT reduction strategy

Additionally, applicants should be aware of limits to overall program effectiveness (i.e., VMT reduction) that may be achieved from TDM strategies dependent on the project's land use context. Projects that are in urban areas have a higher limit of effectiveness (i.e. they can result in higher VMT reductions) than those in suburban areas.

Special attention should be given to ensuring that measures are not double counted through the transportation analysis process. For example, if a project identifies telecommuting as a reduction strategy, care should be taken to identify the level of telecommuting that has already been assumed as part of the travel demand model.

3.6 Cumulative VMT Impacts

A project would result in a significant project-generated VMT impact under cumulative conditions if the applicable cumulative project-generated VMT thresholds are exceeded.

Measuring the project's effect on VMT is necessary, especially under cumulative conditions to fully explain the project's impact. A project effect on VMT under cumulative conditions would be considered significant if the cumulative link-level boundary VMT/Capita or employee (City boundary) increases under the plus project condition compared to the no project condition.

Please note that the cumulative no project shall reflect the adopted Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS); as such, if a project is consistent with the regional RTP/SCS, then the cumulative impacts shall be considered less than significant.

4.0

Local Mobility Analysis

4.1 Overview

Although VMT is now the metric used for determining the significance of vehicle travel-related impacts under CEQA, the City nevertheless needs to ensure that transportation network operations are consistent with adopted standards and policies. Proper vehicular, transit, and non-motorized mode operations will still be needed to accommodate the travel demand generated by future development, as well as to ensure implementation of the City's Land Use and Transportation Element and Active Transportation Plan. Therefore, it is necessary to conduct additional transportation analyses such as intersection delay, LOS, and queuing. Additional analyses are also necessary to assess the project's effects on transit, pedestrian, and bicycle facilities. These analyses are documented within an LMA. The LMA should be prepared as a part of the project's Transportation Study process and included in Volume 2 of the Transportation Study. A Transportation Study Required Content form, Appendix B, should also be submitted to the City with the Transportation Study.

The LMA is intended to provide both the project applicant and the City with an understanding of how the local transportation network will operate with the implementation of the proposed project and to identify facilities that may require improvements to maintain acceptable operating conditions. Detailed information on the analysis methodologies, standards, and thresholds are discussed in the following sections. As discussed previously and in Section 2.3, all projects will be required to submit a PIF and coordinate with City staff prior to project initiation to ensure an efficient review process.

4.2 Process

The LMA process consists of the following three steps:

- Project initiation and scoping: During this step, the project applicant will prepare a trip generation estimate as part of its PIF submittal and coordinate with City staff to determine the appropriate project study area and study scenarios, as outlined in Tables 1 and 2.
- Project effect: This step will determine a project's effect on the local transportation network, as outlined in Table 3.
- Improvements: In this step, the applicant will coordinate with City staff to review proposed improvements to accommodate the project's off-site traffic, as outlined in Tables 4 and 5.

Projects that are not anticipated to generate additional trips, such as a project requesting an additional access point or a change to existing intersection/roadway geometrics, should coordinate with City staff to develop a project-specific LMA, as deemed necessary by City staff.

4.3 Requirements

The required study scenarios and scope will vary depending on the project's consistency with the City's General Plan, as well as the total number of daily trips it is anticipated to generate.

The required study scenarios and scope of facilities that need to be analyzed, for projects consistent with the City's General Plan, are displayed in **Table 1**, while the same information for projects that are inconsistent with the City's General Plan is displayed in **Table 2**.

Both the analysis scenarios and the facilities that need to be analyzed are to be confirmed with City staff as part of the PIF prior to conducting an LMA.

Analysis Methodology

The LMA should use the current state-of-the-practice analysis methodologies to analyze traffic conditions. General requirements for analysis in the LMA are outlined below:

- **Vehicular Analysis**: Peak hour intersection and queuing analyses must use the methodologies contained within the latest edition of the Highway Capacity Manual (HCM), or other practices developed in coordination with City staff. City staff may require additional project-specific analyses as they deem necessary.
- **Pedestrian & Bicycle**: The pedestrian and bicycle analysis should focus on substandard and missing facilities, based on the City's Design and Construction Standard Drawings and relevant planning documents (e.g. General Plan, Active Transportation Plan).
- **Transit**: The transit analysis should focus on transit amenities and connectivity to transit, especially for projects located completely within a Transit Priority Area (TPA), or have all points within the project site within a half-mile walkshed from a high-quality transit corridor.[8] Transit amenities should be consistent or exceed the requirements in the latest San Diego Metropolitan Transit System (MTS) Design for Transit guidelines. A sample of the amenity requirements is provided in **Appendix G.** Project applicants should always coordinate with City and MTS staff to determine appropriate transit amenities and applicable guidelines.

Additional detail regarding the analysis methodologies and specifications are provided in **Appendix G.**

Identifying Transportation Improvements

In general, a project should consider feasible improvements to accommodate the addition of the proposed project's vehicular, pedestrian, and bicycle traffic, and both the transit access and increased demand for transit services and facilities.

The following sections provide guidance for identifying when a transportation improvement is necessary by facility type:

Intersections

Typically, a project is considered to have a substantial vehicular traffic effect on the transportation network if any the following criteria are met:

- The project contributes vehicular traffic to a signalized intersection as identified in **Table 3**.

[8] SB-743 define a TPA as "an area within one-half mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulation."
Section 450.216 addressed development and content of the statewide transportation improvement program, STIPs cover a period of no less than four years.
Section 450.322 refer to development and content of the metropolitan transportation plan. The RTP has at least 20-year planning horizon.
Major Transit Stop, as defined in Section 21064.3 means: "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service of 15 minutes or less during the morning and afternoon peak commute periods.
For the purpose of the City of Chula Vista, an area is considered to be a TPA if there is an existing Major Transit Stop (within one-half (1/2) mile) of the site or if a Major Transit Stop is identified in the SANDAG's *Regional Transportation Improvement Program (RTIP)*.

- The project contributes 5% or more vehicular traffic as compared to pre-existing traffic to the critical movement of an unsignalized intersection as identified in **Table 3**.
- Project traffic either contributes to or is responsible for the 95th percentile queue length of a turning movement exceeding the available storage length, creating a safety or traffic operational concern for through traffic.
- Project traffic contributes to or is responsible for the 95th percentile queue of a freeway off-ramp extending past the ramp length and onto the freeway mainline.

Pedestrian & Bicycle

A project is considered to have a substantial traffic effect[9] on the pedestrian and bicycle network along the project's frontage, adjacent facilities, and within ¼ mile of the project.

A project is considered to have a substantial effect on the transit network if a transit stop within the project's study area is substandard or missing amenities.

Necessary Improvements

Substantial vehicular traffic effects should be remedied through appropriate improvements, to the extent feasible (as determined in coordination with City staff), to accommodate a project's traffic. **Table 4** displays a list of recommended improvements a project will implement, should the project have a substantial vehicular traffic effect.

Consistent with the City of Chula Vista General Plan, the City of Chula Vista Active Transportation Plan, and the City of Chula Vista Local Roadway Safety Plan, all projects are required to provide non-vehicular improvements to complete the City's multi-modal network, including upgrading substandard facilities to ensure high-quality and safe facilities for the project's multimodal users. **Table 5** displays a list of recommended active transportation improvements.

The recommended improvements provided comprise a limited list of potential improvements to the local transportation network. Other types of improvements can be recommended by project applicants or requested by the City. All improvements shall be implemented to the satisfaction of the City Engineer or designee.

4.4 LMA Outline

At a minimum, an LMA must include the following sections:

- **Executive Summary**: Provides a summary of the project's land uses, trip generation, substantial traffic effects, and necessary improvements.
- **Introduction**: Discusses the project location, setting, access, and land uses.
- **Analysis Methodology**: Outlines and documents the analysis methodologies and standards used to conduct the LMA.
- **Project Trip Generation**: Calculates the project's anticipated trip generation, distribution, and assignment.
- **Project Setting or Existing Conditions**: Documents the existing transportation facilities (all modes) within the identified project study area. Discusses the current state of the identified facilities, including the following: existing traffic operations, excessive queue lengths, traffic volumes (e.g. vehicular, bicycle, and pedestrian), gaps in the current active transportation network, and transit ridership (which can be obtained from City staff).
- **Substantial Traffic Effects**: Documents and summarizes the Local Mobility Analysis results as well as any potential substantial effects to the to the surrounding transportation network for the required analysis scenarios.
- **Necessary Improvements**: Identifies and describes the transportation improvements that would be necessary to accommodate the project, based on **Tables 4 and 5**.

Since the scope of the LMA varies based on a project's size and General Plan consistency,

[99] A substantial traffic effect is defined dependent on Facility Type in **Table 3**.

additional analysis and sections may be required. It is recommended that the project applicant develop a draft outline and coordinate with the City's staff prior to conducting an LMA.

Whereas in CEQA, mitigation measures alleviate a significant impact, in the LMA an operational improvement alleviates a substantial effect, and such terminology should be used consistently in the LMA to differentiate it from CEQA VMT analysis.

Table 1: Local Mobility Analysis – Projects Consistent with the General Plan

ADT Threshold	Intersection Analysis Requirements[1]	Analysis Scenarios	Select Zone Assignment	Multi-Modal Analysis[2]	Other Requirements[6]
0-200	• None required	• None	• No	• None	• None
201-500	• Signalized, All-Way Stop Control (AWSC), and Side Street Stop Control (SSSC)[3] Intersections nearest to the project driveway. • All project driveways	• Existing • Existing + Project	• No	• Bicycle and pedestrian facilities along the project frontage.	• Driveway sight distance and queuing analysis • Use City-provided signal timing/phasing • Provide Synchro files to City with submittal
501-1,000	• All Signalized, AWSC, and SSSC[3] Intersections within ½ mile of the project to which the project adds 50 or more peak hour trips.[4] • All project driveways	• Existing • Opening Year[7] • Opening Year + Project	• No	• Bicycle and pedestrian facilities along the project frontage. • Adjacent transit facilities and services.	
1,001-2,400	• All Signalized, AWSC, and SSSC[3] Intersections within 1 mile of the project to which the project adds 50 or more peak hour trips.[4] • All project driveways	• Existing • Opening Year • Opening Year + Project	• No	• Bicycle and pedestrian facilities along Mobility Element facilities within ¼ mile of the project site. • Transit facilities and services within ¼ mile.[5]	
2,401+	• All Signalized, AWSC, and SSSC3 Intersections within 1 mile of the project, to which the project adds 50 or more peak hour trips.[4] • All project driveways	• Existing • Opening Year • Opening Year + Project	• Yes	• Bicycle and pedestrian along Mobility Element Facilities within ¼ mile of the project site. • Transit facilities and services within ¼ mile.[5]	

Notes:

[1] Distance from the project site is measured from the nearest project limit. Analysis should include queuing analysis for all critical turning movements, for example, queuing analysis should be conducted for left-turn pockets onto a freeway on-ramp.

[2] Distance should be measured based on walking distance. Analysis should include substandard bicycle and pedestrian facilities, as well as proposed improvement to each facility.

[3] Only Side Street Stop Control intersections where a Mobility Element roadway intersects with another Mobility Element roadway should be included in the project study area.

[4] If no intersections are located within the specified distance, then analyze the nearest signalized or AWSC intersection(s) in each direction, to which the project adds 50 or more peak-hour trips. If any SSSC intersections are located between the project and the nearest signalized or AWSC intersection, they must also be analyzed.

[5] If the project is located ½ mile from a major transit stop or a stop along a high quality transit corridor and no transit facility is within ¼ mile, then the distance should be expanded to the closest transit stop that is a major transit stop/stop along a high quality transit corridor.

[6] Roadway segment analysis or other additional analyses may be requested at the City's discretion.

[7] Opening Year refers to the year that the certificate of occupancy is expected.

[8] If the proposed project's opening year is within 2 years of the project's application, the Existing + Project scenario is considered to be the same as the project's Opening Year + Project scenario.

Table 2: Local Mobility Analysis – Projects Inconsistent with the General Plan

ADT Threshold	Intersection Analysis Requirements[1]	Analysis Scenarios	Select Zone Assignment	Multi-Modal Analysis[2]	Other Requirements[6]
0-200	• None Required	• None	• No	• None	• None
201-500	• Signalized, All-Way Stop Control (AWSC), and Side Street Stop Control (SSSC)[3] intersections nearest to the project driveway. • All project driveways	• Existing and Existing + Project[7]	• No	• Bicycle and pedestrian facilities along the project frontage.	• Driveway sight distance and queuing analysis • Use City-provided signal timing/phasing • Provide Synchro files to City with submittal
501-1,000	• All Signalized, All-Way Stop Control (AWSC), and Side Street Stop Control (SSSC)[3] intersections within ½ mile of the project in which the project adds 50 or more peak-hour trips.[4] • All project driveways	• Existing • Opening Year[8] and Opening Year + Project	• No	• Bicycle and pedestrian facilities along the project frontage. • Adjacent transit facilities and services.	
1,001-2,400	• All Signalized, All-Way Stop Control (AWSC), and Side Street Stop Control (SSSC)[3] intersections within 2 miles of the project in which the project adds 50 or more peak-hour trips.[4] • All project driveways	• Existing • Opening Year and Opening Year + Project • Horizon Year and Horizon Year + Project	• No	• Bicycle and pedestrian facilities along Mobility Element facilities within ¼ mile of the project site. • Transit facilities and services within ¼ mile.[5]	
2,401+	• All Signalized, All-Way Stop Control (AWSC), and Side Street Stop Control (SSSC)[3] intersections to which the project adds 50 or more peak-hour trips. • All project driveways	• Existing • Opening Year and Opening Year + Project • Horizon Year and Horizon Year + Project	• Yes	• Bicycle and pedestrian along Mobility Element Facilities within ½ mile of the project site. • Transit facilities and services within ¼ mile.[5]	

Notes:

[1] Distance from the project site is measured from the nearest project limit. Analysis should include queuing analysis for all critical turning movements, for example, queuing analysis should be conducted for left-turn pockets onto a freeway on-ramp.

[2] Distance should be measured based on walking distance. Analysis should include substandard bicycle and pedestrian facilities as well as proposed improvement to each facility.

[3] Only Side Street Stop Control intersections where a Mobility Element roadway intersects with another Mobility Element roadway should be included in the project study area.

[4] If no intersections are located within the specified distance, then analyze the nearest intersection(s) in each direction, in which the project adds 50 or more peak-hour trips to.

[5] If the Project is located ½ mile from a major transit stop or a stop along a high quality transit corridor and no transit facility is within ¼ mile, then the distance should be expanded to the closest transit stop that is a major transit stop/stop along a high quality transit corridor.

[6] Roadway segment analysis or other additional analyses may be requested at the City's discretion.

[7] If the proposed project's opening year is within 2 years of the project's application, the Existing + Project scenario is considered to be the same as the project's Opening Year + Project scenario.

[8] Opening Year refers to the year that the certificate of occupancy is expected. Horizon Year refers to the ultimate year of the transportation model.

Table 3: Threshold for Determining a Project's Substantial Traffic Effect on Vehicular Intersections

Facility	Facilities Type	Substantial Traffic Effect
Signal	Whole Intersection	Proposed project contributes to an intersection that currently operates or is projected to operate at LOS E or below.
		Proposed project causes an intersection's operations to degrade to LOS E or below.
	Turning Movement	Proposed project traffic either contributes to or is responsible for the 95th percentile queue length exceeding available storage length.
Freeway Interchange	Freeway Off-Ramp	Proposed project traffic either contributes to or is responsible for the 95th percentile queue length exceeding available off-ramp storage length and extending onto the freeway mainline.
All-Way Stop Control	Whole Intersection	Proposed project contributes to an intersection that currently operates, or is projected to operate, at LOS E or below.
		Proposed project causes the intersection's operations to LOS E or below during one or more peak hours.
Side-Street Stop Control	Critical Movement	Proposed project contributes to a critical movement of an intersection that currently operates, or is projected to operate, at LOS E or below.
		Proposed project causes the intersections critical movement to degrade to LOS E or below.
Pedestrian		All facilities within a project study area
Bicycle		All facilities within a project study area
Transit		All facilities within a project study area

Table 4: Local Mobility Analysis – Potential Improvements to Accommodate a Project's Vehicular Traffic

Intersection Type	Location Type	Potential Improvement (Project responsibility)[1,2]				
Project added peak hour trips[8]		0%-4%	5%-19%[3]		20%+[4]	
Signal	Whole Intersection	Signal Retiming[5] (100%)	Signal Retiming[5] (100%)	Signal Upgrade/ITS[6] (Fair share)	Signal Retiming[5] (100%)	Signal Upgrade/ITS[6] (100%)
	Turning Movement	None	Add additional turn lane (Fair share)[7]	Extend existing turn pocket (Fair share)[7]	Add additional turn lane[7] (100%)	Extend existing turn pocket[7] (100%)
All-Way Stop Control		None	Coordinate with City staff to evaluate alternative control, including signalization, roundabout, turn restriction, additional turn lanes			
Side-Street Stop Control		None				

Notes:
[1]All projects are expected to pay applicable impact fees in addition to implementing the project specific improvements.
[2]Certain improvements may not be feasible due to constraints; alternative improvements can be considered with the approval of the City Engineer.
[3]Project that contributes between 5% and 19% of the overall intersection peak hour traffic volumes can make fair share contributions toward the cost of the improvement, in addition to paying applicable impact fees.
[4]Project that contributes 20% or more peak hour traffic volumes to an intersection is required to pay 100% of the improvement cost.
[5]Project is expected to pay 100% of all signal retiming cost.
[6]Signal upgrade/Intelligent Transportation System (ITS) improvements should be consistent with the City of Chula Vista Traffic Signal Communications Master plan and recommendations from City staff. Project's applicant should coordinate with City staff to identify feasible signal upgrade/ITS improvements.
[7]Coordinate with City staff to determine the appropriate improvement measure. Refer to the City of Chula Vista Design and Construction Standard Drawings for turn pocket requirements.
[8]Project added peak hour trips is relative to pre-existing pre-project peak hour trips.

Table 5: Local Mobility Analysis – Potential Improvements to Accommodate the Project's Active Transportation Needs

Proximity	Facility Type		
	Pedestrian	Bicycle	Transit
Project Frontage & Adjacent Facilities[1]	• Close sidewalk gaps • Remove pathway obstructions • Construct curb ramps per current ADA standards • Implement identified traffic calming measures	• Upgrade substandard bike facilities • Fill gaps in the Planned Bikeway Network	• Add missing transit amenities according to MTS Designing for Transit Guidelines. High-quality transit amenities (shelter, trash can, benches, street trees) are encouraged.
Within 1/4 Mile of Project	• Close sidewalk gaps • Remove pathway obstructions • Implement identified traffic calming measures	• Upgrade substandard bike facilities • Coordinate with City staff to pay fair share towards Planned Bikeways	

Note:
[1]Adjacent facilities are defined as intersections immediately adjacent to the project site. Location of adjacent facilities should be identified in coordination with City's staff prior to conducting an LMA.

APPENDIX A

Project Information Form for Transportation Studies

The Project Information Form (PIF) is to be completed by the applicant. The PIF is subject to change as new project information arises.

General Project Information and Description

Owner/Applicant Information

Name:	
Address:	
Phone Number:	
Email:	

Project Information

Project Name:	
Project Address:	
APN:	
Land Use Designation:	Zoning Designation:

Project Description

Land Uses and Intensities *(units, square feet, etc.)*:		
Gross and Developable Acreage:		
Vehicle Parking Required *(per CVMC Chapter 19.62)*:	Vehicle Parking Spaces Proposed:	
Accessible Spaces:	Bicycle Storage Capacity *(racks and secure storage)*:	
Motorcycle Spaces:	EV Parking Spaces:	

Consultant

Name of Firm:	
Project Manager:	Credentials:
Address:	
Telephone:	

Trip Generation

[Use the SANDAG (Not So) Brief Guide of Vehicular Trip Generation]

Total Daily Trips:	Pass-by Trips:	
Internal Capture Rate:	Existing Development Trips: *(Driveway count or published SANDAG/ITE rate at City's discretion)*:	
Alternative Modes:	Net Daily Trips:	

Site Plan

Attach 11x17 copies of the project location/vicinity map and site plan containing the following:
• Driveway locations and access type
• Pedestrian access, bicycle access, and on-site pedestrian circulation
• Location and distance to closest existing transit stop (measure as walking distance to project entrance or middle of parcel)
• Location of any planned sidewalks or bikeways identified in the City of Chula Vista Active Transportation Plan within ½ mile of the project

CEQA Transportation Analysis Screening

To determine if your project is screened from VMT analysis, review the Project Type Screening and the Project Location Screening tables below. If "No" is checked for any project type or land use applicable to your project, the project is not screened out and must complete VMT analysis in accordance with the analysis requirements outline in the City of Chula Vista *Transportation Study Guidelines (TSG)* Chapter 3.

Project Type Screening

	1. Select the Land Uses that apply to your project 2. Answer the questions for each Land Use that applies to your project *(if "Yes" is indicated in any land use category below, then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis)* *Note: All responses must be documented and supported by substantial evidence.*	Screened Out Yes	Not Screened Out No
☐	**1. Locally Serving Retail Project** a. Is the project less than 125,000 square feet and serving the local community? The City may request a market capture study that identifies local market capture to the City's satisfaction.	☐	☐
☐	**2. Locally Serving Public Facility or Community Purpose Facility** a. Is the project a public facility or Community Purpose Facility that serves the local community? (see TSG Section 3.3)	☐	☐
☐	**3. Small Residential and/or Employment Project** a. Does the project generate less than 200 net daily trips?	☐	☐
☐	**4. Infill Affordable Housing** a. Is the project composed of deed-restricted affordable housing units, and has the following characteristics: i. Is an infill project; ii. Is close to a transit stop or station; and iii. Project-provided parking does not exceed parking required by the Chula Vista Municipal Code?	☐	☐
☐	**5. Redevelopment Project** a. Does the project result in a net decrease in total Project VMT than the existing use?	☐	☐

APPENDIX A

Project Information Form for Transportation Studies

Project Location Screening

1. Select the Land Uses that apply to your project 2. Answer the questions for each Land Use that applies to your project *(if "Yes" is indicated in any land use category below, then that land use (or a portion of the land use) is screened from CEQA Transportation Analysis)*	Screened Out Yes	Not Screened Out No
☐ **1. Residential** a. Is the project located in a VMT-efficient area (15% or more below the regional average) using the Chula Vista screening maps for VMT/Capita? View VMT/Capita map here: https://cvgis.maps.arcgis.com/apps/webappviewer/index.html?id=f0d05a4a014841d588bb66891500b34d	○	●
☐ **2. Employment** *(not including Industrial Employment)* a. Is the project located in a VMT-efficient area (15% or more below the regional average) using the City of Chula Vista screening maps for VMT/Employee? View VMT/Employee map here: https://cvgis.maps.arcgis.com/apps/webappviewer/index.html?id=d80a3cddc1964f8c88dafef234147e98	○	●
☐ **3. Industrial Employment** a. Is the project located in a VMT-efficient area (at or below the regional average) using the City of Chula Vista screening maps for VMT/Employee?	○	●
☐ **4. Within a transit buffer** a. Is the project in a transit priority area or within ½ mile of a stop along a high quality transit corridor, and has the following project characteristics? i. Has a Floor Area Ratio (FAR) of more than 0.75 ii. Includes no more than the minimum parking for use by residents, customers, or employees of the project than required by the jurisdiction iii. Is consistent with the City of Chula Vista General Plan iv. Does not include a smaller number of units that previously on the project site v. Does not replace affordable residential units with moderate- or high-income residential units.	○	●

Local Mobility Analysis Screening

Does this project generate less than 200 daily trips (after adjustments)?	○ Yes	● No
If yes, the project does not need to complete an LMA. If no, continue to next question to determine study extents.		
Is this project consistent with the General Plan?	○ Yes	● No
Refer to the City of Chula Vista Transportation Study Guidelines (TSG), Chapter 4, to determine study extents based on the project's trip generation and consistency with the General Plan.		
Provide attach a list or map of proposed study intersections in accordance with the requirements outlined in the TSG, Chapter 4.		

APPENDIX B

Transportation Study Required Content Form

This document is to be prepared by Consultant and submitted with Transportation Study.

Name of Transportation Study:	
Preparer:	
Date Submitted:	
Date Received:	

Page # or Appendix: *(completed by preparer)*	Required Content	Satisfactory? *(completed by City)* YES	NO
	Required Content, all Transportation Studies		
	Project Information Form, including required attachments	☐	☐
	Cover Page Listing Preparers (Analyst, Project Manager) for CEQA Analysis and LMA	☐	☐
	Table of Contents, Lists of Appendices, Figures, and Tables	☐	☐
	List of Acronyms	☐	☐
	Executive Summary, including: • Project Screening Results • Significance of CEQA Impacts • Mitigation Measures • Residual Impacts with Mitigation Incorporated • Required Improvements from LMA • Preparer Qualifications for CEQA and/or LMA	☐	☐
	Introduction, including: • Purpose of the Transportation Study • Regional vicinity map • Map showing local transportation facilities, all modes • Site plan	☐	☐

APPENDIX B

Transportation Study Required Content Form

Page # or Appendix: *(completed by preparer)*	Required Content	Satisfactory? *(completed by City)* YES	NO
	Required Content, all Transportation Studies (cont.)		
	General project description and background information: • Proposed project description (land use type, intensity, etc.) • Projected opening year • Total (and net) daily and peak hour traffic generation • Existing and proposed zoning and land use designation • Consistency with General Plan Land Use Map • Parking requirements and proposed parking provided	☐	☐
	Required Content, CEQA Analysis (VMT) **(If Project Meets Screening Criteria)** *See TSG Chapter 3 and Appendix E* CEQA Analysis (VMT) should be included in Volume 1 of the Transportation Study.		
	Documentation of screening analysis and conclusions, citing relevant guidance in TSG Chapter 2	☐	☐
	Project's consistency with SB 743's legislative intent	☐	☐
	CEQA Conclusion (i.e., presumed less than significant)	☐	☐
	Documentation of VMT estimation, citing TSG Chapter 3	☐	☐
	Document significance of VMT impacts	☐	☐
	Identify feasible mitigation measures for significant impacts	☐	☐
	Determine residual impacts with mitigation incorporated	☐	☐
	Required Content, Non-CEQA Analysis (LMA) **(Assuming No LMA is Required)** *See TSG Chapter 4* Non-CEQA Analysis should be included in Volume 2 of the Transportation Study.		
	Documentation that no LMA is required, citing relevant guidance in TSG Chapter 4	☐	☐

APPENDIX B

Transportation Study Required Content Form

Page # or Appendix: *(completed by preparer)*	Required Content	Satisfactory? *(completed by City)* YES	NO
	Required Content, Non-CEQA Analysis (LMA) **(Assuming No LMA is Required)** *See TSG Chapter 4* Non-CEQA Analysis should be included in Volume 2 of the Transportation Study.		
	Analysis methodology, including: • Statement that LMA is not a CEQA Analysis (note: do not use CEQA terms in LMA) • Identification of analysis scenarios, citing TSG Chapter 4 • Analysis procedures, per TSG Chapter 4 • Examples of substantial traffic effects that would trigger improvements • Study area definition, citing TSG Chapter 4 (Exhibit)	○	●
	Existing conditions, including: • Existing intersection lane geometry and traffic control (Exhibit) • Existing pedestrian, bicycle, and transit facilities (Exhibit) • Existing peak hour traffic, pedestrian, and bicycle counts (Exhibit, Appendix)	○	●
	Project traffic, including: • Traffic generation (Table) • Documentation of method used for traffic distribution • Traffic assignment (Exhibit)	○	●
	Future conditions, including: • Documentation of estimated baseline traffic volumes (e.g., Opening Year without Project, Horizon Year without Project) • Baseline traffic volumes (Exhibits) • Baseline plus Project traffic volumes (Exhibits)	○	●

APPENDIX B

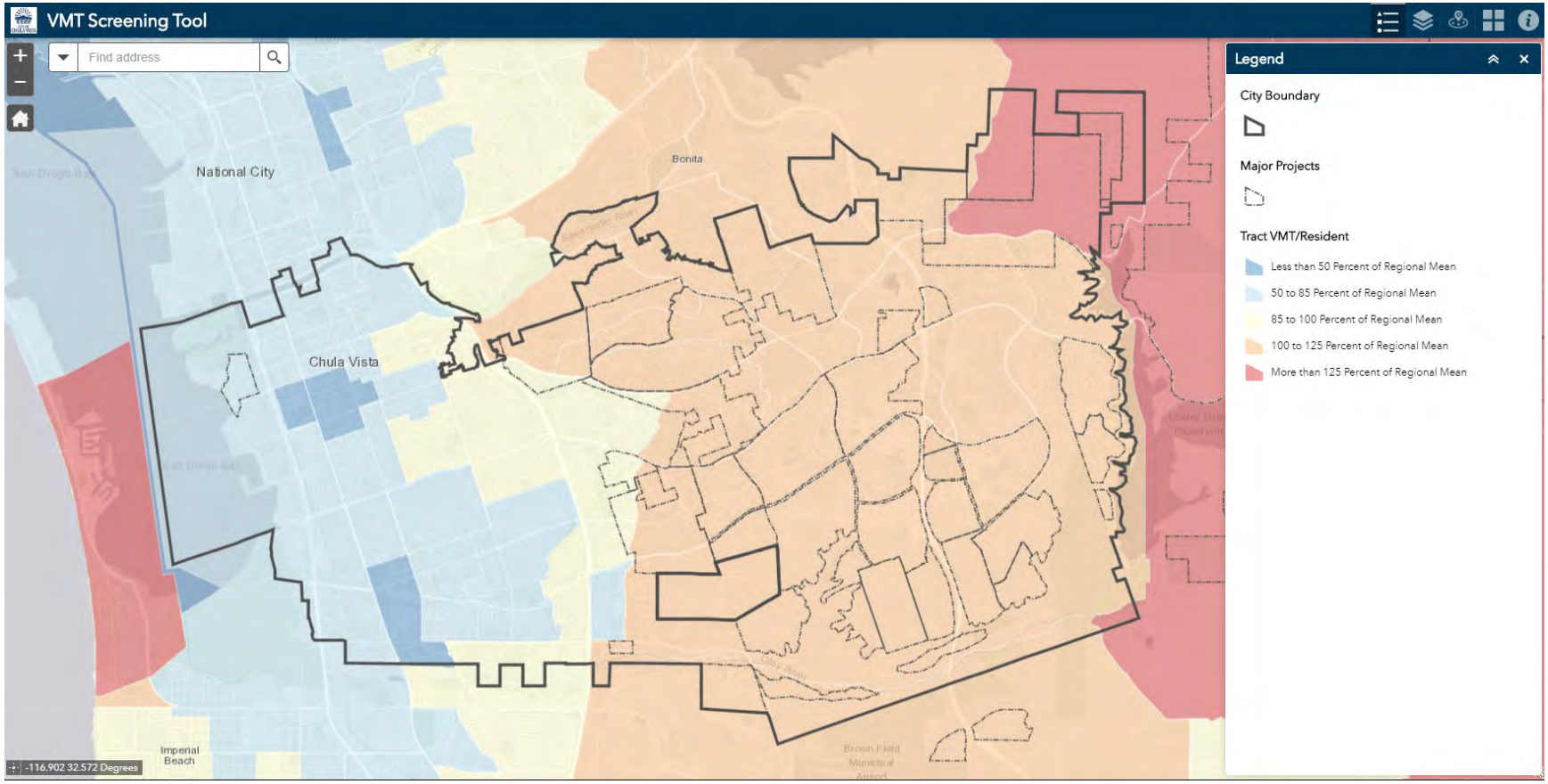
Transportation Study Required Content Form

Page # or Appendix: *(completed by preparer)*	Required Content	Satisfactory? *(completed by City)* YES	NO
	Required Content, Non-CEQA Analysis (LMA) **(Assuming No LMA is Required)** *See TSG Chapter 4* Non-CEQA Analysis should be included in Volume 2 of the Transportation Study.		
	Capacity analysis, including: • Baseline Level of Service (LOS) (Table, Appendix) • Baseline plus Project LOS (Table, Appendix) • Substantial traffic effects per TSG Chapter 4 • Necessary improvements per TSG Chapter 4 • Residual Effects with Improvements Implemented	○	◉

APPENDIX C

Screening Maps: VMT/Capita and VMT/Employee

VMT/Capita

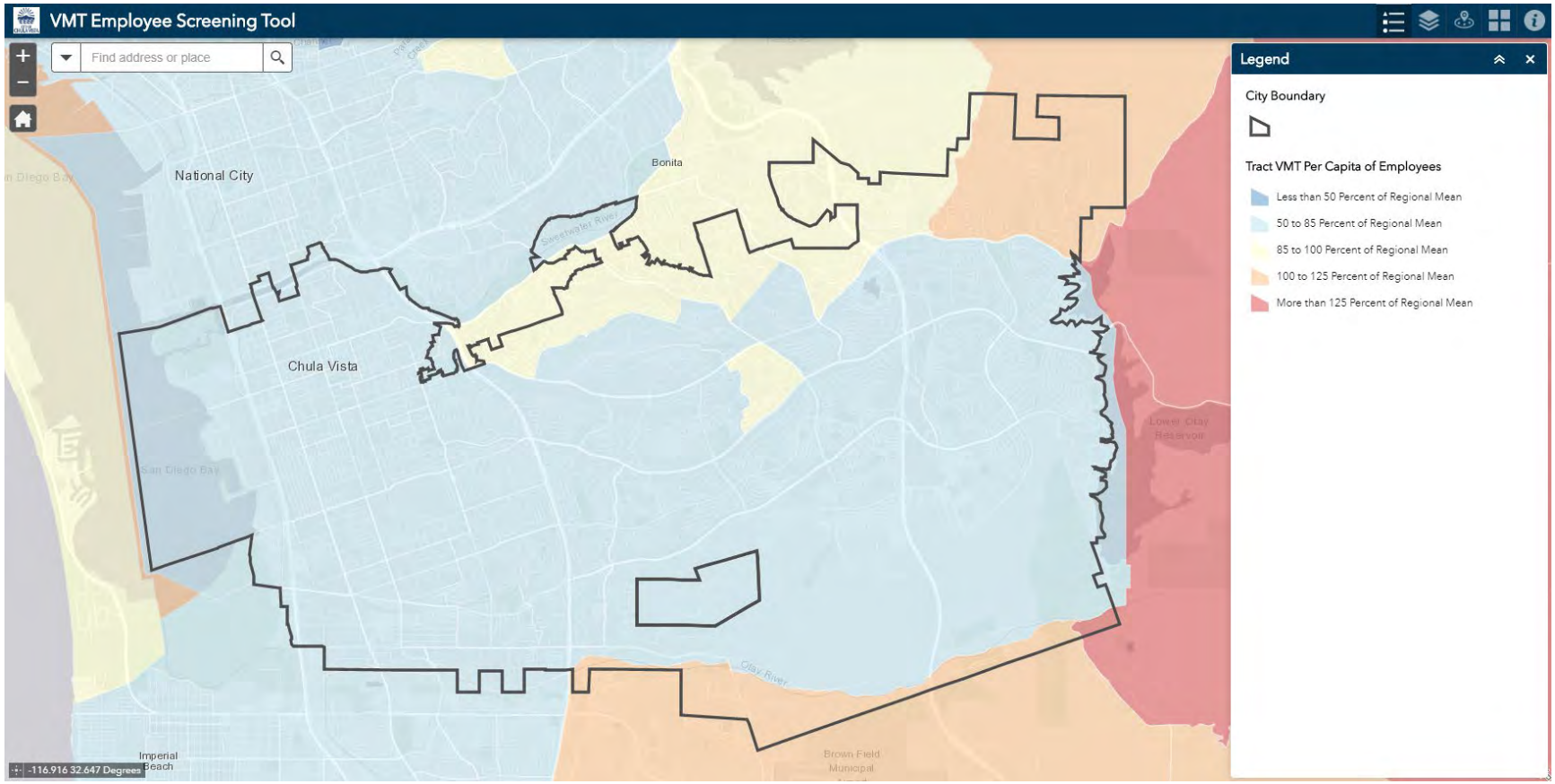


Interactive map (with Transit Priority Areas and High Quality Transit Stops identified) available on the City of Chula Vista website.

APPENDIX C

Screening Maps: VMT/Capita and VMT/Employee

VMT/Employee



Interactive map (with Transit Priority Areas and High Quality Transit Stops identified) available on the City of Chula Vista website.

Land Use Designations

Specific land use designations that fit within residential, non-industrial employment, industrial employment, public facilities, and retail are provided in **Table Appendix C-1** below.

Table Appendix C-1: Land Use Designations

Land Use Type
Residential
Estate, Urban, or Rural
Single Family Detached
Condominium
Apartment
Military Housing (off-base, multi-family)
Mobile Home
Retirement Community
Congregate Care Facility
Commercial Employment
Agriculture
Hospital: General
Hospital: Convalescent/Nursing
Industrial/Business Park (commercial included)
Science Research & Development
Hotel (with convention facilities/restaurant)
Motel
Resort Hotel
Business Hotel
Military
Standard Commercial Office
Large (High-Rise) Commercial Office
Office Park
Single Tenant Office
Corporate Headquarters
Government Offices (Use is Primarily Office with Employees; not Providing In-Person Customer Service)
Medical/Dental
Industrial Employment
Industrial Park (no commercial)
Industrial Plant (multiple shifts)
Manufacturing/Assembly
Warehousing
Storage
Regional Public Facilities/Services: Not Locally Serving
Airport: Commercial
Airport: General Aviation
Airport: Heliports
Cemetery
Church (or Synagogue)
University (4 years)
Junior College (2 years)
High School: Private
Middle/Junior High School: Private
Elementary School: Private

Parks: Regional (developed)
Parks: State
Bus Depot
Waterport/Marine Terminal
Truck Terminal
Beach, Ocean, or Bay
Beach, Lake (fresh water)
Landfill & Recycling Center
Public Facilities/Services: Locally-Serving
High School: Public
Middle/Junior High School: Public
Elementary School: Public
Day Care
Library
Park: City
Park: Neighborhood/County
Post Office
Department of Motor Vehicles
Government Offices (Providing Primarily In-Person Customer Service)
Transit Station (Light Rail w/ Parking)
Park & Ride Lots
Regional Retail (includes Recreational Uses): Not Locally-Serving
Super Regional Shopping Center
Regional Shopping Center
Community Shopping Center
Marina
Parks: Amusement (includes San Diego Zoo and Sea World)
Golf Course (includes driving ranges)
Campground
Retail (includes Recreational Uses): May Qualify for Screening Based on Size/Market Study *If multiple retail land uses are provided as one development, the sizes for all retail uses must be summed and considered together as a shopping center to determine whether the project qualifies for screening.*
Car Wash
Gasoline
Sales (Dealer & Repair)
Auto Repair Center
Auto Parts Sales
Quick Lube
Tire Store
Neighborhood Shopping Center
Commercial Shops
Mixed Use: Commercial (with supermarket)/Residential: *consider each land use type separately for screening*
Bowling Center
Multi-purpose (miniature golf, video arcade, batting cage, etc.)
Racquetball/Health Club
Tennis Courts
Sports Facilities (indoor/outdoor)
Theaters (multiplex with matinee)
Restaurant
Financial (Bank or Savings & Loan)

* Land use designations match the categories in the SANDAG (*Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*.

Screening Criteria and Threshold Evidence

This appendix provides context and evidence for the screening criteria and thresholds for the transportation VMT CEQA analysis.

Screening Criteria

Development projects are presumed to have less than significant impacts to the transportation system, and therefore would not be required to conduct a VMT analysis if any of the following criteria are established, based on the evidence presented below.

Location-Based Screening Maps

If a residential development is located in an area where VMT/Capita is 15% or more below the regional average, or a commercial employment development is located in an area where VMT/Employee is 15% or more below the regional average, or an industrial employment development is located in an area where the VMT per employee is at or below the regional average, the project is presumed to result in a less than significant CEQA impact.

The City of Chula Vista screening maps were created using SANDAG-published information from, the current version of the SANDAG model for the base year (2012), ABM 1 (also known as Series 13, the version used is ABM 13.3.2). As new model versions are released (for example ABM 2), SANDAG will produce VMT screening maps consistent with the final OPR Technical Advisory and Updated CEQA Guidelines (December 2018) for use by its member agencies. In addition, SANDAG will follow its typical peer review protocols, which will allow them to publish the maps on its website without the disclaimer. Therefore, the City of Chula Vista will default to using the screening maps that SANDAG produces for future model versions.

Evidence – This presumption is consistent with the Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) (OPR Technical Advisory), which provides that, "residential and office projects that locate in areas with low VMT, and that incorporate similar features (i.e., density, mix of uses, transit accessibility), will tend to exhibit similarly low VMT. Maps created with data from a travel survey or travel demand model can illustrate areas that are currently below threshold. Because new development in such locations would likely result in a similar level of VMT, such maps can be used to screen out residential and office projects from needing to prepare a detailed VMT analysis."

Evidence – Purely industrial uses are desired to be located in less VMT-efficient, higher-VMT areas in the City of Chula Vista. Placing these land intensive uses in areas with less efficient VMT allows land in efficient VMT areas to be more effectively utilized as high density residential and commercial uses. This threshold will encourage industrial uses to develop in locations appropriate for industrial and agricultural uses, leaving infill and more VMT-efficient areas available for more dense uses.

Specifically, the OPR Technical Advisory provides that, "of land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types."

Local Serving Retail

Local Serving Retail is defined in the City of Chula Vista as retail that is less than 125,000 square feet of total gross floor area and has a market area study that shows a market capture area that indicates a local customer base as determined by the City. Local serving retail includes the Neighborhood Shopping Center land use from the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*. If the specific retail business is a regional serving business, City staff may require a VMT analysis. Hotels and motels are not considered local serving retail (such uses are employment uses for CEQA VMT analysis).

Evidence – The OPR Technical Advisory provides that, "because new retail development typically redistributes shopping trips rather than creating new trips,[1] estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts." Local serving retail generally shortens trips, as longer trips from regional retail are redistributed to new local retail. The 125,000 square foot of total gross floor area threshold for local serving retail is consistent with the upper square footage threshold of the Neighborhood Shopping Center land use from the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*. The Neighborhood Shopping Center land use is by definition locally serving.

Local Serving Public Facilities and Community-Purpose Facilities

Community-purpose facilities serve the community and either produce very low VMT or divert existing trips from established local facilities. A replacement/remodel of an existing local serving public facility with no net increase in VMT would not require a VMT analysis for CEQA.

Evidence – Similar to local serving retail, local serving community-purpose facilities would redistribute trips and would not create new trips.[2] Thus, similar to local serving retail, trips are generally shortened as longer trips from a regional facility are redistributed to the local serving public facility.

Small Residential and Employment Projects

In addition, small projects, which are whole residential and/or employment projects with independent utility that would generate less than 200 net average daily vehicle trips (ADT), would also not result in significant VMT impacts on the transportation system.

Evidence – The OPR Technical Advisory states that, "projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less than significant impact." This is supported by the fact that CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development, and the project is not in an environmentally sensitive area [CEQA Guidelines, § 15301(e)(2)]. Typical project types for which trip generation increases relatively linearly with building footprint (e.g., general office building, single tenant office building, office park, or business park) generate or attract an additional 110-124 trips

---

[1] Lovejoy, et al., Measuring the Impacts of Local Land-Use Policies on Vehicle Miles of Travel: The Case of the First Big-Box Store in Davis, California, The Journal of Transport and Land Use, 2013.

[2] Lovejoy, et al., Measuring the Impacts of Local Land-Use Policies on Vehicle Miles of Travel: The Case of the First Big-Box Store in Davis, California, The Journal of Transport and Land Use, 2013.

per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

The OPR Technical Advisory uses the Institute of Transportation Engineers (ITE) trip generation rates. In Chula Vista, the trip generation for a small project was determined utilizing the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* trip generation rates for Standard Commercial Office following the same OPR Technical Advisory rationale. These rates are listed below.

Trip Generation Rate

Land Use	Unit	Rate
Standard Commercial Office	1,000 square feet (KSF)	20 Trips
Trip Generation for 10,000 SF Office		
Standard Commercial Office	10 KSF	200 Trips

Using SANDAG's trip generation rates for a 10,000-square-foot standard commercial office, the daily trip generation is calculated as 200. This number was used to define a small residential or employment project.

Affordable Housing Projects

Residents of affordable residential projects typically generate less VMT than residents in market rate residential projects. This pattern is particularly evident in affordable residential projects near transit.[3] In recognition of this effect, and in accordance with the OPR Technical Advisory, deed-restricted affordable housing projects that meet the following conditions meet the City's screening criteria and would not require a VMT analysis.

- Is an infill project;
- Is close to a transit stop or station; and
- Project-provided parking does not exceed parking required by the Chula Vista Municipal Code.

The City has discretion to limit screening following review of the proposed affordable housing.

Evidence –Affordable residential projects generate fewer trips than market rate residential projects.[4] This research also supports the assumption that the rate of vehicle ownership is expected to be less for persons that qualify for affordable housing.

Additionally, the OPR Technical Advisory states, "Adding affordable housing to infill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT."

[3] Newmark and Hass, "Income, Location Efficiency, and VMT: Affordable Housing as a Climate Strategy," The California Housing Partnership, 2015.

[4] Newmark and Hass, "Income, Location Efficiency, and VMT: Affordable Housing as a Climate Strategy," The California Housing Partnership (2015).

Projects Within Transit Buffers Near Transit Priority Areas[5] and Near Stops Along High Quality Transit Corridors[6]

Projects located in a half-mile transit buffer near major transit stops, or a Transit Priority Area (TPA), and stops along high quality transit corridors are screened out in the City of Chula Vista, given that the project has the following characteristics:

a. Has a Floor Area Ratio (FAR) of more than 0.75
b. Includes no more than the minimum parking for use by residents, customers, or employees of the project than required by the jurisdiction
c. Is consistent with the City of Chula Vista General Plan
d. Does not replace affordable residential units with a smaller number of moderate- or high-income residential units

Evidence - Projects located in a TPA and a half mile from stops along high-quality transit corridors can help reduce VMT by increasing capacity for transit-supportive residential and/or employment densities in low VMT areas. The increased density that is associated with projects in a TPA can increase transit ridership and therefore justify enhanced transit service which would in turn increase the amount of destinations that are accessible by transit and further increase transit ridership and decrease VMT.

Additionally, the OPR Technical Advisory states, "generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor will have a less-than-significant impact on VMT."

Redevelopment Projects

A redevelopment project that demonstrates that the total project VMT is less than the existing land use's total VMT is not required to complete a VMT analysis.

Evidence – Consistent with the OPR Technical Advisory, "[w]here a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds described above should apply."

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

---

[5] A transit priority area is the area within ½ mile of a major transit stop, which is defined as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. A high quality transit corridor is defined as a corridor with fixed-route bus service, with service intervals no longer than 15 minutes during peak commute periods. *Pub. Resources Code* § 21064.3

[6] Pub. Resources Code, § 21155:"For purposes of this section, a high-quality transit corridor means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours."

"If the project leads to a net increase in provision of locally-serving retail, transportation impacts from the retail portion of the development should be presumed to be less than significant. If the project consists of regionally-serving retail, and increases overall VMT compared to with existing uses, then the project would lead to a significant transportation impact." – OPR Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018).

Thresholds

If a project is required to complete a VMT analysis, the project's impacts to the transportation system would be significant if the VMT would exceed any of the thresholds below.

Residential

Threshold – 15% below regional average VMT/Capita.

Evidence – The OPR Technical Advisory provides that, "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."

Commercial Employment

Threshold – 15% below regional average VMT/Employee

Evidence – The OPR Technical Advisory provides that, "office projects that would generate vehicle travel exceeding 15 percent below existing VMT per employee for the region may indicate a significant transportation impact."

Industrial Employment

Threshold – At or below regional average VMT/Employee

Evidence – The OPR Technical Advisory provides that, "[o]f land use projects, residential, office, and retail projects tend to have the greatest influence on VMT. For that reason, OPR recommends the quantified thresholds described above for purposes of analysis and mitigation. Lead agencies, using more location-specific information, may develop their own more specific thresholds, which may include other land use types." Purely industrial uses are desired to be located in locations that are less dense and not within urban areas, which typically have higher VMT/Employee. Industrial land uses are land intensive; therefore, placing industrial land uses in less urban areas characterized by having higher VMT/Employee allows land in efficient VMT areas to be more effectively utilized as high density residential and commercial 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.

Regional Retail

Regional retail uses are retail uses that are larger than 125,000 square feet of total gross floor area.

Threshold – A net increase in total regional VMT

Evidence – The OPR Technical Advisory provides that, "because new retail development typically redistributes shopping trips rather than creating new trips, estimating the total change in VMT (i.e., the difference in total VMT in the area affected with and without the project) is the best way to analyze a retail project's transportation impacts…Regional-serving retail development,… which can lead to substitution of longer trips for shorter ones, may tend to have a significant impact. Where such development decreases VMT, lead agencies should consider the impact to be less than significant."

Retail within the City of Chula Vista will be analyzed consistent with the OPR technical advisory. The City of Chula Vista has retail uses that attract trips from beyond a neighborhood, which are defined in the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* as "Community Shopping Center," "Regional Shopping Center," and "Super Regional Shopping Center," and are all characterized as being greater than 125,000 square feet.

Transportation Project Screening

The following complete list is provided in the OPR Technical Advisory (December 2018, Pages 20-21) for transportation projects that, "would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis."

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation, such as median barriers and guardrails
- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left-turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- Addition of roadway capacity on local or collector streets, provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs, and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way

- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure
- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

APPENDIX G

Summary of Desired Transit Stop Features &
Local Mobility Analysis Specifications

Summary of Desired Transit Stop Features

The summary of desired transit stop features provided below was obtained from the San Diego Metropolitan Transit System (MTS) Design for Transit Guideline (February 2018). Project applicants should always coordinate with City's staff and MTS to ensure the latest guideline is used.

Desired Transit Stop Features Based on Number of People Boarding/Exiting at Stop

Feature	<50 People	50-100 People	101-200 People	201-500 People	>500 People
Sign and Pole	X	X	X	X	-
Built-in Sign	-	-	-	TPA	X
Expanded Sidewalk	TPA	TPA	X	X	X
Accessible	X	X	X	X	X
Seating	X**	X	X	X	X
Passenger Shelter	TPA	TPA	X	X	X
Route Designations	X	X	X	X	X
Scheduled Display	TPA	TPA	TPA	X	X
Route Map	TPA	TPA	TPA	X	X
System Map	-	-	TPA	TPA	X
Trash/Recycling Receptacle	TPA	TPA	TPA	X	X
Real Time Digital Display	-	-	TPA	TPA	TPA
Bud Pads (Street)	*	*	*	*	X
Red Curbs	X	X	X	X	X

Note:
X = Required

TPA = Only if the transit stop is located within a TPA (Existing or Future)

* = Required for stops with four or more buses per hour. Bus pads (street) are a specification of the jurisdiction that controls the right-of-way.

** = Varies from MTS standard, however, this is an important feature that should be provided.
- = Not applicable

Actual deployment of features depends upon individual site conditions and constraints.

APPENDIX G

Summary of Desired Transit Stop Features &
Local Mobility Analysis Specifications

Local Mobility Analysis Specification - Vehicular

<table>
<tr><th rowspan="2">Scenarios</th><th colspan="5">Vehicular</th></tr>
<tr><th>Traffic Volumes</th><th>Peak Hour Factor (PHF)</th><th>Signal Timing</th><th>Queueing</th><th>Geometrics</th></tr>
<tr><td>Existing</td><td>Collected within 2 years or if warranted by other changes in built environment conditions. AM & PM counts should be collected on Tuesday, Wednesday, or Thursday between 7:00-9:00 AM and 4:00-6:00 PM during a non-holiday periods and not on the week of a holiday under fair weather conditions. Counts should be taken when school is in session. Coordinate with City's staff prior to conducting counts to determine if a seasonal adjustment is required.</td><td>Use existing PHF (overall intersection)</td><td>Coordinate with City staff to obtain existing signal timing.</td><td>Existing Observation - note any excess queue</td><td>Field Conditions</td></tr>
<tr><td>Existing w/ Project</td><td>Existing Traffic Volumes + Project's Traffic</td><td>Use existing PHF (overall intersection)</td><td>Use Existing signal timing unless the project includes updating the signal timing as a project-specific feature.</td><td rowspan="5">95th Percentile Queue from traffic analysis software. Queuing results should be reviewed for reasonableness when compared to Existing (field) conditions.</td><td>Field Conditions + Project Features (if any)</td></tr>
<tr><td>Near-Term</td><td>Developed based on cumulative projects or ambient growth. Coordination with City's staff required.</td><td>Use existing PHF (overall intersection)</td><td>Use Existing signal timing.</td><td rowspan="4">Coordinate with City staff to determine if any improvements are anticipated.</td></tr>
<tr><td>Near-Term w/ Project</td><td>Near-Term + Project's Traffic</td><td>Use existing PHF (overall intersection)</td><td>Use Existing signal timing unless the project includes updating the signal timing as a project-specific feature.</td></tr>
<tr><td>Horizon Year</td><td>Developed based on City's General Plan, Regional Model, or Specific Plan. Coordinate with City's staff to determine the appropriate source.</td><td rowspan="2">Use .95 PHF or existing PHF, whichever is greater (overall intersection)</td><td rowspan="2">Optimize signal timing is acceptable with concurrence from City staff.</td></tr>
<tr><td>Horizon Year w/ Project</td><td>Horizon Year + Project's Traffic</td></tr>
</table>

Note: If a project is redeveloping an existing site, trips associated with the existing uses should be calculated by conducting driveway counts at all existing site driveways, or estimated using published traffic generation rates from the SANDAG *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* or the Institute of Transportation Engineers (ITE) *Trip Generation* Guide, at the City's discretion..

APPENDIX G

Summary of Desired Transit Stop Features &
Local Mobility Analysis Specifications

Local Mobility Analysis Specification – Active Transportation

Scenarios	Pedestrian		Bicycle		Transit
	Volumes	Facilities	Volumes	Facilities	Amenities
Existing	Existing Counts for each crosswalk leg at each study intersection	Document existing facilities along the project's study area	Existing Counts for each turning movement at each intersection	Document existing facilities along the project's study area	Document existing facilities along the project's study area
Existing w/ Project	N/A	Document any proposed improvement per Table 2 through Table 6 of the TSG	Document any proposed improvement per Table 2 through Table 6 of the TSG	Document any proposed improvement per Table 2 through Table 6 of the TSG	Document any proposed improvement per Table 1 through Table 5 of the TSG and Desired Transit Stop Features in Appendix E.
Near-Term	N/A	N/A	N/A	Document any anticipated improvements (not proposed by the project)	N/A
Near-Term w/ Project	N/A	N/A	N/A	Document any proposed improvement per Table 2 through Table 6 of the TSG	Document any proposed improvement per Table 1 through Table 5 of the TSG and Desired Transit Stop Features in Appendix E.
Horizon Year	N/A	N/A	N/A	Document planned facilities per the City of Chula Vista plans (General Plan, Specific Plan, ATP)	N/A
Horizon Year w/ Project	N/A	N/A	N/A	Document any proposed improvement per Table 2 through Table 6 of the TSG	Document any proposed improvement per Table 1 through Table 5 of the TSG and Desired Transit Stop Features in Appendix E.

Local Mobility Analysis Specification – General

Parameter	Guidance
Peak Hour Factor	• Use the measured PHF by intersection approach that is obtained during traffic data collection. • For new intersections or to analyze conditions beyond five years of commencing the LMA, refer to the HCM and maintain consistency across analysis periods, scenarios, and intersections.
Saturation Flow Rate	• Use 1,850 vehicles per hour per lane. • Other Saturation Flow Rates in accordance with the HCM or other justification may be used with approval of the City Traffic Engineer. The current typical saturation flow rate in the HCM is 1,900 vehicles per hour per lane.
Signal Timing	• Obtain signal timing plans from the appropriate agency and use the timing (by time of day if provided) for the analysis. • For new traffic signals, typically use a maximum cycle length of 120 seconds for intersections near freeway interchanges or at the intersection of two arterial roadways. • For all other conditions use a maximum of 90 seconds, unless directed otherwise by City staff. • For all conditions, ensure that the minimum pedestrian crossing times are utilized.
Conflicting Pedestrians and Pedestrian Calls	• Use pedestrian count data if available. • If not available, refer to the HCM for appropriate minimum values.
Heavy Truck Percentage	• If available, use observed values from field observations or traffic counts. • If unavailable, the minimum recommended value is 3%. Heavy truck percentages should be higher on truck routes.
Lane Utilization Factor	• If applicable, adjust the lane utilization factor based on field observations. • If unavailable, refer to the HCM.