

City of Imperial Beach

Transportation Impact Guidelines for

Vehicle Miles Traveled (VMT) and Level of Service Assessment

**October 2020
Final Version**





TABLE OF CONTENTS

1.0	PREFACE	1
2.0	INTRODUCTION	1
3.0	WHAT IS VEHICLE MILES TRAVELED (VMT)?	12
4.0	WHAT IS A LOCAL TRANSPORTATION STUDY (LTS)?	12
5.0	SUMMARY OF PROCESS	14
6.0	TRIP GENERATION/DISTRIBUTION PROCEDURE	15
7.0	SCREENED OUT PROJECTS	16
8.0	DETERMINING PROJECT STUDY REQUIREMENTS	17
9.0	SAN DIEGO REGIONAL GUIDELINES FOR VMT	19
10.0	MITIGATION MEASURES AND STRATEGIES FOR VMT REDUCTION	21
11.0	LOCAL TRANSPORTATION STUDY GUIDELINES	26
12.0	TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES.....	31
13.0	RESOURCES.....	32



LIST OF Tables

Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies	3
Table 7-1 Screened Out Projects.....	17
Table 9-1 Threshold for VMT Analysis for Projects Consistent with the Adopted General Plan	19
Table 9-2 Threshold for VMT Analysis for Projects Inconsistent with the Adopted General Plan.....	19
Table 9-3 City of Imperial Beach Project Threshold.....	20
Table 10-1 Additional VMT Reduction Strategies for Employers	23
Table 10-2 OPR Recommended Mitigation Measures	24
Table 11-1 Threshold for LTS for Projects Consistent with the Adopted General Plan	26
Table 11-2 Threshold for LTS for Projects Inconsistent with the Adopted General Plan.....	27
Table 11-3 HCM Level of Service Description for Signalized Intersections	29
Table 11-4 HCM Level of Service Description for Unsignalized Intersections	29
Table 11-5 Roadway Classification LOS & Capacity	30
Table 11-6 Determination of the Need for Roadway Improvements.....	31
Table 12-1 Potential TDM Improvement Measures	31

LIST OF FIGURES

Figure 8-1 Project Study Requirements	18
Figure 10-1 Mobility Management Strategies.....	22

APPENDICES

Appendix A – Project Information Form (PIF)

Appendix B – SANDAG Smart Growth Opportunity Area Map and Transit Priority Areas

Appendix C – VMT Analysis Examples

Appendix D – SANDAG Mobility Management Guidebook



LIST OF ACRONYMS

ADT.....	Average Daily Traffic
CAP.....	Climate Action Plan
CAPCOA.....	California Air Pollution Control Officers Association
CARB.....	California Air and Resources Board
CEQA	California Environmental Quality Act
HCM.....	Highway Capacity Manual
ITE.....	Institute of Transportation Engineers
LOS	Level of Service
LTA	Local Transportation Assessment
LTS	Local Transportation Study
NEPA	National Environmental Protection Agency
OPR	Office of Planning and Research
PIF	Project Information Form
SANDAG	San Diego Association of Governments
SB 743	Senate Bill 743
TIS.....	Traffic Impact Study
VMT	Vehicle Miles Traveled



1.0 PREFACE

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

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

This document provides:

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

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

2.0 INTRODUCTION

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

Purpose

The purpose of this document is to provide general instructions for analyzing the potential transportation impacts of proposed development projects (e.g., Development Plans, Conditional Use Permits, etc.). These guidelines present the recommended format and methodology that should be utilized in the preparation of transportation impact studies. In order to provide consistency with the City's adopted General Plan's Circulation Element (1994) while adhering to CEQA law, the City considers both vehicle miles traveled (VMT) and level of service (LOS) to be relevant and necessary measurements for transportation impacts. Depending on the project, the City may require VMT documentation and either a Local Transportation Study (LTS) or Local Transportation Assessment (LTA). Specific documentation and study requirements for VMT and LTA / LTS are provided further in this document in Section 9.0 and Section 11.0, respectively.



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

California Environmental Quality Act (CEQA)

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

State Senate Bill 743 (SB 743)

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

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

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

SB 743 Relevance to City Policy

The City of Imperial Beach currently has several policies that have been adopted through the General Plan/Local Coastal Program and Climate Action Plan that is supported with the implementation of SB 743. Additionally, the City has prepared a Bicycle Transportation Plan that identifies areas of connectivity deficiencies and opportunities for improvements. These planning documents are supported with SB 743 as the City strives to reach development goals. **Table 2-1** identifies several goals and policies the City has adopted that are supported by SB 743.



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

GENERAL PLAN / LOCAL COASTAL PLAN - LAND USE ELEMENT	
Land Use Element Goals	<p>The overriding goal for Imperial Beach shall be the retention of the quality of life and atmosphere of a small beach-oriented town.</p> <ul style="list-style-type: none"> • A town that is not overcrowded or exclusive like many California beach communities. • A town with a human scale and a relaxed pace of life.
	<p>a. Residential Neighborhoods Future plans should foster keeping residential neighborhoods stable, well maintained, and pedestrian oriented. These plans should provide the means and incentives to encourage upgrading and rehabilitation of existing housing and, where possible, enhancement of public services. New buildings should also be encouraged with emphasis on appropriate scale, open space and diversity in architectural design.</p>
	<p>b. Natural resource Protection All land use proposals shall respect, preserve, and enhance the most important natural resources of Imperial Beach, those being the ocean, beach, San Diego Bay, and the Tijuana River Valley.</p>
	<p>c. Immediate Ocean Shoreline The ocean, beach and the immediately abutting land are recognized as an irreplaceable natural resource to be enjoyed by the entire City and region. This unique, narrow strip of land should receive careful recognition and planning. The purpose of the beach is to make available to the people, for their benefit and enjoyment forever, the scenic, natural, cultural, and recreational resources of the ocean, beach and related lands.</p>
	<p>e. Economic Development The City shall foster development of a broader tax base to support residents of, and visitors to the City. However, this development must be compatible with the goal of remaining a small, beach-oriented town. Economic activities should focus on generating income through expanded local services, visitor serving uses and ecotourism and research related to the City's natural resources.</p>
Land Use Policies L-3	<p>Specific policies for residential uses are:</p> <p>a. Pedestrian Orientation All housing and neighborhoods shall be designed with a pedestrian orientation. This requires:</p> <ul style="list-style-type: none"> • Safe and pleasant pedestrian ways with numerous street trees. • Front doors and windows facing the street whenever feasible. • Ground level front porches, patios, bay windows and balconies facing the street wherever feasible. • Minimum front yard set-backs. • Garages and parking accessed from an alley or set back and recessed behind the front facade of the residential units.



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

	<p>d. High Density Residential</p> <p>Higher density neighborhoods shall be located near public transportation facilities. Development shall emphasize human scale, aesthetically pleasing buildings with active and passive private and common open space. Areas shall be protected from the intrusion of traffic and conflicting land uses.</p>
<p>Land Use Policies L-4</p>	<p>Commercial Uses and Areas – Specific policies for commercial uses and areas are as follows:</p> <p>a. Attractive and Stimulating Surroundings</p> <p>Commercial and mixed-use areas should be enjoyable places in which to shop and work. This means providing pedestrian scaled design, bicycle facilities, such as racks or storage areas, landscaping of building sites and parking lots, street trees, screening unsightly storage and parking areas and banning out-of-scale advertising. All new commercial developments and major expansions of existing commercial uses should be subject to design controls.</p> <p>c. Fostering New Commercial and Mixed-Use Development</p> <p>Commercial and mixed-use development should be encouraged to increase the City's tax base, and should be evaluated in terms of the effect it will have on the economy, as well as its compatibility with the existing character and quality of living in the City. Particular emphasis should be placed on the development of new businesses and fostering commercial uses that provide goods and services to residents and visitors.</p> <p>d. State Highway 75 Commercial (C/MU-1)</p> <p>This commercial/mixed-use area requires substantial improvement. It serves as the major gateway to the City and carries more traffic than any other street in the City. It is expected that the area will retain a mix of pedestrian- and automobile-oriented uses; however, as redevelopment occurs, pedestrian-oriented commercial and mixed-use development, including multi-family dwellings, are encouraged.</p> <p>e. Seacoast Commercial and Mixed-Use (C/MU-2)</p> <p>The Seacoast Area shall serve as a commercial and mixed-use visitor serving, pedestrian-oriented commercial area. Existing residential uses shall be slowly transitioned to new visitor serving commercial uses. To ensure that the existing character is maintained and enhanced, the zoning for this area shall incorporate standards for setbacks and stepbacks and encourage pedestrian activity through the design and location of building frontages and parking provisions. For all buildings with frontage along Seacoast Drive, including those with multiple-family dwelling units, "active commercial uses" are required to be provided at a minimum sixty percent of each building's ground floor square footage and have direct pedestrian access from the Seacoast Drive sidewalk or a plaza. The remaining 40% must either be primarily related to the commercial use, such as parking, access, or other nonactive commercial purpose or, if related to noncommercial use, must be designed either to encourage and promote pedestrian activity or to visually screen required on-site parking. Per the City of Imperial Beach Zoning Ordinance, timeshares shall require approval of a conditional use permit and shall be</p>



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

	<p>prohibited on the first 1st floor, unless 25% are reserved for overnight accommodation.</p> <p>f. Thirteenth Street Commercial Areas (C-3)</p> <p>The 13th Street area shall provide areas for pedestrian-oriented commercial and mixed-use businesses that provide goods and services primarily for neighborhood residents.</p>
<p>Land Use Policies L-5</p>	<p>Ream Field Urban Reserve Area</p> <p>b. Urban Reserve</p> <p>Ream Field is designated in the Urban Reserve land use designation. Any re-use shall require an amendment of the General Plan and the preparation of a Specific Plan. Such Specific Plan should consider but not be limited to:</p> <ul style="list-style-type: none"> • A well-balanced utilization plan designed to increase the City's tax base, employment opportunities and address other City problems. • Retention of 606 acres currently part of the Tijuana Slough National Wildlife Refuge to remain under control of the U.S. Fish and Wildlife Service. • Retention of the Exchange, Commissary, Child Development Center, Job Corps Center, and Immigration Naturalization Services Center. • A public park to serve the southeastern portions of Imperial Beach. • A site for the City's public works yard. • Businesses, college campus, education park, hotel, housing, light industry, medical facilities, veterans home, secondary school and tourist facilities.
<p>Land Use Policies L-7</p>	<p>Revitalization</p> <p>The retention of an attractive, human scale, beach oriented small town atmosphere requires a high level of street and property maintenance.</p> <p>The City shall:</p> <p>f. Promote revitalization of the City through the installation of public improvements such as street and alley lighting, undergrounding of utilities, and street, sidewalk, alley, median and landscape improvements.</p> <p>h. Complete, through the use of assessment districts or other means, the construction of missing sidewalks with high priority to:</p> <ul style="list-style-type: none"> • Streets leading to the beaches. • Streets used by children walking to school. • Streets that provide good pedestrian access to commercial areas
<p>Land Use Policies L-8</p>	<p>Bayfront/Marina</p> <p>The Imperial Beach Bayfront area is a very unique and environmentally sensitive are of the South San Diego Bay. Opportunities and constraints for development and access to this area have been the subject of numerous studies, reports and surveys. While the opportunities for full deep-water bay access from the Imperial Beach portion of the bayfront are limited by extensive environmental and economic constraints, the City should:</p> <ol style="list-style-type: none"> 1. Continue to evaluate opportunities for increased public access to the San Diego Bay, including a marina or other commercial recreational marina alternatives, giving



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

	<p>full consideration to the environmental and economic constraints applicable to that area.</p> <p>2. Insure continued public access to the Imperial Beach Bayfront area and, where possible, provide for additional public access.</p> <p>3. Create a recreational corridor along the Imperial Beach Bayfront incorporating bicycle and pedestrian paths</p>
GENERAL PLAN / LOCAL COASTAL PLAN – CIRCULATION ELEMENT	
<p>Circulation Element Goals</p>	<p>Balanced Circulation</p> <p>The quality of life and economic vitality of Imperial Beach is dependent upon a safe and efficiently operating circulation system that provides for pedestrians, bicycles, trucks, automobiles and public transportation. Specific aspects of this system should include:</p> <p>a. Assure Regional Access</p> <p>Imperial Beach is dependent on its transportation connections to the rest of the region and will pro-actively work with other cities and organizations to preserve and improve this regional access</p> <p>b. Safety, Environmental Sensitivity, Energy Efficiency</p> <p>The City will strive for safety, environmental sensitivity and energy efficiency in all transportation designs and improvements. In this system, pedestrian walkways, bicycle paths and public transit will receive the same attention as facilities designed for the automobile.</p> <p>c. Service Levels for Streets and Signalized Intersections</p> <p>Arterials and local streets should be designed to operate at service level "C" or better during average daily traffic volume (ADT) conditions. Signalized intersections under peak hour conditions should operate at service level "D" or better. A lower standard is acceptable for special events and seasonal beach related traffic.</p> <p>d. Visitor Parking and Traffic</p> <p>Some street parking and traffic for regional daily visitors is accepted within the known constraint that the demand for beach parking may often exceed the supply when the weather and beach conditions are attractive. However, within this context, the volume and regularity of parking and traffic intrusions into residential areas should be minimized where practical.</p>
<p>Circulation Element Policies C-1</p>	<p>Street Classification Plan, Design Standards and Dedication Requirements</p> <p>Streets shall be classified as shown in Figure C-5. An acceptable Level of Service (LOS) for Palm Avenue west of 7th Street to 3rd Street shall be LOS E and F with prescribed traffic calming measures implemented tied to alternative transportation system development, such as a bicycle transportation plan. Cross sections, the general right-of-way width and configuration for each street and highway shall be as specified by the City. All street and highway designs should further the goal of providing safe and efficient circulation, as well as an aesthetically pleasing urban form. Developers shall dedicate right-of-ways and street improvements in keeping with the street classification system, as may be required by the City.</p>



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

<p>Circulation Element Policies C-2</p>	<p>Street Design and Access Street design and access shall include the following principles: a. Driveways for corner properties on arterials or collectors shall be located as far away from the intersection as possible. Joint access driveways shared by abutting uses shall be encouraged. b. Driveway widths shall be kept narrow in order to retain a pedestrian street scale. Minimum and maximum curb cut widths shall be as set forth in Table C-3. When redevelopment or rehabilitation occurs, existing driveways shall be modified or eliminated to conform to these standards.</p>
<p>Circulation Element Policies C-6</p>	<p>Traffic Signal Timing In order to reduce congestion and help reduce air pollution from motor vehicles, the City should consider improving its traffic signal operations by: (a) replacing fixed-time signals with fully-actuated and/or interconnected signals; (b) optimizing signal timing, including adjustments at least every three years; and (c) interconnecting signalized intersections in accordance with the regional Traffic Flow Improvement strategy.</p>
<p>Circulation Element Policies C-9</p>	<p>Comprehensive Transit Services The City shall support the availability of transit service as a means to reduce automobile congestion, to provide transportation for- those who have no other form of transportation, as a means to reduce air pollution, and as a service to visitors.</p>
<p>Circulation Element Policies C-10</p>	<p>Light Rail The City shall support the potential of light rail service to Imperial Beach to the extent that regional agencies can project sufficient ridership to assure economic feasibility.</p>
<p>Circulation Element Policies C-11</p>	<p>Bus Stops and Bus Transfer Points The City should encourage MTDB to enhance Imperial Beach bus loading and unloading stops as well as bus transfer points. The SR-75/Palm Avenue at Ninth Street bus stop should be upgraded to a MTDB Level IV stop to include accessibility to disabled persons, bicycle racks and storage facilities, expanded sidewalk, seating, passenger shelter, route destinations, route map, lighting, time tables for each route, trash receptacles, system map and telephone. The City should encourage MTDB to provide route buses that can accommodate the transportation of bicycles for passengers. The City shall also explore the long term potential for an expanded multi-model transfer station on SR-75/Palm Avenue.</p>
<p>Circulation Element Policies C-12</p>	<p>Transit Facilities As deemed necessary, new developments shall be required to provide or assist in funding transit facilities such as bus shelters and turnouts.</p>
<p>Circulation Element Policies C-13</p>	<p>Ridesharing The City shall promote ridesharing and shall provide ridesharing information to the public.</p>
<p>Circulation Element Policies C-14</p>	<p>Management Programs</p>



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

	<p>The City will cooperate with SANDAG to implement future Congestion Management Programs and Transportation Demand Management requirements included in the San Diego Regional Air Quality Strategy.</p>
<p>Circulation Element Policies C-15</p>	<p>Bikeways Plan Bikeways shall be located and classified as shown in Figure C-6. Westbound Palm Avenue between Seventh Street and Rainbow Drive is classified as a Class III Route. Eastbound Palm Avenue is classified as a Class II Bicycle Route from Rainbow Drive to 7th Street. The Bikeway Plan is designed to tie into the City of San Diego's Class II Bike Lane on SR 75, to connect to the Bayshore Bikeway and to connect to a new Ecoroute Bikeway as described in Policy C-16.</p>
<p>Circulation Element Policies C-21</p>	<p>Pedestrian Circulation Sidewalks shall be required for all new developments. Normally, the sidewalk shall be located so that a landscape strip for trees and vegetation is located between the sidewalk and the vehicle travel way. City should discourage the use of sidewalks for use as a bicycle route or bicycling facility. Techniques shall be encouraged to create a pleasant walking experience including concern for views, paving materials, landscaping, street furniture and pedestrian scaled lighting. Traffic calming measures, specifically on the Palm Avenue corridor between Ninth Street and Seacoast Drive should be employed as a measure to enhance public safety. In locations with a high volume of pedestrian traffic, crosswalks should use stamped concrete, brick or similar paving materials as an extra warning to motorists. Said stamped concrete, brick or similar paving materials should not impede or hinder the ability of bicycles to use designated bike lanes.</p>
<p>Circulation Element Policies C-22</p>	<p>Parking Parking for both residents and visitors shall be provided as part of new development. Implementation actions shall include: a. Seacoast Drive The use of in lieu parking fees, off-site parking facilities and shared parking shall be encouraged for properties located west of Seacoast Drive General Plan/ Local Coastal Plan C-24 Circulation Element and on Seacoast Drive. The intent of this policy is to encourage a more pedestrian atmosphere near the beach and develop properties near the ocean with commercial and recreational uses rather than parking lots. b. Commercial/Mixed-Use Areas In lieu parking fees, off-site parking facilities, transportation demand management strategies, and shared parking may be used in commercial/mixed-use areas to facilitate mixed-use development, shared group parking, a pedestrian atmosphere, and/or improved design. The consolidation of off-street parking for several uses shall be encouraged to improve walkability, allow for a more pedestrian-oriented environment, reduce the number of street ingress and egress points, and to facilitate well-designed, small-lot infill development.</p>



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

	<p>e. Shared Parking Shared parking shall only be approved when technical evidence is presented to justify the shared use. The Urban Land Institute guidebook Shared Parking Second Edition (2005) shall be used as a guideline and supplemented by additional findings, where appropriate.</p> <p>j. Balanced Development All new commercial and higher density residential development shall be located and designed to facilitate provision or extension of transit service to the development to the extent feasible. Residential, commercial, and recreational uses should be located in relationship to each other so as to encourage walking, bicycling, and transit ridership. Major employment, retail, and entertainment districts and major coastal recreational areas should be well served by public transit and easily accessible to pedestrians and bicyclists.</p> <p>k. Employer Support of Transit The City shall actively encourage convenient alternatives to automobile General Plan/ Local Coastal Plan C-26 Circulation Element use throughout the Commercial Districts by requiring employers to provide incentives for alternative transit use such as providing employee transit passes or subsidies, ridesharing programs, preferred parking for carpooling and on-site shower facilities.</p>
GENERAL PLAN / LOCAL COASTAL PLAN – CONSERVATION AND OPEN SPACE ELEMENT	
<p>Conservation and Open Space Element Goals</p>	<p>Goal 2 Natural Resources – Key Foundation of the City The ocean, beach, bay, estuary, weather and related ecosystems set much of the image of Imperial Beach. Conservation and protection of these resources shall be a key focus of the General Plan. The unique physiographic characteristics of Imperial Beach are recognized as the foundation for all other aspects of the community. These characteristics enhance the quality of life of residents and visitors and shall not be wasted, destroyed, or neglected. They are generally nonrenewable and provide many of the scenic, historic, economic, recreation, open space and ecological values for the community.</p> <p>Goal 3 Resources and Open Space Belong To Everyone Imperial Beach is an integral part of the larger California coastal community, linked by shared resources that are prized by the state, national and even international community. Congenial and cooperative use of these resources by both residents and visitors is recognized. Solutions for cooperative use shall always be based on retaining the area's resources.</p>
<p>Conservation and Open Space Element- Air Quality CO-6</p>	<p>The City shall support actions to insure clean air including but not limited to: d. Encourage the development and use of emission reduction equipment for private and commercial vehicles. The City shall encourage operators of vehicular fleets using City streets to use lower weight or horsepower or low emission vehicles whenever feasible. The City shall strive to set the example by purchasing such vehicles for its own use whenever feasible, or converting existing vehicles to meet such standards.</p>



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

	<p>e. Pursue the development of alternative means of transportation, which would reduce the use of the automobile within the City. The development or licensing of any future public transportation system should be limited to the use of the most advanced low or non-emission powered vehicles. Transportation by means other than motor vehicles shall be encouraged (see also Circulation Element).</p> <p>g. Continue to review all new developments to ensure that they meet acceptable air quality standards as set forth by the State and local Air Pollution Control District, preferably through the environmental assessment process.</p>
GENERAL PLAN / LOCAL COASTAL PLAN – DESIGN ELEMENT	
Design Element Goals	<p>Goal 4 Visual Quality is important</p> <p>The visual quality of the City's environment shall be preserved and enhanced for the aesthetic enjoyment of both residents and visitors and the economic well-being of the community. Development of neighborhoods, streets and individual properties should be pleasing to the eye, rich in variety, and harmonious with existing development. The feeling of being near the ocean and bay should be emphasized even when the water is not visible. Designs reflective of a traditional California seaside community should be encouraged.</p>
Design Element Policies D-8	<p>Project Design</p> <p>c. Developments should be designed to respect and enhance the view and safety of the passerby.</p> <ul style="list-style-type: none"> • Public rights of way should be designated not only for the safety and enjoyment of the motorist, but also for the pedestrian, jogger and bicyclist. <p>f. Developments shall be designed to conserve energy and water and work toward healthful air quality.</p> <ul style="list-style-type: none"> • Project design shall encourage the use of mass transit. This may include the clustering of units and the provision of bus shelters/benches, turnouts, schedule signs and sidewalks.
Design Element Policies D-11	<p>Permanent Open Space Areas</p> <p>a. Bicycle and pedestrian paths in developed areas should connect with one another through permanent open spaces.</p>
GENERAL PLAN / LOCAL COASTAL PLAN – FACILITIES AND SERVICES ELEMENT	
Facilities and Services Element Goals	<p>Goal 5 Facilities and Services Concurrent with Need</p> <p>The City shall ensure that public facilities and services are available to adequately serve all new and existing development concurrently with new construction. For existing facilities requiring upgrading and/or replacement, the City shall plan for adequate funding of these improvements to preclude interruptions or deterioration of service that may imperil the health and welfare of the residents and visitors to Imperial Beach.</p>
Facilities and Services Element Policies F-12	<p>Sidewalks / Treelawns</p> <p>The City's preferred location for sidewalks shall be in an area that is not contiguous with the paved street and curb. The area between the street curb and the sidewalk shall be used for street lawns and the planting of street trees. This policy shall be implemented as part of development approvals except in areas already committed</p>



Table 2-1 City of Imperial Beach Relevant Adopted Goals and Policies

	to curb side sidewalks. Tree lawns shall not be paved except where satisfactory trees have been planted in the tree lawn and decorative paving material is used, such as bricks or pavers.
Facilities and Services Element Policies F-13	New Sidewalks The City shall encourage property owners to complete missing portions of sidewalks and, for larger areas, should sponsor the creation of sidewalk assessment districts. Improvements to existing sidewalks, or new sidewalks, shall be required with all building permits for construction valued at greater than \$25,000.
GENERAL PLAN / LOCAL COASTAL PLAN – HOUSING ELEMENT	
Housing Element Goals	Goal 1 Meet the housing needs of existing and future needs of the community. Goal 2 Provide adequate housing sites through appropriate land use designations, zoning districts, and residential development standards to accommodate the City’s share of the regional housing need. Goal 3 Expand homeownership opportunities to increase the proportion of owner-occupied housing units Goal 4 Maintain, preserve, and enhance existing housing to build stronger and more vibrant residential neighborhoods.
Housing Element Policies 1.2	Facilitate development of affordable housing through use of financial and/or regulatory incentives when feasible.
Housing Element Policies 2.2	Promote mixed-use development and second dwelling units in appropriate districts to facilitate smart growth and reduction in automobile trips, vehicle miles traveled, and associated energy consumption.
Housing Element Policies 2.4	Support the assembly of small vacant or underutilized parcels as a means to increase the feasibility of infill development.
Housing Element Policies 3.1	Encourage the development of affordable homeownership housing for first-time homebuyers.
Housing Element Policies 4.7	Monitor, protect, and preserve affordable housing within the coastal zone.

Table 2-1 demonstrates the documentation in place the City of Imperial Beach has envisioned for the community. SB 743 will help support these documents and achieve the goals set forth by the City.

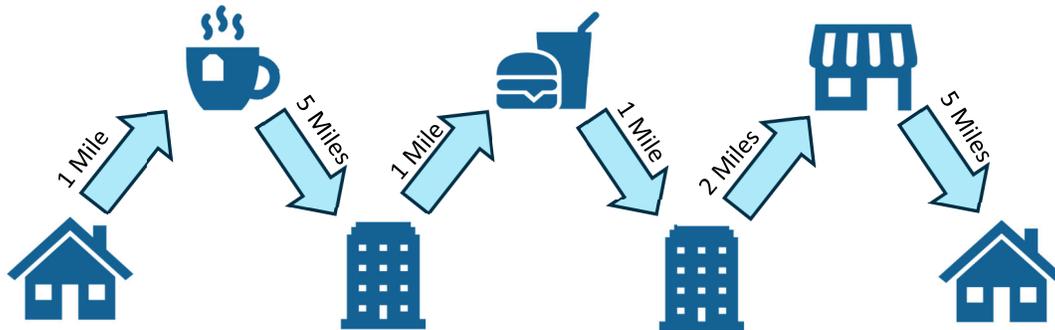
National Environmental Protection Agency (NEPA)

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



3.0 WHAT IS VEHICLE MILES TRAVELED (VMT)?

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



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

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

The thresholds developed are based on engineering judgment of professionals who are local experts in determining the effect of projects within San Diego County using the Institute of Transportation Engineers (ITE) Guidelines for Transportation Impact Studies in the San Diego Regional Guidelines (May 2019). The thresholds have been used successfully for over 19 years in the San Diego region and have received wide acceptance from the transportation profession, decision makers, and the public. Transportation engineers and planners consider these thresholds to be valid for VMT-based analyses.

Screened out Projects

Some projects for CEQA purposes qualify as screened out. If a project is screened out that means the project has VMT reducing characteristics and is assumed to decrease VMT. A screened out project would not have to complete a VMT analysis under CEQA.

4.0 WHAT IS A LOCAL TRANSPORTATION STUDY (LTS)?

City Staff determines the need for a transportation analysis in conformance with the CEQA guidelines and City policies. The City recognizes the changes to CEQA regarding SB 743 implementation and may require VMT analysis. Additionally, the City recognizes the need to maintain existing infrastructure and may require a Local Transportation Study (LTS).

A Local Transportation Study will analyze the projects influence on the surrounding intersections and roadway network utilizing level of service (LOS) for all project scenarios. The document also includes the identification of pedestrian, bicycle, and transit amenities. The purpose of a Local Transportation Study is



to ensure the goals, objectives, and policies adopted by the City are supported and implemented while monitoring the capacity for the roadway networks.

A Local Transportation Study (LTS) will be required if a project exceeds 1,000 ADT and is consistent with the adopted General Plan. If a project is inconsistent with the adopted General Plan, an LTS will be required if the project exceeds 500 ADT.

The following scenarios comprise a Local Transportation Study and may be modified in agreement with the City.

- Existing
- Existing Plus Project
- Near-term
- Near-term Plus Project
- Horizon Year
- Horizon Year Plus Project

What is a Local Transportation Assessment (LTA)?

A Local Transportation Assessment helps the City monitor development impacts on the transportation network and is similar to a Local Transportation Study (LTS). The main difference between the two studies is a Local Transportation Assessment (LTA) analyzes fewer scenarios than a Local Transportation Study (LTS). A Local Transportation Assessment (LTA) will be required if a project is less than 1,000 ADT but is anticipated to influence the surrounding environment.

A Local Transportation Assessment (LTA) will be required to analyze the following scenarios based on the thresholds identified for the project's ADT.

- **A project that generates between 200-500 ADT will be required to analyze existing and existing plus project conditions.**
- **A project that generates between 500-1,000 ADT will be required to analyze existing, existing plus project conditions, and existing plus project plus cumulative conditions.**

Examples of Projects Thresholds Between 200 – 1,000 ADT

Land Use	Size	Trip Generation Rate	ADT
Single Family Homes	25 dwelling units	10 trips / dwelling unit	250
Condominiums	100 dwelling units	8 trips / dwelling unit	800
Convenience Market (15-16 hours)	1,500 square feet	500 trips / 1,000 square feet	750

The study requirements are subject to the discretion of City Staff.



City and Interagency Coordination

Early consultation between the developer and the City is strongly recommended to establish the base input parameters, assumptions, and analysis methodologies for the transportation study. To avoid unnecessary delays or revisions and to streamline document preparation and the review process, the applicant should submit and have approved a Project Information Form (PIF) prior to the preparation and submittal of a draft CEQA or LTS/LTA document. The Project Information Form can be found in **Appendix A**.

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

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

5.0 SUMMARY OF PROCESS

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



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

Step 1: Study Initiation

The City has developed a Project Information Form (PIF) that helps guide the requirements for a project. This form helps identify the study requirements and shall include the project location and description. Additionally, the PIF should include the estimated trip generation, trip distribution, and trip assignment. The PIF is provided in **Appendix A** and is subject to change at the City's discretion.

Step 2: City Confirmation

Once the PIF has been submitted to the City, the City will review and let the project consultant or developer know if additional information is needed. Depending on the project, the City may request information or documentation not outlined in the PIF.



Step 3: Submit Draft Report

Subsequent to the City's approval of the PIF, the project consultant shall conduct the transportation study. Once a draft report is prepared, it shall be submitted to the City in PDF and hardcopy for the City's review. The City shall provide the consultant with comments and revisions to the study as appropriate. The consultant shall address the City's comments and provide a comment/response matrix to the City along with a revised draft report. This may take several rounds of comments and/or meetings.

Step 4: Submit Final Report

The consultant will submit a final transportation study report to the City with all comments addressed. A comment/response matrix of all comment/responses and any decisions made shall accompany the final submittal.

If necessary, City Staff is available for individually scheduled meetings at the request of the project applicant or consultant.

6.0 TRIP GENERATION/DISTRIBUTION PROCEDURE

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

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

Trip Reduction

Based on the project's relation to bicycle, pedestrian infrastructure and proximity to transit, trip reductions may be applicable and should be discussed with City Staff. If the project is eligible for a trip reduction, the reduction rates outlined in SANDAG's *Not So Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region(2002)* or ITE's Trip Generation Manual shall be utilized unless another methodology is justified and more appropriate. Project backup documentation related to trip reduction rates shall be provided to the City.



Trip Distribution / Assignment Procedure

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

- The first method utilizes engineering judgement based on existing traffic data and land use patterns. This method requires the consultant to provide a map with project distribution and trip assignments to the City for review prior to conducting analysis.
- The second method utilizes the SANDAG Regional Travel Demand Model to perform a select zone or link analysis. **This approach is typically used for larger projects and shall be used for any project that generates over 2,400 ADT.**

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

7.0 SCREENED OUT PROJECTS

SB 743 eliminates the need for some projects to be analyzed for CEQA purposes that support VMT reduction, these projects are considered screened out for VMT analysis. Screened out is defined as projects not needed to be analyzed for CEQA purposes that already support VMT reduction.

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



Table 7-1 Screened Out Projects

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

(1) Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017). See **Appendix B** for reference.

(2) Smart Growth Opportunity Area Map is provided in Appendix B. The most recent version available shall be used.

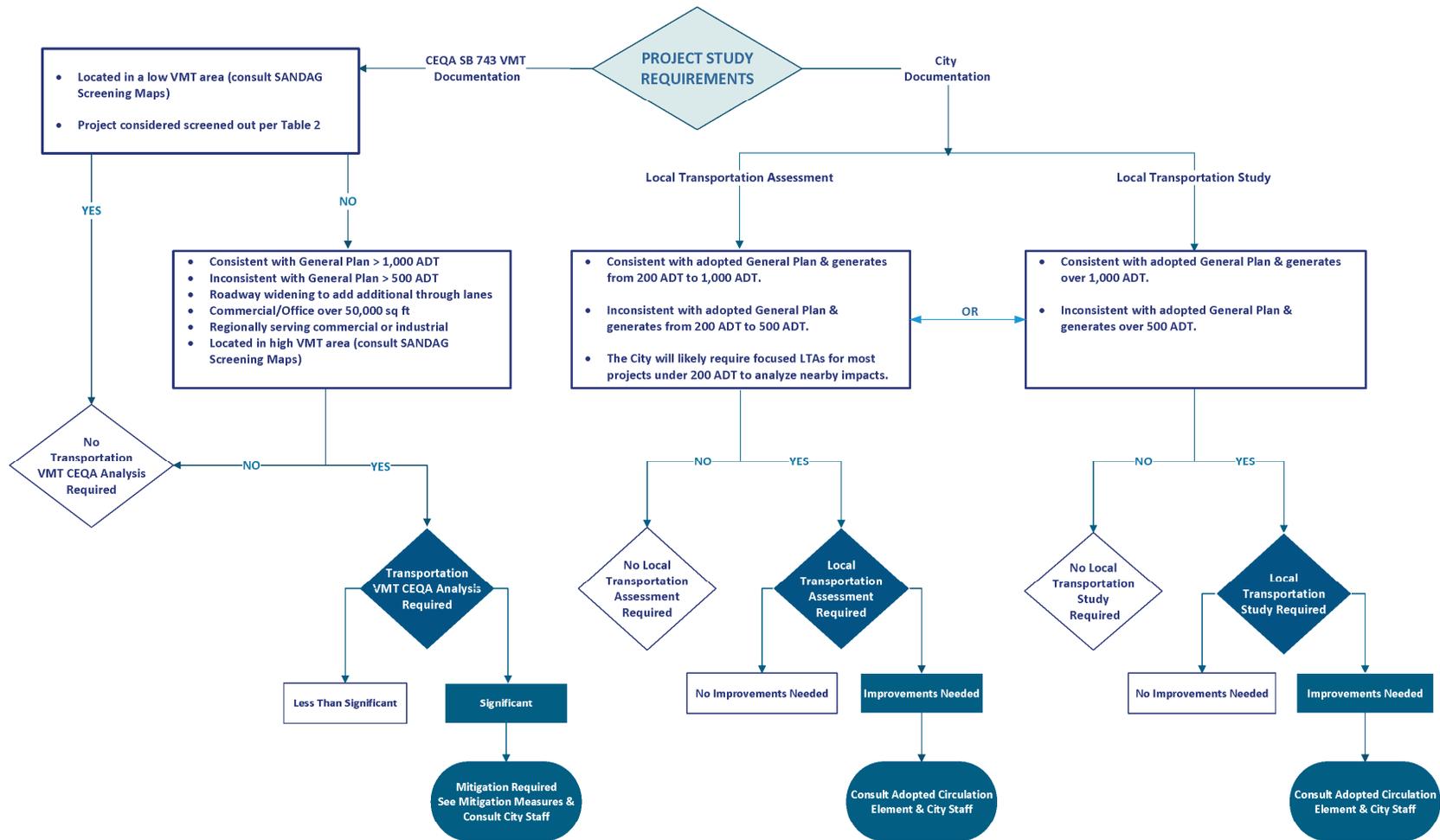
(3) If a project is a mix of affordable housing and market rate housing or unscreened use, only the affordable housing component would qualify as screened out. Additionally, any removal of affordable housing automatically requires CEQA VMT analysis.

8.0 DETERMINING PROJECT STUDY REQUIREMENTS

Figure 8-1 helps guide development projects in determining the requirements from a local and state perspective in order to help determine study requirements. The screening flowchart indicates an overview of the circumstances where a detailed CEQA VMT analysis would or would not be required and when a project would require a Local Transportation Study or Local Transportation Assessment. The City maintains the discretion to require a project to conduct additional analysis if needed.



Figure 8-1 Project Study Requirements



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



9.0 SAN DIEGO REGIONAL GUIDELINES FOR VMT

The City of Imperial Beach utilizes the Institute of Transportation Engineers (ITE) Guidelines for Transportation Impact Studies in the San Diego Region (May 2019) to establish thresholds and methodology for VMT analysis. For analysis purposes the most recent version of these guidelines shall be utilized. The following sections summarize the VMT thresholds requirements for Imperial Beach in alignment with ITE. Thorough analysis explanation can be found in the most recent ITE guidance.

Minimum Threshold for VMT Analysis

Based on the recommendations of the Institute of Traffic Engineers (ITE) for the San Diego section, **Table 9-1** indicates when a VMT analysis for CEQA is required. This is based on keeping consistent with the thresholds previously used and *SANDAG's Not So Brief Guide Trip Generation (2002)*. These thresholds are based on the understanding that SANDAG trip generation rates differ from ITE trip generation rates which OPR's recommendations are based on.

Projects Consistent with the Adopted General Plan

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

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

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

Projects Inconsistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that are not in support of the General Plan have a lower VMT threshold and will require a General Plan Amendment. The following VMT analysis thresholds for projects that are inconsistent are identified in **Table 9-2**.

Table 9-2 Threshold for VMT Analysis for Projects Inconsistent with the Adopted General Plan

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

The thresholds identified in Table 9-1 and Table 9-2 stem from the professional expertise and judgement of the ITE San Diego section. These thresholds reflect what is appropriate for the San Diego region to use for VMT and have previously helped determine LOS impacts.

VMT Thresholds

This section identifies what type of VMT analysis is required based on the land use and thresholds identified in the previous section. If a project qualifies for a VMT analysis, the VMT analysis can be compared based on City-wide, Regional, or community basis. The method of comparison shall be agreed upon by the City and shall be appropriate based on the use of the site.



Small Projects

Small projects, under 2,400 ADT, shall utilize the most recent version of the SANDAG VMT Calculation Tool. SANDAG has prepared an online tool that calculates average VMT/capita and VMT/employee at the census tract level. This tool determines the project's VMT/employee or VMT/capita to be compared to community, city, and/or regional averages. **Appendix C** provides two examples of how to use the SANDAG VMT Calculation Tool to determine the project's VMT.

Large Projects

Projects consisting of 2,400 ADT or higher will require the use of the most recent SANDAG model to determine VMT.

Table 9-3 identifies the significance thresholds for proposed land uses. Projects that exceed the significance thresholds are considered significant and will require VMT analysis and mitigation.

Table 9-3 City of Imperial Beach Project Threshold

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

⁽¹⁾ The City may request the applicant to analyze VMT using a more localized threshold if the project requires.

⁽²⁾ Locally serving retail is presumed to decrease VMT however retail projects over 50,000 square feet are considered regionally serving.

⁽³⁾ A redevelopment project that reduces VMT is presumed to have less than a significant impact and is screened out. The removal of affordable housing will require VMT analysis.

The following defines the metrics identified in Table 9-3. It is important the appropriate metrics are applied for each project.

VMT/Capita:

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

VMT/Employee:

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



10.0 MITIGATION MEASURES AND STRATEGIES FOR VMT REDUCTION

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

SANDAG MOBILITY MANAGEMENT GUIDEBOOK

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

The guidebook consists of the following resources:

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

Figure 10-1 identifies the potential mobility management strategies included in the guidebook that are recommended for a project exceeding the VMT thresholds. It is also recommended the SANDAG iCommute and MTS programs be utilized for projects generating employment. Several opportunities included in these programs are identified in **Table 10-1**. **Appendix D** provides a link to the SANDAG Mobility Management Guidebook and corresponding resources. The link includes additional information and reduction strategies related to VMT.

The VMT Reduction Calculator Tool evaluates the VMT impact of more than 20 mobility management strategies. The calculator can be utilized to determine how a strategy, when implemented, can reduce a project's VMT.



Figure 10-1 Mobility Management Strategies

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

Source: SANDAG Mobility Management Strategy Guidebook, June 2019



Table 10-1 Additional VMT Reduction Strategies for Employers

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



OPR MITIGATION MEASURES FOR VMT REDUCTION

Table 10-2 identifies additional mitigation measures provided by the Office of Planning and Research (OPR).

Table 10-2 OPR Recommended Mitigation Measures

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

The City may decide to implement a VMT mitigation fee bank to fund projects that would help the City reduce GHG emissions and promote VMT reduction. This would need to be developed specifically for VMT reduction projects for the City and cannot be preexisting to this document. Mitigation measures are not limited to this document and may be discussed with the City providing appropriate reduction methodologies are applied using documentation published by SANDAG, the California Air Resources Board (CARB), or the California Air Pollution Control Officers Association (CAPCOA).



SIGNIFICANT AND UNAVOIDABLE IMPACTS

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

Section 15091 Findings:

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

The possible findings are:

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

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

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

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

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

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

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

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

Section 15093 – Statement of Overriding Considerations:

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

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

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



11.0 LOCAL TRANSPORTATION STUDY GUIDELINES

The City of Imperial Beach utilizes the Institute of Transportation Engineers (ITE) Guidelines for Transportation Impact Studies in the San Diego Region (May 2019) to establish thresholds and methodology for Local Transportation Study (LTS). A Local Transportation Study is different from VMT analysis for CEQA purposes and may be required in addition to the VMT analysis or individually. A Local Transportation Study will analyze the projects influence on the surrounding intersections and roadway network utilizing level of service (LOS) for all project scenarios. The purpose of the LTS is to help quantify the local impact of the development and expected changes in transportation conditions. The LTS should include roadway, bicycle, pedestrian, and transit evaluations. The following sections identify the project requirements for a Local Transportation Study. The Local Transportation Study helps the City ensure the goals, objectives, and policies adopted by the City are supported and implemented while monitoring the capacity for the roadway networks.

Data should be collected during typical operation hours. Data should be recent and no more than 2 years old for an LTS. Arterials and local streets should be designed to operate at service level "C" or better during average daily traffic volume (ADT) conditions. Signalized intersections under peak hour conditions should operate at service level "D" or better. (Ref Goal 1c. page C-13).

Minimum Threshold for Local Transportation Study

Based on the recommendations of the Institute of Traffic Engineers (ITE) for the San Diego section, **Table 11-1** indicates when a Local Transportation Study is required for the City. This is based on keeping consistent with the thresholds previously used and *SANDAG's Not So Brief Guide (2002) Trip Generation*.

Projects Consistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that support these goals will adhere to the following LTS thresholds identified in Table 11-1.

Table 11-1 Threshold for LTS for Projects Consistent with the Adopted General Plan

	LTS Analysis Not Needed	LTS Analysis Needed ⁽¹⁾
Average Daily Traffic Volume (ADT)	Less than 1,000 ADT	Greater than 1,000 ADT

(1) If ADT is equal to 1,000 ADT, an LTS is required.

A Local Transportation Study (LTS) will be required if a project exceeds 1,000 ADT and is consistent with the adopted General Plan.

Projects Inconsistent with the Adopted General Plan

The City's adopted General Plan represents the vision and goals the City has for the community. Projects that are not in support of the General Plan have a lower LTS threshold and will require a General Plan Amendment. The following LTS analysis thresholds for projects that are inconsistent are identified in **Table 11-2**.



Table 11-2 Threshold for LTS for Projects Inconsistent with the Adopted General Plan

LTS Analysis Not Needed		LTS Analysis Needed ⁽¹⁾
Average Daily Traffic Volume (ADT)	Less than 500 ADT	Greater than 500 ADT

(1) If ADT is equal to 500 ADT, an LTS is required.

A Local Transportation Study (LTS) will be required if a project exceeds 500 ADT and is inconsistent with the adopted General Plan.

The thresholds identified in Table 11-1 and Table 11-2 stem from the professional expertise and judgement of the ITE San Diego section. These thresholds keep consistent with regional practice and will help ensure developments will not overburden the transportation network.

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

Study Scenarios

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

- Existing
- Existing Plus Project
- Near-term
- Near-term Plus Project
- Horizon Year
- Horizon Year Plus Project

Local Transportation Assessment (LTA)

A Local Transportation Assessment helps the City monitor development impacts on the transportation network and is similar to a Local Transportation Study(LTS). The main difference between the two studies is a Local Transportation Assessment (LTA) analyzes fewer scenarios than a Local Transportation Study (LTS). A Local Transportation Assessment (LTA) will be required if a project is less than 1,000 ADT but is anticipated to influence the surrounding environment.

A Local Transportation Assessment (LTA) will be required to analyze the following scenarios based on the thresholds for identified for the project’s ADT.

- **A project that generates between 200-500 ADT will be required to analyze existing and existing plus project conditions.**
- **A project that generates between 500-1,000 ADT will be required to analyze existing, existing plus project condition, and existing plus project plus cumulative conditions.**

The following sections identify the areas to be analyzed and included in the LTS/LTA.



Transportation Modes to be Included for Discussion in the LTS/LTA

Pedestrian:

- The LTS/LTA shall include pedestrian infrastructure available including any opportunities or deficiencies such as path obstructions or missing sidewalk for ½ mile walking distance from project pedestrian access points.
- All pedestrian facilities directly connected to project access points or adjacent to the project development, extending in each direction to the nearest intersection with a classified roadway or connection with a Class I path
- Facilities connecting to transit stops within two blocks of the project
- Only facilities on the side of the project or along the walking route to transit stop
- Additional geographic areas may be included in certain cases to address special cases such as schools or retail centers

Bicycle:

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

Transit:

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

Vehicle:

All signalized intersections and signalized project driveways shall be analyzed if:

- The project will add 50 or more peak hour (new trips) trips in either direction

All unsignalized intersections and unsignalized project driveways shall be analyzed if:

- The project will add 50 or more peak hour (new trips) trips in either direction

All freeway ramp intersections and signalized project driveways shall be analyzed if:

- The project will add 20 or more peak hour (new trips) trips in either direction

Intersection Level of Service analysis should be conducted using the Highway Capacity Manual (HCM) Methodology. For signalized intersections, the methodology described in the HCM for signalized intersections is used. With this methodology, the average control delay per vehicle is estimated for each



lane group and aggregated for each approach and for the intersection as a whole. The relationship between control delay per vehicle and LOS for signalized intersections is summarized in **Table 11-3**.

Table 11-3 HCM Level of Service Description for Signalized Intersections

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

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

For unsignalized intersections, the methodology described in the HCM for unsignalized intersections is used. With this methodology, LOS is related to the control delay for each stop-controlled movement. The relationship between control delay per vehicle and LOS for unsignalized intersections is summarized in **Table 11-4**.

Table 11-4 HCM Level of Service Description for Unsignalized Intersections

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

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



Table 11-5 provides guidance on the levels of ADT that can be accommodated on various types of roadways, based on level of service.

Table 11-5 Roadway Classification LOS & Capacity

Class	Lanes	Level of Service (LOS)				
		A	B	C	D	E
Expressway	6	30,000	42,000	60,000	70,000	80,000
Prime Arterial	6	25,000	35,000	50,000	55,000	60,000
Major Arterial	6	20,000	28,000	40,000	45,000	50,000
Major Arterial	4	15,000	21,000	30,000	35,000	40,000
Major Arterial (One-Way)	3	12,500	16,500	22,500	25,000	27,500
Major Arterial (One-Way)	2	10,000	13,000	17,500	20,000	22,500
Secondary Arterial/ Collector	4	10,000	14,000	20,000	25,000	30,000
Collector (no center lane)	4	5,000	7,000	10,000	13,000	15,000
Collector (continuous left-turn lane)	2	5,000	7,000	10,000	13,000	15,000
Collector (no fronting property)	2	4,000	5,500	7,500	9,000	10,000
Collector (commercial - industrial fronting)	2	2,500	3,500	5,000	6,500	8,000
Collector (multi-family)		2,500	3,500	5,000	6,500	8,000
Collector (One-Way)	3	11,000	14,000	19,000	22,500	26,000
Collector (One-Way)	2	7,500	9,500	12,500	15,000	17,500
Collector (One-Way)	1	2,500	3,500	5,000	6,500	7,500
Sub=Collector (single family)	1	-	-	2,200	-	-

Note: Roadway classification level of service and capacity is based on Table 7-2 of the Institute of Transportation Engineers (ITE) San Diego Regional Guidelines for Transportation Impact Studies in the San Diego Region (2019). Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

Table 11-6 indicates when a project's effect on the roadway system is considered to justify the need for roadway improvements. That is, if a project's traffic effect causes the values in this table to be exceeded, roadway improvements should be considered as follows on a case by case basis:

- Improvements should be consistent with the General Plan
- Improvements for transit, bike and pedestrian facilities should be given priority in Transit Priority Areas or Smart Growth Opportunity Areas as identified by SANDAG.
- Projects in Transit Priority Areas or Smart Growth Opportunity Areas as identified by SANDAG, that are consistent with the General Plan at the time of project application, should not be denied due to the inability to provide roadway improvements (i.e. existing right of way is constrained, etc.)



Table 11-6 Determination of the Need for Roadway Improvements

Level of Service with Project*	Allowable Change Due to Project Effect**					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (MPH)	V/C	Speed (MPH)	Delay (Sec.)	Delay (Min.)
E & F (or ramp meter delays above 15 min)	0.01	1	0.02	1	2	2

12.0 TRANSPORTATION DEMAND MANAGEMENT (TDM) STRATEGIES

In general, the goal of City Staff is to help Imperial Beach increase connectivity and level of comfort for pedestrians, bicyclists, and transit users. Project improvements may come from the City’s adopted General Plan or other City policies that help improve the overall quality of life for the community. Many VMT mitigation measures are also applicable. In addition, **Table 12-1** identifies some TDM improvement measures that may be considered for a project.

Table 12-1 Potential TDM Improvement Measures

Potential TDM Measures	
Transit Facilities	Telecommuting
Bike Facilities	Rideshare Programs
Walkability	Flex-time
Carpool Incentives	Parking Cash-Out
Subsidized Transit Passes	Shuttle Service

A measure that is not listed may be considered if the mitigation is appropriately applied and reasonable. Additional improvement measures may be identified as future technologies and policies evolve or with consultation by City Staff.



13.0 RESOURCES

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

City of San Diego. "Transportation Study Manual (TSM) Draft." September 2019.

Institute of Traffic Engineers (San Diego Section). "Guidelines for Transportation Impact Studies (TIS) in the San Diego Region." May 2019. Accessed April 1, 2020.

Governor's Office of Planning and Research (OPR). "Technical Advisory on Evaluating Transportation Impacts in CEQA." December 2018. Accessed April 1, 2020.

Governor's Office of Planning and Research (OPR). "Key Resources on SB 743: Studies, Reports, Briefs, and Tools." April 2018. Accessed April 1, 2020.

California Air Resources Board (CARB). "2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals." January 2019. Accessed April 1, 2020.

California Air Pollution Control Officers Association (CAPCOA). "Quantifying Greenhouse Gas Mitigation Measures." August 2010. Accessed April 1, 2020.

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



APPENDIX A

PROJECT INFORMATION FORM (PIF)



PROJECT INFORMATION FORM (PIF)

THE FOLLOWING IS TO BE COMPLETED BY THE PROJECT APPLICANT:

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

1) Projects located in a TPA must be able to access the transit station within a ½ mile walking distance or 6 minute walk continuously without discontinuity of sidewalk or obstructions to the route. Qualifying transit stops means a site containing an existing rail transit station served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods (OPR, 2017). A high-quality transit corridor may also be considered if a corridor with fixed route bus service has service intervals no longer than 15 minutes during peak commute hours (OPR, 2017). See Appendix B.

(2) See Appendix B.

(3) Based on the most recent SANDAG SB 743 Screening Map. Example shown in Appendix C.

TO BE COMPLETED BY CITY STAFF AND RETURNED TO PROJECT APPLICANT

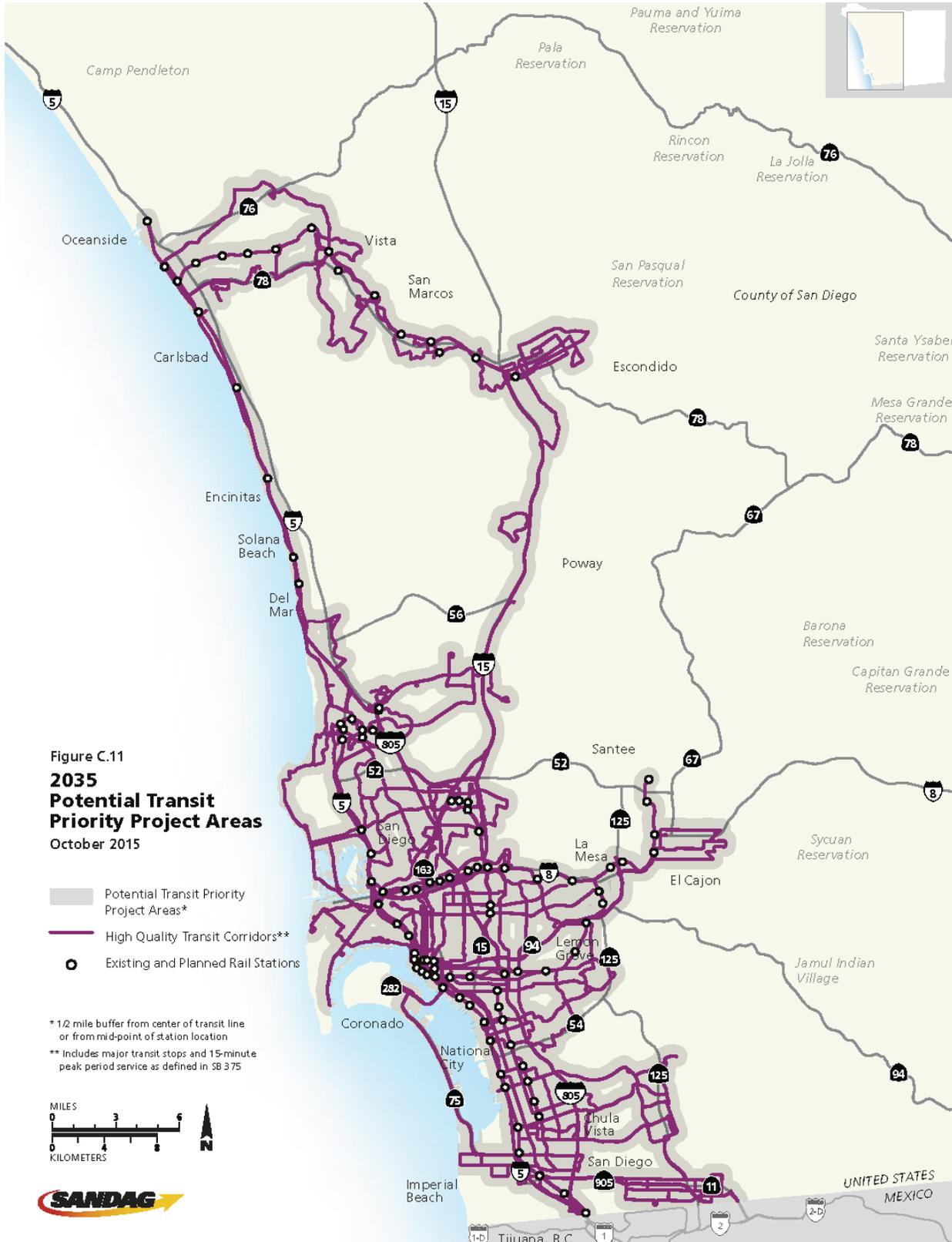
PROJECT STUDY REQUIREMENTS				
1)	Does the project require a CEQA VMT analysis?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Incomplete ⁽¹⁾
	A. If yes, does the project require a SANDAG Model Run?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
2a)	Does the project require a Local Transportation Study?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Incomplete ⁽¹⁾
OR				
2b)	Does the project require a Local Transportation Assessment?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> Incomplete ⁽¹⁾

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



APPENDIX B
SANDAG SMART GROWTH OPPORTUNITY AREA MAP
AND TRANSIT PRIORITY AREAS





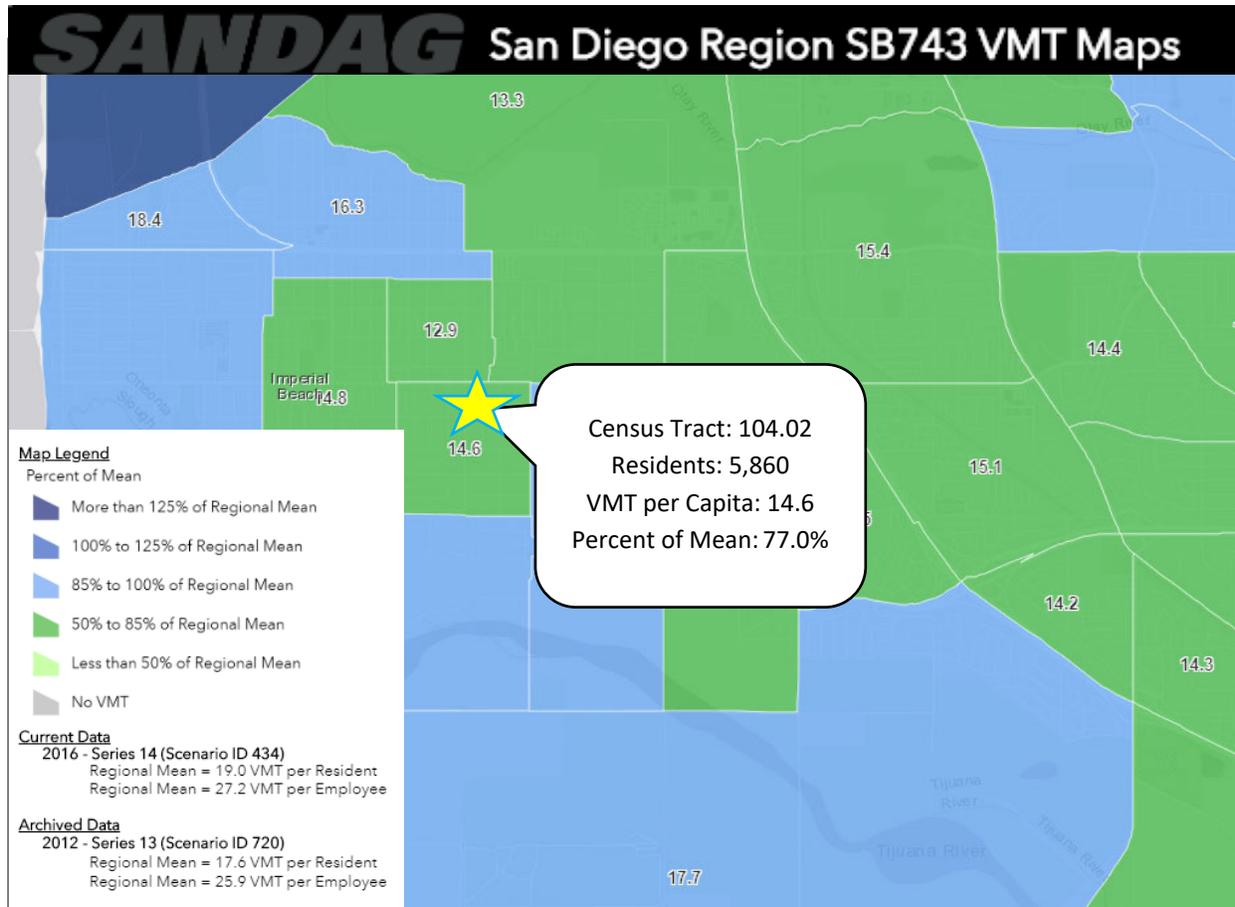


APPENDIX C VMT ANALYSIS EXAMPLES



VMT Example Project # 1

The most recent version of the screening maps and model shall be utilized unless otherwise directed by City Staff. SANDAG currently has two maps, one representing per capita (for each person) and one for per employee. Note this example does not take into consideration the criteria for a screened out project but are provided to help guide projects that require VMT analysis.





VMT STEPS FOR A RESIDENTIAL PROJECT HYPOTHETICAL EXAMPLE 1 (PER CAPITA)

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

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

*Based on SANDAG Not So Brief Guide (2002)

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

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

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

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

For this example, VMT Per Capita is utilized and compared to the Regional mean. Based on the screening map, the project location is located in a low VMT area. The following table identifies the project and regional VMT. Additionally, it demonstrates how to interpret the SANDAG SB 743 Concept map.

Proposed Land Use	Project VMT	Regional VMT	% of Regional Mean
Single Family Residence (200 units)	14.6 per resident	19.0 per resident	77.0

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

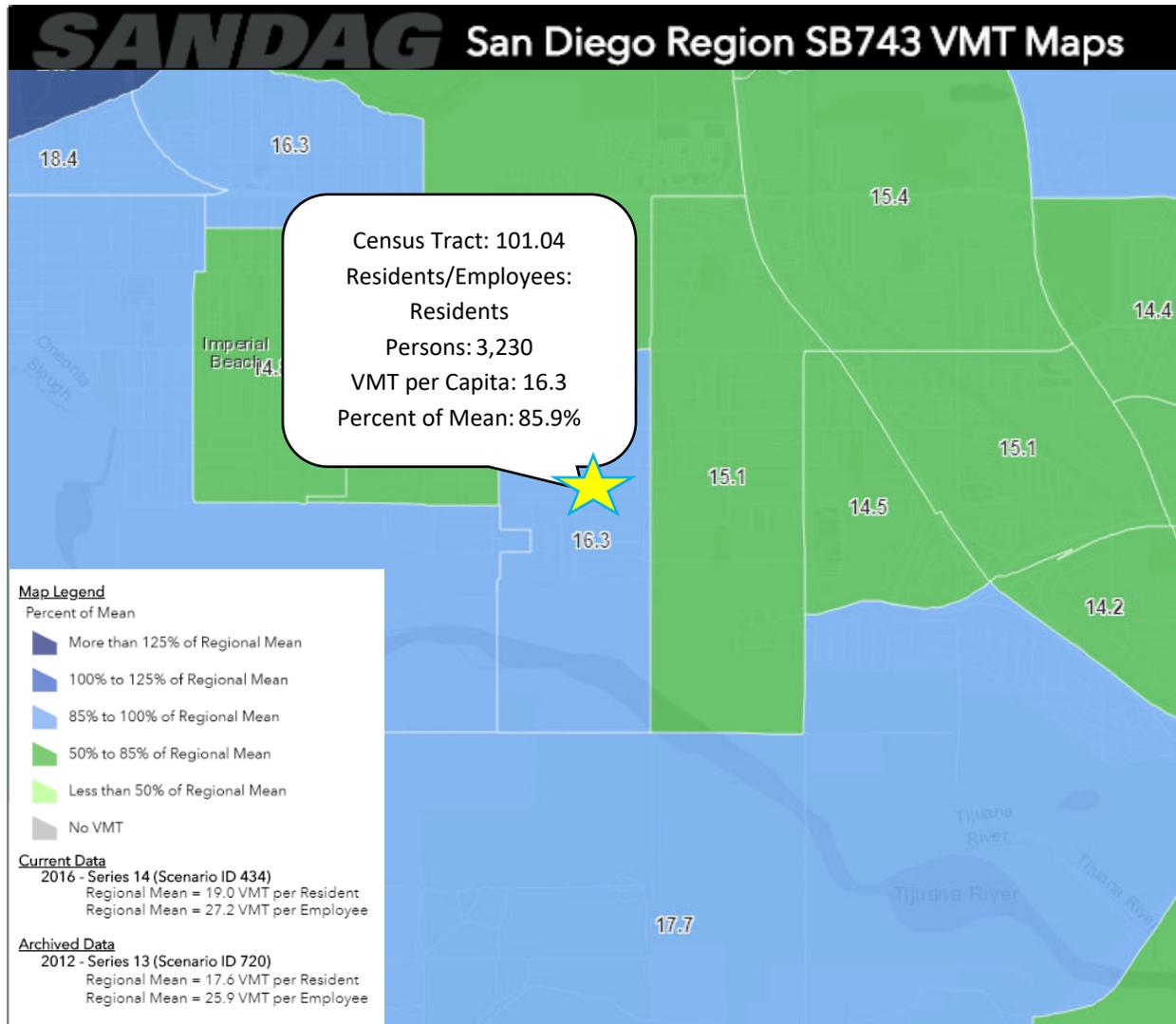
For this example yes, the project is 77.0% of the regional mean, therefore no mitigation will be required.

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



VMT Example Project # 2

The most recent version of the screening maps and model shall be utilized unless otherwise directed by City Staff. SANDAG currently has two maps, one representing per capita (for each person) and one for per employee. Note this example does not take into consideration the criteria for a screened out project but are provided to help guide projects that require VMT analysis.





VMT STEPS FOR A RESIDENTIAL PROJECT HYPOTHETICAL EXAMPLE 2 (PER CAPITA)

This example uses the same project but in a different location.

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

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

*Based on SANDAG Not So Brief Guide (2002)

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

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

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

Locate the project’s location and click the census tract. An information callout pops up that identifies the characteristics of the project’s location (based on the existing land use).

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

Proposed Land Use	Project VMT	Regional VMT	% of Regional Mean
Single Family Residence (200 units)	16.3 per resident	19.0 per resident	85.9

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

For this example no, the project is 85.9% of the regional mean, therefore further analysis is required to determine project mitigation strategies to reduce the VMT to 15% below the regional average.

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



VMT STEPS FOR A RESIDENTIAL PROJECT HYPOTHETICAL EXAMPLE (PER CAPITA) - MITIGATION

Since this hypothetical example is to develop single family homes, the use is not VMT reducing in nature. In order to reduce VMT for the project location improvements would need to implement VMT reducing strategies. The Mobility Management VMT Reduction Calculator Tool available on the SANDAG website VMT reducing strategies can be utilized for this effort. The tool is an Excel spreadsheet available for download that calculates the VMT reduction of several strategies. The spreadsheet is based on the SANDAG model input parameters and contains information for each jurisdiction in the San Diego Region. The tool is available for download at the following link: <https://www.icommutesd.com/planners/TDM-local-governments>

MOBILITY MANAGEMENT VMT REDUCTION CALCULATOR TOOL

I. Overview

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

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

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

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

[For more information, visit ICommuteSD.com/LocalGov.](https://www.icommutesd.com/LocalGov)

II. Instructions

Follow the steps below:

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

III. Legend

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

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

Using the same hypothetical example, VMT mitigation is required. To mitigate this project, the project will need to reduce VMT by 0.92% for a project VMT of 16.15 (85% of the Regional Mean).

Proposed Land Use	Project VMT	Regional VMT	% of Regional Mean
Single Family Residence (200 units)	16.3 per resident	19.0 per resident	85.9

On the first page of the tool, the user provides project information and chooses the land use and scale of the analysis (Project/Site or Community/City). Depending on the user's selection, the tool will supply



a variety of mitigation measures to choose from and lock improvements that are not applicable given the land use and scale of analysis.

IV. Project Information

Project Name (optional):

Project Address (optional):

Project Type (optional):

Scale of Analysis:

Analysis Location:

CPA (if applicable):

Is analysis in a rural area? See Question #11 of the FAQ page for information about tool applicability.

Not applicable if scale of analysis is city/community.
E.g., residential, commercial

Strategies that occur at the scale of a parcel, employer, or development project.
"City/community" refers to strategies that occur at a scale of a neighborhood, corridor, or entire municipality.

If necessary, determine location using SANDAG's online [Parcel Lookup Tool](#). Be sure to turn on the Jurisdiction and Community Plan Areas layers.

If the Analysis Location is in a CPA in San Diego City or Unincorporated San Diego County, select the CPA from the dropdown list. See the Parcel Lookup Tool above for more information. If the Analysis Location is the entire San Diego City or entire Unincorporated San Diego County, leave the CPA input blank. Follow hyperlinks below for lists of CPAs in San Diego City and Unincorporated County.

CPAs:

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

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

V. Mobility Management Strategies

Project/Site-Level Strategies

Project-Level Results

Employer Commute Programs

Strategies implemented by employers that encourage workers to commute by modes other than auto

- 1A [Voluntary Employer Commute Program](#)
- 1B [Mandatory Employer Commute Program](#)
- 1C [Employer Carpool Program](#)
- 1D [Employer Transit Pass Subsidy](#)
- 1E [Employer Vanpool Program](#)
- 1F [Employer Telework Program](#)

Land Use Strategies

Strategies that modify the location or characteristics of land development projects to encourage non-auto travel modes

- 2A [Transit Oriented Development](#)
- 2B [Mixed Use Development](#)

Parking Management

Strategies that discourage auto travel by modifying the price or supply of vehicle parking

- 3A [Parking Pricing](#)
- 3B [Parking Cash Out](#)

Community/City-Level Strategies

Community-Level Results

Neighborhood Enhancements

Strategies that improve or encourage neighborhood-level bicycle, pedestrian, and other multimodal travel options

- 4A [Street Connectivity Improvement](#)
- 4B [Pedestrian Facility Improvement](#)
- 4C [Bikeway Network Expansion](#)
- 4D [Bike Facility Improvement](#)
- 4E [Bikeshare](#)
- 4F [Carpshare](#)
- 4G [Community-Based Travel Planning](#)

Transit Strategies

Strategies that improve transit service and cause a mode shift from auto to transit

- 5A [Transit Service Expansion](#)
- 5B [Transit Frequency Improvement](#)
- 5C [Transit Suspension Treatment](#)
- 5D [Fare Reduction](#)
- 5E [Microtransit/HRV Shuttle](#)

V. Mobility Management Strategies

Project/Site-Level Strategies

Project-Level Results

Employer Commute Programs

Strategies implemented by employers that encourage workers to commute by modes other than auto

- 1A [Voluntary Employer Commute Program](#)
- 1B [Mandatory Employer Commute Program](#)
- 1C [Employer Carpool Program](#)
- 1D [Employer Transit Pass Subsidy](#)
- 1E [Employer Vanpool Program](#)
- 1F [Employer Telework Program](#)

Land Use Strategies

Strategies that modify the location or characteristics of land development projects to encourage non-auto travel modes

- 2A [Transit Oriented Development](#)
- 2B [Mixed Use Development](#)

Parking Management

Strategies that discourage auto travel by modifying the price or supply of vehicle parking

- 3A [Parking Pricing](#)
- 3B [Parking Cash Out](#)

Community/City-Level Strategies

Community-Level Results

Neighborhood Enhancements

Strategies that improve or encourage neighborhood-level bicycle, pedestrian, and other multimodal travel options

- 4A [Street Connectivity Improvement](#)
- 4B [Pedestrian Facility Improvement](#)
- 4C [Bikeway Network Expansion](#)
- 4D [Bike Facility Improvement](#)
- 4E [Bikeshare](#)
- 4F [Carpshare](#)
- 4G [Community-Based Travel Planning](#)

Transit Strategies

Strategies that improve transit service and cause a mode shift from auto to transit

- 5A [Transit Service Expansion](#)
- 5B [Transit Frequency Improvement](#)
- 5C [Transit Suspension Treatment](#)
- 5D [Fare Reduction](#)
- 5E [Microtransit/HRV Shuttle](#)

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

The strategies at this scale are neighborhood enhancements and transit strategies.



Using the same hypothetical example, VMT mitigation is required. To mitigate this project, the project will need to reduce VMT to below 85% of the regional VMT for a project VMT of 16.15. Currently the project is 0.92% over the threshold.

Proposed Land Use	Project VMT	Regional VMT	% of Regional Mean
Single Family Residence (200 units)	16.3 per resident	19.0 per resident	85.9

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

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

4B. Pedestrian Facility Improvement

Level of application: **City/CPA**

Type of VMT affected: **All city/CPA trips**

Max VMT reduction: **1.4%**

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

Existing sidewalk length in Imperial Beach (miles)	3.0	user input
Existing street length in Imperial Beach (miles)	4.0	user input
Ratio of sidewalk length to street length	0.8	calculated
Sidewalk length in Imperial Beach with project (miles)	4.0	user input
Ratio of sidewalk length to street length with strategy	1.0	calculated
% change in ratio of sidewalk length to street length	33%	calculated
Elasticity	-0.05	constant, source (1, 2)
Change in VMT	-1.4%	<input type="checkbox"/> Exclude from Results

Formula: % Change in VMT = % change in ratio of sidewalk length to street length * elasticity

VMT change capped at 1.4%, assuming one-way walk trip length of 0.83 mile and maximum 10% of auto trips can shift to walking

Sources:

(1). Frank, L., Greenwald, M., Kavage, S. and Devlin, A. 2011. "An Assessment of Urban Form and Pedestrian and Transit Improvements as an Integrated GHG Reduction Strategy." WSDOT Research Report WA-RD 765.1, Washington State Department of Transportation. www.wsdot.wa.gov/research/reports/fullreports/765.1.pdf

(2). Handy, Susan, et al, 2014. "Impacts of Pedestrian Strategies on Passenger Vehicle Use and Greenhouse Gas Emissions: Policy Brief." www.arb.ca.gov/cc/sb375/policies/ped/walking_brief.pdf

[Return to Main](#)

[Results Summary](#)

Note: The entered numbers are not based on Imperial Beach data and are for hypothetical example purposes. Projects will be required to determine mitigation that is appropriate for the project and is approved by City Staff.

Using this strategy and providing ample sidewalk the project is able to reduce the project's VMT by 1.4%.



SUMMARY OF RESULTS

The total VMT reduction with the implementation of these strategies is 1.4% which would meet the minimum VMT reduction needed for this hypothetical project to achieve 85% of the regional mean for VMT. The calculator provides several summary sheets for the user to export as evidence.

Community/City Results			
Community/City-Level Strategies	VMT Type	Change in VMT	Exclusions
Neighborhood Enhancements			
4A	Street Connectivity Improvement	All city/CPA trips	
4B	Pedestrian Facility Improvement	All city/CPA trips	-1.4%
4C	Bikeway Network Expansion	All city/CPA trips	
4D	Bike Facility Improvement	Trips on roadway with bikeway addition	
4E	Bikeshare	All city/CPA trips	
4F	Carshare	All city/CPA trips	
4G	Community-Based Travel Planning	All city/CPA trips	
Transit Strategies			
5A	Transit Service Expansion	All city/CPA trips	
5B	Transit Frequency Improvements	All city/CPA trips	
5C	Transit-Supportive Treatments	All city/CPA trips	
5D	Transit Fare Reduction	All city/CPA trips	
5E	Microtransit NEV Shuttle	All city/CPA trips	
All City/CPA Trips - Total Change in VMT		-1.4%	
Trips on Roadway Affected by Bikeway Addition - Total Change in VMT			

The following link documents the overall methodology, inputs, and data sources used to develop the VMT Reduction Calculator Tool:

https://www.icommutesd.com/docs/default-source/planning/tool-design-document_final_7-17-19.pdf?sfvrsn=ec39eb3b_2

It is important to note this is an oversimplified example of mitigation. The measures implemented must be appropriate for the project and approved by City Staff. Additional VMT reduction measures are available through the Office of Planning and Research (OPR) and CAPCOA as discussed in Section 10.0 of this document.



APPENDIX D
SANDAG Mobility Management Guidebook

Mobility Management

Guidebook

JUNE 2019

