

City of Milpitas

Transportation Analysis

Guidelines



March 2022

Planning Department / Engineering Department

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Figure 1 City of Milpitas along Tasman

Intent of the Transportation Analysis Guidelines

The Transportation Analysis (TA) guidelines are established to assist applicants with assessing potential transportation impact of proposed projects in the City of Milpitas. This document was prepared to address new transportation requirements consistent with the adopted new transportation policy; however, the transportation operational analysis requirements are also included to help determine the scope of a project's complete transportation requirement to comply with Milpitas policies and the California Environmental Quality Act (CEQA).

Introduction

On September 27, 2013, Governor Brown signed Senate Bill 743 (SB 743) and started a process intended to fundamentally change transportation impact analysis as part of California Environmental Quality Act (CEQA) compliance. These changes include the elimination of auto delay, level of service, and other similar measures of vehicle capacity or traffic congestion as a basis for determining significant impacts to comply with the California Environmental Quality Act (CEQA). The Governor's Office of Planning and Research (OPR) has issued final guidance entitled, *Proposed Updates to the CEQA Guidelines* (November 2017), covering the specific changes to the CEQA guidelines. The updated guidelines became effective on December 28, 2018 and recommend elimination of auto delay and level of service for CEQA purposes and use of Vehicle Miles Traveled, or VMT, as the preferred CEQA transportation metric.

The City of Milpitas adopted a new transportation analysis policy on May 18, 2021 which established Vehicle Miles Traveled (VMT) as the methodology for measuring potential transportation environmental impacts and provided significance thresholds for CEQA analysis of future projects.

In addition to conforming to the City's VMT policy, new development projects will also be required to conduct a Transportation Operational Analysis (TOA) to supplement a project's CEQA analysis by evaluating other transportation operational deficiencies resulting from new development. This document establishes protocol for VMT analysis studies and reports based on the current state-of-the-practice in transportation planning and engineering and includes guidance for measuring non-CEQA transportation operational deficiencies. These guidelines will result in studies that provide comprehensive and consistent analysis of transportation conditions resulting from the addition of new development vehicle traffic to the City of Milpitas transportation network and provide relevant information for decision makers and the public.

Adopted Plans and Policies

City of Milpitas General Plan

The General Plan contains goals and policies (including but not limited CIR 1-8, Action CIR-1c, Goal CIR-2, Goal Cir-5, Goal Cir-6, CIR 6-2, CIR 6-3, LU 1-1, CON 7-1, CON 7-10) that support the goals of reducing Vehicle Miles Traveled (VMT); however specific Milpitas goals that promote VMT reduction and encourage multimodal travel through implementation of thoughtful land use and transportation, include:

- **Goal CIR-1** Provide a transportation system that efficiently, equitably and effectively supports the City's land use vision, minimizes vehicle miles traveled (VMT), enhances connectivity of the existing network, and supports the use of all modes of transportation
- **LU 3-1** Support regional efforts that promote higher densities near major transit and travel facilities and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit. Support local and regional land use decisions that promote safe access to and the use of alternatives to auto transit.
- **LU 4-2** Emphasize efforts to reduce regional vehicle miles traveled by supporting land use patterns and site designs that promote active modes of transportation, including walking, biking, and public transit.



Figure 2 Implementing Milpitas General Plan. Pedestrian Bridge connecting residential development to the BART Station along Montague Expressway.

These goals and policies collectively align and support the State's goals by:

- Implementing an alternate vehicular Level of Service standards or other substantiated threshold as a City-wide criterion for streets and intersections under the City's jurisdiction.
- Reducing dependence on single occupant automobile use.
- Promoting projects that minimize vehicle miles traveled, capitalizes on public investment in transit, and are compatible with surrounding land uses.
- Supporting high density and intensity projects within a quarter mile of transit hubs and stations and along transit corridors.
- Encouraging transportation demand management strategies and the provision of bicycle and pedestrian amenities in new development, and
- Promoting mixed-use projects that maximize accessibility to alternate transportation modes and integrates pedestrian, bicycle, transit, open space, and outdoor uses to encourage active centers.

There are other General Plan goals and policies that also provide direction for transportation in Milpitas which will be discussed in subsequent chapters. A complete list of transportation related General Plan Goals are included in Appendix A.



Figure 3 Transit Oriented Development Along East Capitol Ave.

Adopted Policies

In addition to the general plan goals, the following adopted policies should be considered when preparing a transportation analysis for a project in the City.

- Milpitas Bicycle/Pedestrian Trails Master Plan (2022)

- Congestion Management Program (CMP) (State Law)

Adopted Land Use Plans

The following focus area specific and precise plans should also be considered when conducting transportation analysis for projects.

- Milpitas Midtown Specific Plan (2010)
- Milpitas Transit Area Specific Plan (2011)

Draft Policies

- Milpitas Gateway-Main Street Specific Plan (draft)

The City is in the process of developing an updated land use plan that envisions the Midtown area as a mixed-use neighborhood with improved pedestrian and bicycle connectivity along key corridors including Main Street and Calaveras Boulevard. The updated land use and urban design plan will be called the Milpitas Gateway-Main Street Specific Plan and is expected to be adopted in Summer 2023.

- Milpitas Metro Specific Plan (draft)

The City is in the process of developing an updated land use plan that envisions a vibrant community around the Milpitas Transit Center with improved pedestrian and bicycle connectivity, prioritizing affordable housing development and commercial opportunities to expand the City's business and job base. The updated land use and urban design plan will be called the Milpitas Metro Specific Plan and is expected to be adopted in Fall 2022.



Figure 4 Implementing General Plan policy along Main Street. Creating livable, walkable and desirable communities.

Technical Guidelines

- American Association of State Highway and Transportation Officials (AASHTO) “Policy on Geometric Design of Highways and Streets” Manual (Green Book)
- Manual on Uniform Traffic Control Devices for Streets and Highways, (MUTCD)
- Caltrans Highway Design Manual
- Highway Capacity Manual
- Milpitas Municipal Code
- VTA’s Transportation Analysis Guidelines 2014 (Congestion Management Program requirements)
- Institute of Transportation Engineers (ITE), various technical resources and publications

Vehicles Miles Traveled (VMT)

The adoption of a new transportation policy changes the requirements for measuring potential transportation environmental impacts of land use and transportation projects to align with other environmental goals, encourage infill development and mode shift, and ultimately reduce greenhouse gas emissions. The adopted transportation policy (May 2021) is included in Appendix B.

Implementation of Milpitas Transportation Analysis Policy

This document is intended to assist in evaluating land use and transportation projects in alignment with the adopted new transportation policy. Since VMT is now the established methodology for evaluating and identifying potential transportation environmental impacts, a transition from level of service methodology to VMT methodology is necessary. When transitioning to VMT analysis, it is important to understand how, when and why VMT methodology differs from measuring LOS.

Level of Service (LOS), the previous CEQA standard for transportation evaluation, impacts, and mitigation, is a measure of vehicle congestion and delay that occurs when new developments are proposed. The basic method entails measuring existing traffic levels at signalized intersections, adding approved projects traffic. This represents the background traffic levels and establishes the basis for determining the “impact” or effects of adding a project’s traffic to the roadway network surrounding a project. When project traffic is added to the background, it is the increase in traffic added by the project to determine if the threshold was exceeded or the project added enough traffic to cause the level of service to degrade to below acceptable standards.

From a CEQA standpoint, it is relatively easy to evaluate increased traffic to determine if an impact occurs. Evaluating impacts using VMT requires looking at traffic impact in a different way. Since the evaluation for VMT focuses on mainly everyday travel from employment and residential projects, VMT is the measurement of total vehicles miles generated by the project. To describe it further, for residential projects, the total VMT is divided by the number of houses or residents to establish the VMT per household or VMT per resident (per capita). For employment projects, the total VMT is divided by the number of jobs to establish the VMT per job. Factors that cause the VMT to be higher or lower include distance to transit, availability of shopping, schools, dining, etc. and the ability to walk or ride a bicycle. For residential uses, employment centers are part of the trip-making of residential VMT. For employment projects, proximity of residential uses is the main factor affecting employment VMT.

To help cities identify when VMT analysis is required, the State developed Technical Guidelines with recommendations for projects that do not require VMT analysis. Those “presumptions of less than significant VMT impact” is predicated on the assumption that these types of projects reduce VMT.

- *Small projects (generating 110 daily trips or less)*
- *retail of 100,000K square feet or less (local serving)*
- *Local serving public projects such as fire stations, neighborhood parks, libraries, and community centers*
- *Restricted Affordable Housing (as described in the policy)*
- *“Transit Supportive Projects (Typically located in areas supported by existing transit)*

Otherwise, projects will be required to evaluate their transportation environmental impacts based on the amount of VMT they generate. As expected, a project's density, location and diversity of land uses will all have positive effects on VMT. Within the City of Milpitas, the surrounding environment in different parts of the City can have different effects on VMT.

CEQA Transportation Analysis

CEQA transportation analysis requires an evaluation of a project's potential impacts related to VMT and other significance criteria. This section provides the significance criteria, screening criteria, thresholds of significance, and methodologies of the analysis to be used in transportation analysis reports and CEQA documents for development projects. Below are the criteria (a through d) included in the CEQA checklist for transportation.

Significance Criteria

In accordance with the Office of Planning and Research (OPR) updates to the CEQA Guidelines¹⁸, a project could have a significant transportation impact on the environment if it:

- a) Conflicts with a plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian paths.
- b) Conflicts or is inconsistent with CEQA guidelines section 15064.2 (subdivision (b)(1).
- c) Substantially increases hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).
- d) Results in inadequate emergency access.

Addressing the CEQA Checklist for Milpitas Projects

a) Conflicts with a plan, ordinance, or policy addressing the circulation system

In addition, the CEQA requirements and other mandated State policies and ordinances, the main guiding document used for policy conformance is the Milpitas 2040 General Plan. There are many policies that help define how land uses should support transportation in the City and demonstrate this in the Transportation Analysis. The City of Milpitas has adopted the following guiding documents that shall be used to meet this criterion:

- Milpitas General Plan
- Milpitas Midtown Specific Plan (2010)
- Milpitas Transit Area Specific Plan (2011)
- Milpitas Bicycle/Pedestrian and Trails Master Plan (2022)
- Congestion Management Program

A significant impact could be identified if proposed projects fail to conform to the identified policies above.

b) Conflicts or is inconsistent with CEQA guidelines section 15064.2 (subdivision (b)(1).

This section of the transportation analysis demonstrates conformance to the City's Transportation Analysis policy and specifically focuses on VMT.

Vehicle Miles Traveled (VMT)

On May 18, 2021, the City of Milpitas adopted a new transportation policy Vehicle Miles Traveled as the methodology for evaluating potential transportation impacts of new developments to comply with the California Environmental Quality Act (CEQA). In addition, the policy also establishes other exemption criteria as follows:

CEQA Project Screening Criteria

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

- Small Project Screening: Projects generating 110 daily trips or less. Examples: Single-family residential development of 12 units or fewer, multi-family residential development of 20 units or fewer, and office developments of 10,000 square feet or less.
- Retail projects that are local serving defined as 100ksf or less.
- Local serving public projects such as fire stations, neighborhood parks, libraries, and community centers.
- Transit Supportive Project transit screening: All land-use projects located within one half mile of a major transit stop, or a stop along a high-quality transit corridor, pursuant to State definitions for such facilities and meet the following criteria:
 - For Office/R&D projects, a minimum floor area ratio of 0.75
 - For Residential projects, a minimum density of 35 units/acre (40 units/acre in the Serra Center and 50 units/acre in the Milpitas Metro Specific Plan area)
 - No excess parking: the project does not include more parking for use by residents, customers, or employees of the project than required by the City Code
 - No loss of affordable dwelling units: the project does not replace affordable residential units with a smaller number of affordable units, and any replacement units are at the same level of affordability
- Affordable Housing Screening: Projects with restricted affordable housing (as described in the policy).

Transportation Impact Level of Significance

In addition, the policy establishes:

- The Santa Clara County Areawide reference average VMT baseline and a 15% threshold of significance for both residential and office projects.
- Retail projects which result in a net increase in total VMT is a significant VMT impact; however, retail projects determined by the City to be local serving are exempt from VMT analysis. In all cases, retail projects larger than 100,000 square feet may be considered regional-serving and would be subject to the retail threshold of significance.

- Mixed-Use and all other Project Types: Each land use within a mixed-use project, and all other project types, shall be evaluated independently by applying the most appropriate threshold of significance to each land use type being proposed.

Except for the small project screening, all projects that are screened out and projects that are not screened out may be required to conduct an MTA

Determining when VMT analysis is required

Generally, VMT analysis is required for all projects that are not screened out; however, the State Technical Advisory provides the following “Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact. If the project leads to a net overall increase in VMT, then the thresholds should apply.” Therefore, it may be necessary to measure the VMT for the both existing site and the proposed development project to determine whether the proposed development project leads to the same level of VMT or a net overall decrease in VMT.

For many projects, the Santa Clara County VMT Evaluation Tool can be used to evaluate most residential and office/R&D projects. However, land uses that require the travel demand model to measure VMT will be more difficult to evaluate the VMT for comparison. Therefore, for most projects that require the travel demand model, existing site vehicle trips should be used to determine net increase in VMT rather than whether VMT analysis is required.

Methodology

Development Projects

When evaluating how to categorize the type of land uses that can use the SCC VMT Evaluation Tool, specifically if the land uses are consistent with the office, industrial, retail or residential classification, if the proposed development could be considered complementary to the office or residential tour (the daily trip making a resident or employee makes during a typical day (i.e.. Bank, local school, store)), then many of the land uses are part of the trip making a residential or employment project will generate. The screening and impact evaluation should be conducted for the following types of development projects:

- Residential projects. Single-family housing, multi-family housing and affordable housing.
- Office projects. General office and medical office.
- Industrial projects. Light industrial, manufacturing, warehousing/self-storage,
- shall be treated as office for screening and analysis.
- Retail projects. General retail, furniture store, pharmacy/drugstore, supermarket, bank, health club, restaurant, auto repair, home improvement superstore, discount store, and movie theatre, K-12 schools, college/university, hotel/motel land uses

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

- Public services. Public services (e.g. police, fire stations, libraries, community centers, public utilities) do not generally generate substantial VMT. Instead, these land uses are often built in response to development from other land uses (e.g. office and residential) and typically serve local communities. Therefore, these land uses can be evaluated using the retail thresholds.

- Schools and Religious Uses. VMT impacts of religious and school uses will be determined on a case by case basis. Religious and school uses that are small in scale and are shown to primarily serve the immediate community can be considered local serving uses, and therefore can be potentially screened out from further VMT analysis. For school and religious uses that are large in scale and are expected to attract people from a broader area, impacts would need to be further evaluated. The project would result in significant VMT impact if the project results in a net increase in daily VMT.
- Event Centers and Regional Entertainment Venues, Sports Complexes. Trips associated with these land uses are typically discretionary trips made by individuals, which may be substitute or new trips. For these land uses, a detailed customized VMT analysis would most likely be required to determine if the project attracts regional trips. For these land uses, the project would result in significant VMT impact if the project results in a net increase in daily VMT.

VMT Heat Maps

The VMT heat maps use color to represent the four ranges of VMT levels. The heat maps for the City of Santa Clara indicate how far residents and employees are traveling during a typical day. The heatmaps below indicate the baseline and threshold VMT for Santa Clara. The green areas indicate where people are driving less, in this case, when compared to the other cities in Santa Clara County.

Residential VMT Heatmap

The Residential VMT Heatmap shows VMT levels relevant to residential VMT in the other cities in Santa Clara County.

The Residential VMT Heatmap shows how VMT is measured in the city. Areas of green are the lowest in the city and development proposed in these areas will meet the City's adopted VMT threshold. The yellow areas indicate where development can take advantage of multimodal transportation options thus, will be able to meet the threshold with little or no mitigation. The orange and red areas indicate that VMT levels are higher, so development in these areas will require VMT mitigation or will not be able to meet VMT threshold even with mitigation. Lastly, the areas within the red boundary meet the State's definition of Transit Priority Area or High-Quality Transit Corridor. Development within this area would result in "less than significant VMT impact" based on the proximity to transit. The City's policy defines all the requirements for this exemption.

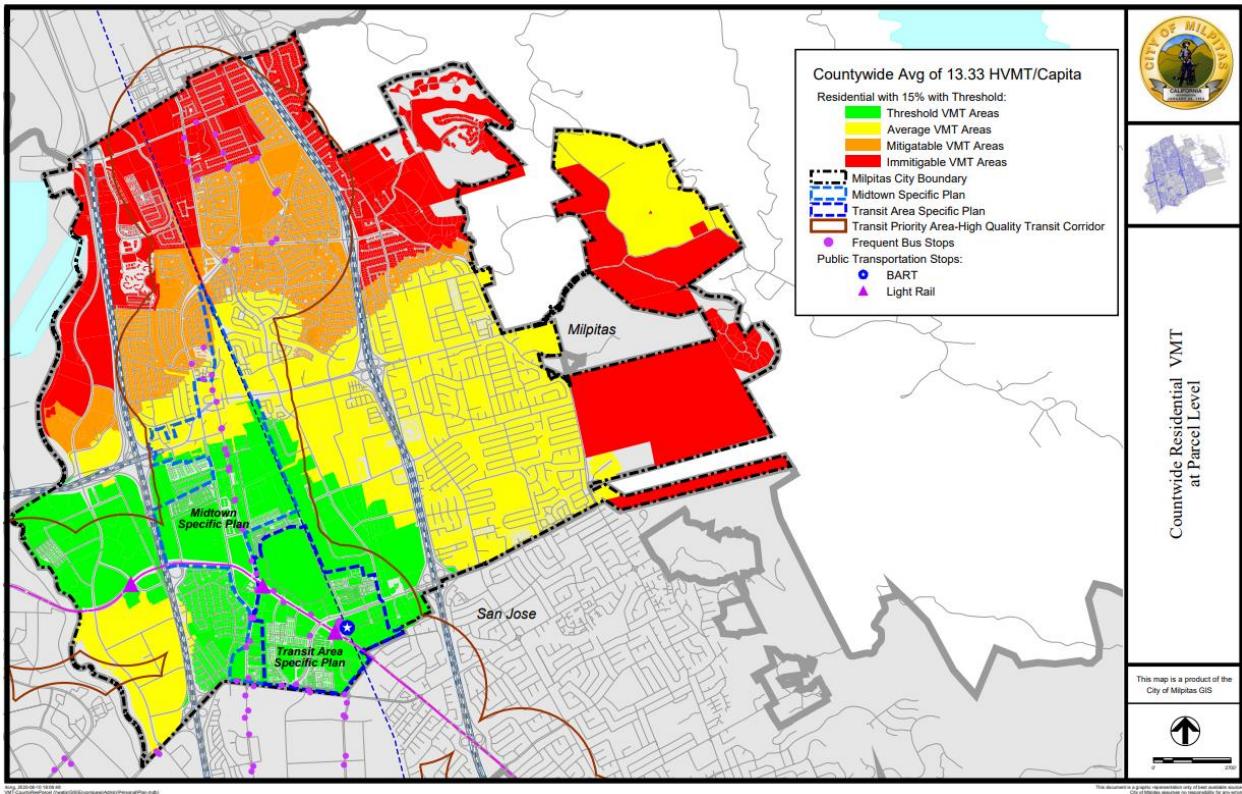


Figure 5 Residential VMT Heatmap

Employment VMT Heatmap

The Employment VMT Heatmap shows VMT levels relevant to employment VMT in the other cities in Santa Clara County. On this map there are areas in the City where the VMT is high (red areas) and will be difficult to mitigate.

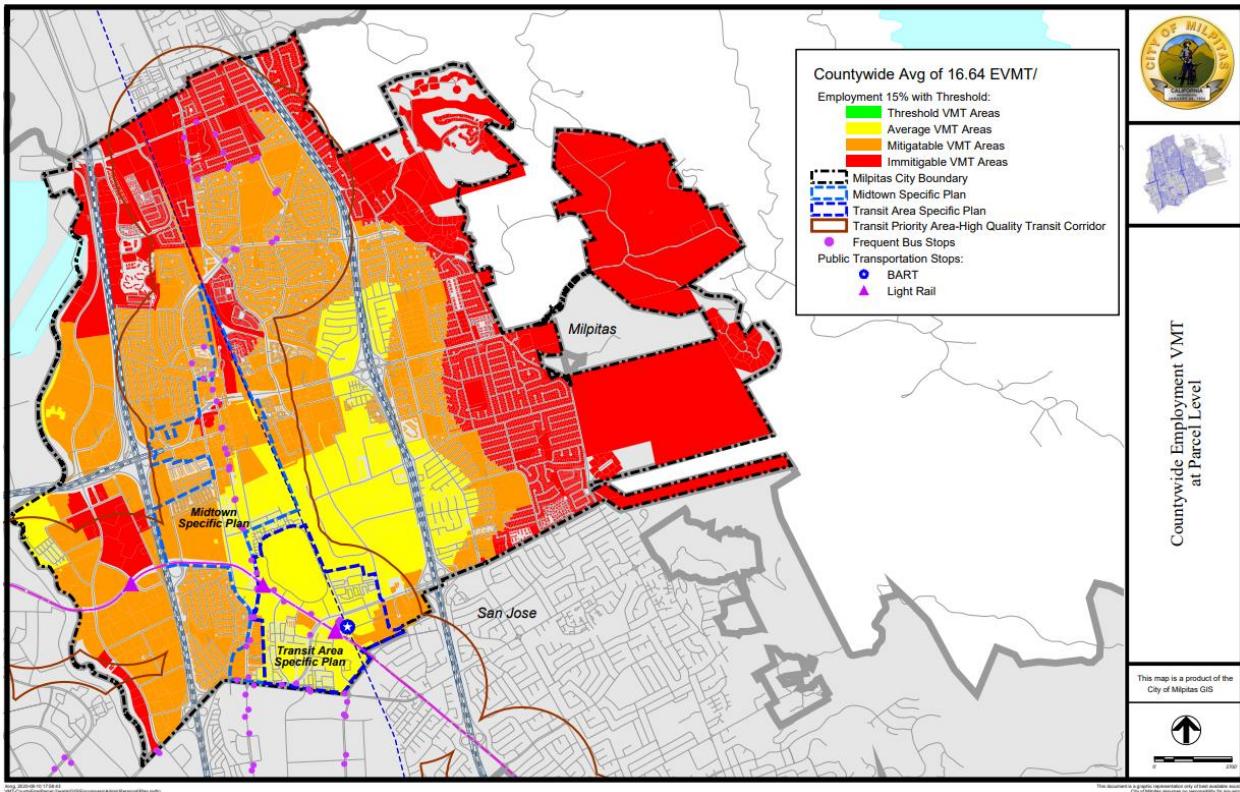


Figure 6 Employment VMT Heatmap

Transit Screening Boundaries

The heat maps also indicate the areas where projects located within $\frac{1}{2}$ mile of a major transit stop, or a stop along a high-quality transit corridor as defined in the State guideline are presumed to have a less than significant impact on VMT. See “CEQA Project Screening Criteria” above for necessary requirements to meet the Transit screening.



Figure 7 Milpitas BART Station Transit Hub



Figure 8 Milpitas BART Station. Proposed Development located within 1/2 mile of major transit is presumed to have a "less than significant transportation impact".

Project VMT Analysis Methodologies

Most projects that require a VMT analysis will use one of the two methods for assessing a project's VMT:

1. Santa Clara County VMT Evaluation Tool
2. Travel Demand Model

If a project VMT cannot be estimated using the above methods, other methods for estimating VMT may be acceptable and should be discussed with City staff prior to completing VMT analysis.

Santa Clara County (SCC) VMT Evaluation Tool

The VMT evaluation tool (sketch tool), available for download on the VTA's website, assesses a project's potential VMT based on the project's description, location, and attributes.¹⁹ For most residential, and employment projects, the tool is the approved method to calculate VMT.

Using the SCC VMT Evaluation Tool

The steps for evaluating VMT using the "tool" are straightforward. The tool asks for the inputs and provides three VMT measurement, existing area VMT, project VMT with no TDM measures, and project VMT with TDM measures. The tool will also identify when projects are screened out within the transit area. If a project needs mitigation to meet the City's threshold, the tool contains all the approved VMT mitigation and its relative effectiveness on VMT. The tool will also produce a summary report which includes the project description, all the inputs, the 3 VMT levels, and any mitigation required. This summary report should be included in the appendix of any project requiring a VMT analysis. Within the tool, there are various explanations and descriptions to provide direction; in addition; the VTA has published a manual on their website to provide further support.

VMT Mitigation

The mitigation to reduce VMT is available within the tool. The mitigation was approved based on substantial evidence and documentation of its effectiveness. A summary of the VMT reduction strategies is included in Appendix X. The mitigation is organized in 4 tiers:

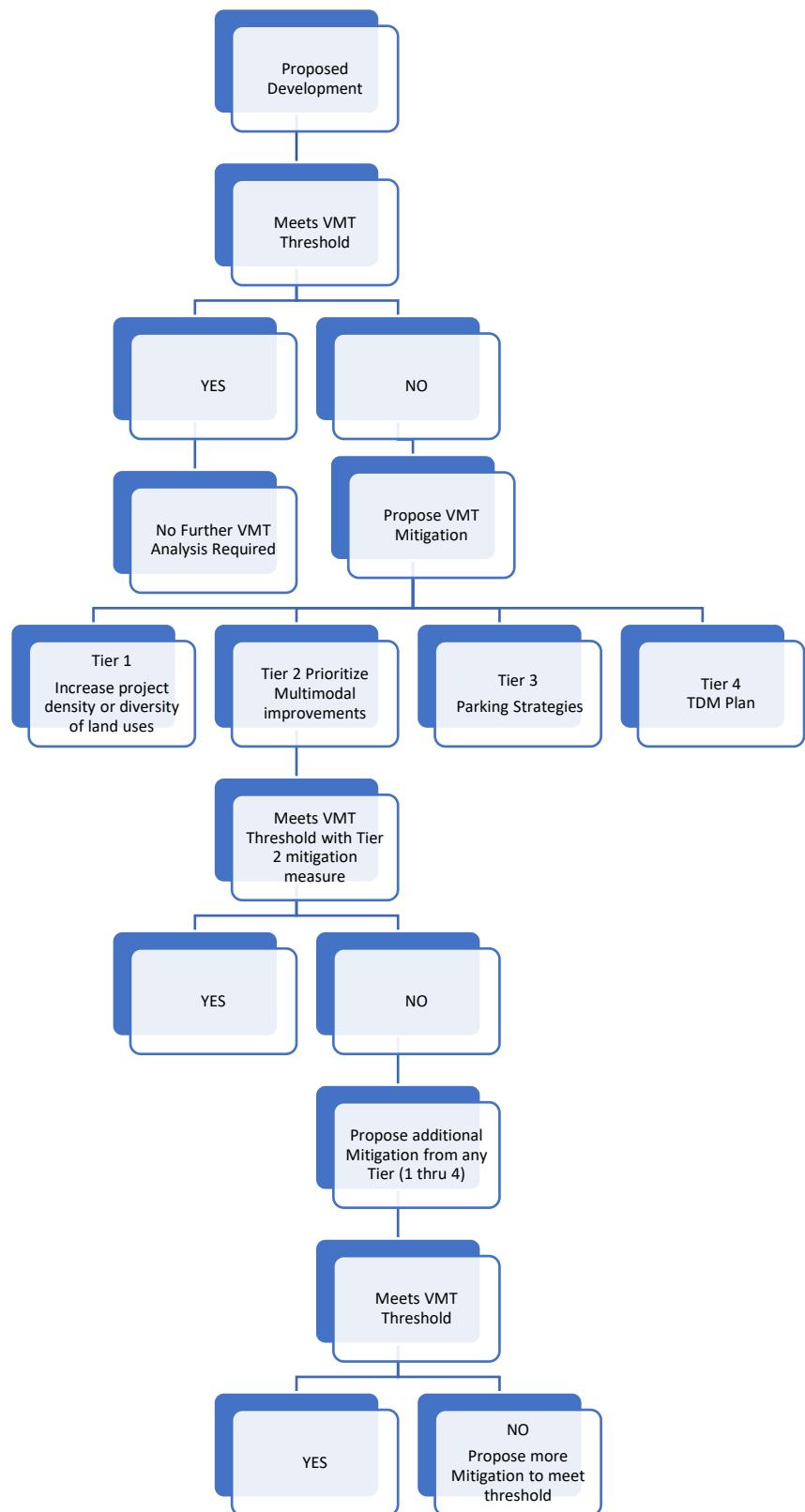
- Tier 1 – Project Characteristics. Although it may be difficult to revise a project during environmental review, Tier 1 strategies allow the user to increase the project density, diversity of land uses, and add affordable and/or below market rate housing to the residential and employment projects to reduce VMT.
- Tier 2 – Multimodal Network Improvements. These improvements include implementing bicycle lanes, improving pedestrian network, implementing traffic calming, increase transit accessibility, and improve network connectivity. These improvements require coordination with Mountain View staff and additional studies (signal warrant studies, traffic calming studies, etc.) to determine feasibility. Ideally, consultants should use the City's approved plans which contain various transportation improvements to bicycle, pedestrian, and roadway as VMT mitigation. (See above for list of adopted plans and policies).
- Tier 3 – Parking. Parking strategies shown to effectively reduce VMT include reduced parking, increased bike parking or end of trip bike facilities. To be most effective, the areas surrounding the projects with reduced parking should have parking permit programs.
- Tier 4 – Travel Demand Management (TDM) There are a multitude of TDM measures to reduce VMT. The tool includes all allowable TDM measures and their relative effectiveness. Based on the percentage participation selected by the user, the tool calculates the resulting VMT reduction. The various TDM measures in the tool include school carpool programs, bike-sharing programs, car-sharing programs, Trip reduction marketing/educational campaign, parking cash-out,

subsidized transit, telecommuting, alternative work schedules, shuttles, pay to park, ride-sharing, unbundled parking, and subsidized vanpool.

How to mitigate VMT

As previously stated, there are four tiers of mitigation that will reduce VMT. Projects that do not meet the VMT screening criteria and are required to evaluate VMT must demonstrate the Project VMT meets the City's 15% VMT thresholds. To successfully mitigate a project's VMT, a project must propose a mitigation from Tier 2 and then propose any additional mitigation from Tier 3 and Tier 4. To mitigate using Tier 1, further coordination with City staff would be required. Project located in the high VMT areas of the City may require several VMT reduction strategies to mitigate the impact.

Figure X. VMT Mitigation Flowchart



Examples of VMT Mitigation

Multimodal Transportation Network Improvements

Implementing multimodal transportation will provide an improved environment for walking, bicycling or taking transit. There are many examples, but the following have been implemented in the City.

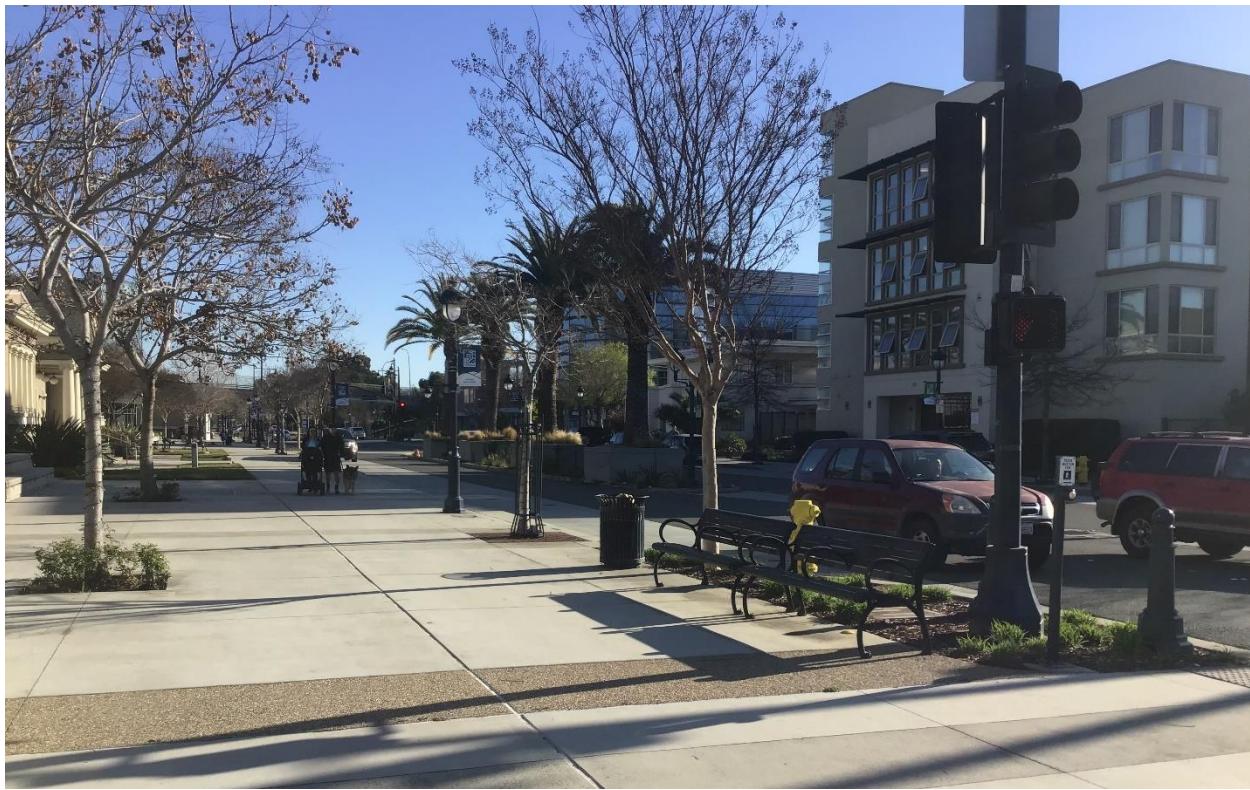


Figure 9 Pedestrian Improvements along Main Street including wider sidewalks, pedestrian scale lighting, enhanced landscaping and street furniture.



Figure 10 Enhanced neighborhood crosswalks along school routes



Figure 11 Coyote Creek Trail head conveniently located at Ranch Drive



Figure 12 Coyote Creek Trail connecting walking, biking and nearby development



Figure 13 Enhanced Bicycle lanes along N. Milpitas Blvd. at Scott Creek Road



Figure 14 Buffered bike lanes along Scott Creek Road in Fremont along the Milpitas border



Figure 15 Bicycle Amenities such as Bicycle Repair Shop and Bicycle storage encourages bicycling.



Figure 16 Milpitas BART Station improved access to transit. Dedicated bus lane and bike lanes

Travel Demand Models

For large land use plans, very large projects, projects that are not residential or office, projects that can potentially shift travel patterns, and projects located in areas where the average VMT has not been established in the City, the VMT evaluation tool would not be adequate or capable of evaluating VMT. For those projects, a Travel Demand Model may be required based on a preliminary review of the project. For project's requiring modeling, the consultant should coordinate with Milpitas staff during the scoping process.

Land Use Plans, Specific Plans and Precise Plans

As noted above, most large land use plans will require using a Travel Demand Model to evaluate VMT. Consistent with the State's technical guideline, the requirements for evaluating VMT differ from smaller projects where VMT can be estimated based on existing conditions surrounding the proposed project. Furthermore, VMT modeling usually results in total VMT which can be expressed in VMT per service population (job + residents). Expressing VMT per service population may be the most appropriate metric to use for these large projects. Ideally, this metric will capture the aggregate VMT of a land use plan, general plan, or specific plan that proposes employment, residential development, commercial (both local and regional retail), and any new roadways, etc.).

The guideline states that “analysis of specific plans may employ the same thresholds as for projects (in Milpitas’ policy, 15% below Countywide Average VMT for residential project and employment projects, etc.) but that may be difficult using the travel demand model. Therefore, the guideline allows for some flexibility. The guideline further states “A general plan, area plan, or community plan may have a significant impact on transportation if proposed new residential, office or retail land uses would in aggregate exceed the respective thresholds recommended” for land use projects. Therefore, the guideline does not recommend a specific threshold; giving some flexibility in establishing a methodology and threshold for larger projects, land use plans and general plans.

TDM Programs for VMT Mitigation

TDM Programs that mitigate VMT impacts shall be included in the Mitigation Monitoring Report (MMRP), other CEQA documents, or Conditions of Approval. Projects are required to demonstrate through an annual monitoring report it is meeting the TDM targets or conditions for the life of the project. TDM monitoring reports should be submitted annually or as required to the /Planning/Engineering for review and approval.

Other CEQA Checklist Questions (c and d)

c) Substantially increases hazards due to a geometric design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment).

Consistency with this checklist item can be demonstrated in transportation conditions that are consistent with adopted geometric design practices. There are many available design manuals including ITE publications on street design, pedestrian facilities, traffic calming, intersection design. Most transportation professionals and engineers use Caltrans Highway Design Manual, AASHTO, Complete Streets, and typically jurisdictions conform to MUTCD for traffic control devices and signage. In addition, the City has adopted transportation standards in municipal code.

e) Results in inadequate emergency access.

A project may result in inadequate emergency access if it includes modifications to the existing transportation network, which would potentially impact emergency access response times. Proposed changes in motor vehicle infrastructure could result in increased vehicle delay at intersections as well as along roadway segments. Thus, an increase in emergency response times could occur. However, a project could demonstrate compliance with requirements contained in the City's Design and Construction Standards, which include requirements for emergency access. Furthermore, a reduction in vehicular roadway capacity could be mitigated by conducting an operations analysis to assesses the potential impacts to emergency vehicle access and implementing the recommended mitigation measures.

Intent of Transportation Operational Analysis

The City's Transportation Analysis Policy also establishes the requirement of a Transportation Operational Analysis (TOA) to identify transportation deficiencies resulting from a Project. The Project is responsible for constructing improvements, implementing other measures, or modifying the scope of work to eliminate transportation deficiencies.

The TOA evaluates the effects of a development project on transportation, traffic operations, access, circulation, and related safety elements surrounding the project. TOAs also establishes consistency with the General Plan goals and policies and supports the following objectives:

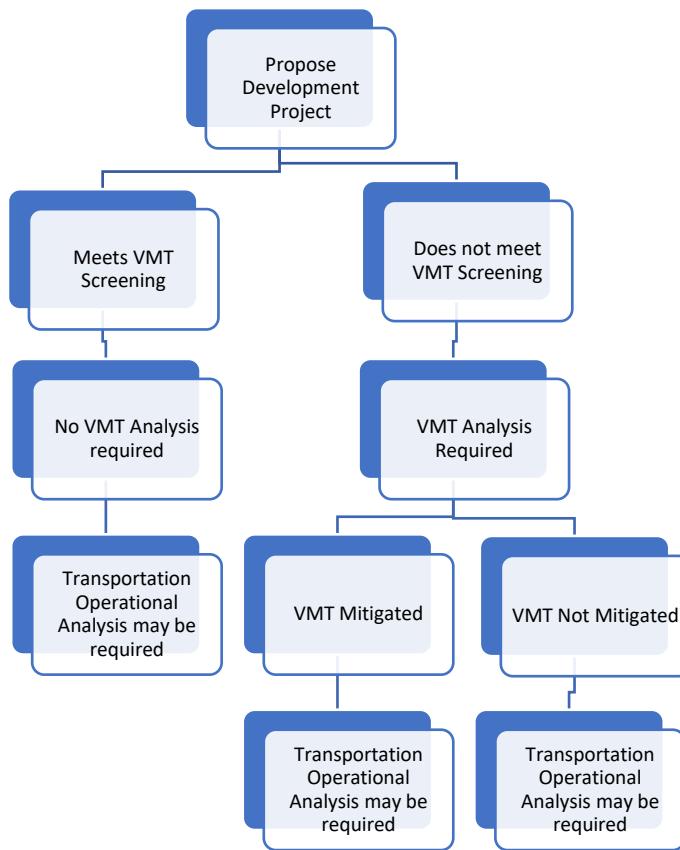
- Ensures the transportation network is designed and built to serve the type, characteristic and intensity of the surrounding land use;
- Encourages projects to reduce single occupancy vehicle use and increase mode share of other transportation options like walking, biking, and transit; and
- Ensures projects address transportation effects caused or exacerbated by the project, and identified, addressed, and documented in the TOA.

Many factors are considered when determining the scope of the analysis for a TOA. Project description, location, adjacent land use, and existing transportation network are considered when evaluating surrounding transportation conditions and the potential effects a proposed project may have on the transportation network. For many projects, Transportation Operational Analysis will be required even when a development project is exempted from VMT analysis. Determining the requirements for a TOA will require coordination with City staff prior to commencing the transportation study.



Figure 17 Aligning Intersection Operations to serve surrounding community conditions.

Figure X. Transportation Analysis Process



Determining the Scope of the Study

This size and location of a project will help determine the overall parameters of the TOA. Smaller projects would naturally have less effect on the adjacent transportation network than larger projects. Coordination with City staff will help determine study requirements.

Study Area

The study area that projects will use to define the scope of the analysis is outlined in Table 2. Each of the travel modes applies specific methodologies and the appropriate area where a project will generate pedestrians, bicyclists, transit users, and automobile traffic. For pedestrian and bicycle modes of transportation, conditions will be considered in the immediate vicinity of the project.

Project Size and Complexity

Furthermore, the size and/or complexity of the project will also determine the appropriate study components. The first consideration is the number of peak-hour trips a project generates. Table 3 defines the size consideration when determining the TOA scope.

Major Components of the TOA

Within the study area, specific Components to be addressed in the TOA are outlined in Table 4. Not all of the components will apply. The table is intended to guide the focus of the analysis to what is applicable to a specific project based on the project size, description, and location.

Table 4. Typical TOA Components

Components	Evaluation
On-site Circulation	<p>Review and evaluate site pedestrian access and circulation including street-oriented entrances, direct pathways to transit stops, active, transparent ground floor uses, human-scale elements, pedestrian vistas, paseos, crossing and driveway treatments.</p> <p>Review and evaluate site bicycle access and circulation including bike access locations, direct routes to bike parking, high-visibility secure bike parking near building entrances, and other amenities.</p> <p>Review and evaluate site motor vehicle access locations, driveway widths, quantity and location, size of major circulation features with respect to operations and safety, turning movement volumes at site access points, queuing at site access driveways, dimensions of truck loading areas, solid waste and emergency access.</p>
Off-site Transportation Operations	<p>Study all transportation facilities using methods and procedures contained in the latest versions of Highway Capacity Manual (HCM) or the VTA TIA Guidelines (for non-auto modes).</p>
Pedestrian Experience and Americans with Disabilities Act (ADA) compliance	<p>Evaluate pedestrian quality of service at the project and routes between the project and key destinations including transit stops. Identify any existing or planned pedestrian facilities that may be affected by the project. Focus on maintaining or enhancing connectivity, completing network gaps, and removing barriers. Disclose evaluation and documentation of project features (e.g., road widening) with likely adverse effects on pedestrians (longer crossing time, etc.)</p>
Bicycle Facilities	<p>Evaluate bicycle level of traffic stress at the project and along direct routes between the project and key destinations including transit stops. Identify any existing or planned bicycle facilities that may be affected by the project. Focus on maintaining or enhancing connectivity, improving route directness, and filling gaps in the network of low-stress facilities.</p>
Parking	<p>Compare the project parking plan with the City standards. Additionally, vehicles generated from a proposed project should not spill over into adjacent streets.</p>
Trucks (or other heavy vehicles)	<p>For projects related to goods or materials movement, identify the number of truck trips that will be generated, and design facilities necessary to accommodate project truck traffic. This will require evaluation of the Traffic index for existing roadways serving the project compared to current City design standards</p>
Transit	<p>Identify and existing or planned transit facilities and services that may be affected by the project including high quality transit services. Focus on maintaining or enhancing transit service speed, on-time performance, access to high quality services, and public transit ridership.</p>
Signalized Intersection Operational Analysis	<p>Evaluate signalized intersection Level of Service for motor vehicle traffic with and without the proposed project. Intersections are designated as</p>

	City intersections or Congestion Management Program (CMP) intersections.
Intersection Traffic Control	Evaluate unsignalized intersections located within study area to determine appropriate traffic control with or without the project. Consider stop control, signal control, and roundabout control.
Construction Traffic	Identify any potential road closures or diversion, any traffic control planned for future construction activity, include location of construction entrance(s), and employee parking plan (location).

Evaluating Existing Conditions

A project is required to document the existing conditions of the transportation system surrounding the project including field observations of biking, walking, transit, and roadway operations during peak commute periods.

- Existing conditions should include, but not limited to the following areas:
- Pedestrian facilities and operations
- Bicycle facilities and operations
- Transit stations, routes, schedules and operations
- Intersection operations
- Queuing and storage length
- Traffic signal phasing and timing
- Ramp meter queues and spill back/over
- Existing hazards such as roadway curvature, sight distance deficiency

Milpitas Guiding Transportation Plans

TOA documents should be consistent with the following Milpitas plans:

- Congestion Management Program
- Milpitas Bike/Pedestrian Trails Plan (2022)

Pedestrian and Bicycle Evaluation

The pedestrian and bicycle evaluation should provide information on the existing conditions, conditions with project implementation and identify any improvements required by the project and may include evaluation of the following:

Pedestrian and Bicycle Assessment

Projects will be evaluated for their ability to support bicycling and walking. The evaluation should include any adverse effects attributed to the project and the benefits of the project and proposed modifications to bicycle and pedestrian infrastructure, bicycle and pedestrian access; and conformance to existing plans and policies.

Pedestrian and Bicycle Infrastructure

- Any effects on the existing pedestrian and bicycle facilities attributed to the project construction or project implementation
- Any proposed improvements to the existing bicycle and facility proposed by the project
- Availability of Americans with Disabilities Act (ADA) ramps at intersections and driveways. A project may be required to construct or reconstruct ADA ramps, especially along project frontages and in locations where there is significant pedestrian activity within the project's sphere
- The availability and adequacy of bike parking
- The location of fire hydrants, streetlights, traffic cabinets and boxes, and other facilities that may affect the pedestrian or bicycle pathway
- The effects of any proposed addition, relocation or reconstruction of sidewalks, bikeways, curb ramps, street lighting, etc.;
- Consistency with all adopted plans and policies

Pedestrian and Bicycle Access:

- Pedestrian and Bicycle access to and from the project, including an inventory of facilities and deficiencies for access within the site (i.e. from buildings on the site to the public sidewalks) and off-site (i.e. presence/absence of continuous sidewalks, safe crossings). Bicycle and pedestrian access are also described in the Site Circulation and Access section
- Proposed actions to improve pedestrian and bicycle access, or to address adverse effects on pedestrian and bicycle access that result from the project.



Figure 18 Pedestrian and Bicycle Bridge to the BART Station

Conformance to Existing Plans and Policies

Transportation plans developed at the State (California Transportation Plan 2040), regional (Plan Bay Area 2040), County (Valley Transportation Plan 2040), Countywide Bike Plan, and Pedestrian Access to Transit Plan, Multimodal Improvement Plans, etc.), and local (Milpitas) planning documents).

Vision Zero

Vision Zero is a City's commitment to eliminate all fatal and severe injury traffic collisions by prioritizing street safety to ensure all road users – people who walk, bike, or ride transit are safe. Although a Vision Zero Policy has not been adopted yet, there are various adopted General Plan Policies proposing Vision Zero Policy implementation and establishing the goals and ideals necessary to achieve safer streets in Milpitas.

Developers and projects are considered partners that can help the City achieve Vision Zero goals of safer streets for everyone. In support of the General Plan and Vision Zero, projects may be required to evaluate certain roadways, or intersection conditions where the project's added vehicle, pedestrian or bicycle trips exacerbate or create an adverse condition.

Americans With Disabilities Act (ADA)

The ADA is a civil rights law that prohibits discrimination against individuals with disabilities in all areas of public life, including jobs, schools, transportation, and all public and private places that are open to the public. As part of the project assessment of existing conditions, the analysis should inventory the pedestrian sphere for all existing ADA ramps and areas where ADA ramps have not been installed, especially along the project frontage.

Transit

Projects will be evaluated based on their ability to support, promote and encourage transit. An assessment of:

1. Transit facilities and services
2. Access to transit, and
3. Transit operations.

These assessments should include the following elements:

Transit Facilities and Services

- Any temporary or permanent reduction of transit availability or interface with existing transit users (e.g. relocation/reconstruction/closure of a transit stop, or vacation of a roadway utilized by transit);
- Existing transit services with stops with $\frac{1}{2}$ mile from a project, include route character, service areas, hours of service, peak period headways, and types of vehicles (bus, light rail, Caltrain).
- For projects located more than $\frac{1}{2}$ mile from existing or planned transit services:
 1. Assess the potential of generating a demand for services.
 2. Large projects are encouraged to support promote public transit (provide transit passes, etc.).
 3. If there is an adopted plan on a transit priority corridor, a project may construct or contribute to the buildup of the plan.

- If an existing or planned transit stop is located along the project frontage, transit stop improvements may be required as part of the project's frontage improvements. If the existing or planned transit stop closest to the project requires the installation of a shelter where additional right-of-way is needed, or if the new transit stop is not located along the project frontage, the developer, City staff and the transit agency will coordinate to acquire the easement from the affected property owners, or any other requirement prior to the project's construction of the planned transit stop.
- Projects may propose enhancements or improvements to transit services, transit facilities (transit stop improvements) as part of frontage improvements or to address adverse effects on existing transit systems or facilities.



Figure 19 Enhanced Bus Stop along E. Capitol Avenue

Access to Transit:

- Pedestrian and bicycle access from the project to nearby transit stops, including an inventory of facilities and deficiencies for access within the site. (i.e. building entrances/exits to public sidewalks) and off-site (i.e. presence/absence of continuous sidewalk and safe crossings to access transit).
- Proposed improvements to pedestrian and bicycle access to transit stops, or to address adverse effects on pedestrian and bicycle access to transit stops that result from the project.



Figure 20 Transit Access on Capitol Ave. Connecting BART, Light Rail Station to surrounding area.

Transit Operations:

- For land use plans or large projects, conform to the VTA Guidelines for methodology on evaluating transit delay.
- If a large project is found to have an adverse effect on transit operations, the project should work with the City and VTA to identify feasible transit priority measures (e.g. transit signal priority, queue jump lanes, transit bulb-outs, or dedicated bus lanes, etc.) near the affected facilities and propose fair share contribution to any applicable projects that improve transit operations.



Figure 21 Montague Light Rail Station

Transportation Demand Management (TDM)

TDM programs are one of the recommended options to reduce project vehicle trips. There are a multitude of TDM measures the City supports to reduce vehicle trips, increase pedestrian, bicycle and transit use, and improve the environment surrounding the project. Furthermore, Milpitas General Plan states ..." All TDM Plans shall include monitoring, reporting, compliance, and funding for the life of the project and will become part of the conditions of approval." Some of the TDM measures may overlap with CEQA transportation mitigation measures.

Annual trip monitoring reports will be submitted to Department of Planning/Engineering for approval.

Intersection Operations Analysis

Projects are required to conduct intersection operations analysis per the guidelines set forth in this document and confirmed by Public Work's staff. City staff will provide any available intersection data for use in the analysis. Updated data may be required and will be requested in the project work scope.

An intersection operations analysis will require existing conditions traffic data, project trip generation, trip distribution, and trip assignment. These assumptions should be submitted with the proposed work scope.

Trip Generation Estimates

Trip generation is an estimate of the number of vehicle trips generated by a project. Trip generation rate estimates are typically submitted by a traffic consultant for review and approval prior to commencing a transportation analysis. Trip generation estimates should be based on *ITE Trip Generation Handbook* and proposed trip reductions should conform to the *VTA Traffic Impact Analysis Guidelines*. However, per approval by City staff, trip generation estimates can also be generated by conducting trip generation studies, if necessary. This may be required for unusual, or specific land uses where ITE trip generation estimates do not apply.

Pass-by and Diverted Link Trips

Primary vehicle-trips are trips attracted to a project where the project is the (primary) destination. Pass-by trips are intermediate stops on the way to a primary destination without diverting to another street to access a project. Diverted link trips are intermediate stops on the way to a primary destination that require diversion from one roadway to another to get to the site. Refer to the VTA Transportation Impact Analysis Guidelines for estimates of pass-by, primary and diverted vehicle-trips for most retail use.

The percentage of pass-by and diverted link trips should be estimated based on data provided by ITE or surveys of similar land uses. San Diego Association of Governments (SANDAG) also has published information on trip generation, primary and diverted link trip estimates that may apply. The net new vehicle-trip generation estimates should be used to assign project trips to the roadway network and the appropriate pass-by and diverted link trips should be added or subtracted from the affected intersection turning movements but always included in the driveway trip estimates for a project.

Existing Uses

Vehicle-trip credits associated with existing use at the project site may be acceptable. Applying vehicle trip credits provides a more accurate estimate of net new vehicle traffic to be added to the existing roadway network. Coordinate with City staff for approval on any proposed existing site vehicle-trip credits.

Project Trip Generation

Trip Generation Table should always contain the following information:

1. Project description – land use and size
2. Trip Generation estimate and Trip generation source
3. Any trip reductions including, pass-by or diverted link trips, VTA mixed use reductions or transit reductions, credit for existing site traffic.

Trip Distribution

A trip distribution is a forecast of the travel pattern of vehicles generated by a project. Trip distribution percentages should be included in the transportation analysis in a figure on an area map showing the location of the project and the surrounding transportation network. The trip distribution figure should show trip percentages at gateways, on nearby freeway segments, and along major arterials that provide direct access to the project.

Trip distribution can be determined from zip code data, census data, market research, travel demand models, existing travel patterns, and/or locations of complementary land uses, and professional engineering judgement. Trip distribution assumptions should be consistent with similar land uses in the same areas in the City. The trip distribution figure should be submitted for review and approval prior to use.

Trip Assignment

Trip Assignment consists of assigning vehicle-trips to certain routes on the roadway system based on the trip distribution. Assignment of vehicle-trips should be based on existing and expected traffic volumes and patterns. Trip assignment forecasts from a travel demand model is recommended for long-term land use plans and large development projects where the implementation of the project is expected to occur over time (beyond 5 years).

Trip assignment figures should contain the project's vehicle traffic turning movement volumes at each study intersection and all other signalized intersections in the project vicinity. The figures must be submitted to the City for review and approval prior to use.

Study Scenarios

- **Existing Conditions**

Existing intersection operations or level of service (LOS) of all study intersections should be included in the MTA to establish the transportation conditions prior to project implementation. Guidelines for data collection are later in this section.

- **Background Conditions**

Background conditions LOS are typically described as existing traffic data with any approved but not yet built projects added to establish the LOS at the study intersections with pending development. The background conditions provide a LOS assessment of conditions where multiple projects are being proposed. Since measuring intersection LOS is no longer a CEQA measure, this requirement may only apply to certain projects.

In addition to approved projects, any funded improvements should also be included in this scenario if applicable.

- **Project Conditions**

The project vehicle trips are added to the background trip volumes to establish the level of service of the study intersections with the project traffic. An adverse effect at the study intersection can be based on the comparison between background LOS and project or existing LOS and project LOS.

Study Intersections

If a project is expected to add 10 vehicle-trips per hour per lane (See VTA guidelines) to signalized intersection that meets any of the following conditions, the intersection is included in the intersection operations analysis (LOS):

- Within a 2-mile radius from the project
- Designated Congestion Management Program (CMP) facility
- At all signalized entrances or serving project access

Not all intersections within the 2 mile need to be studied. Intersections where project traffic does not meet the VTA guideline are not required to be studied. Additionally, intersections operating at LOS A, B or C may not need to be studied. The final list of study intersections should be approved by Milpitas staff.



Figure 22 Regional intersection Milpitas Boulevard and Montague Expressway

Data Collection

New traffic count data may be requested by Milpitas staff if current data is not available. Count data should be no older than 2 years. New count data should be collected and processed by a traffic consultant as follows:

- Obtain new AM and PM peak hour vehicle count data for two (or three depending on the project) consecutive hours during peak travel. Vehicle and bicycle count by turning movement, pedestrian counts by crosswalk leg at all selected study intersections.
- Data collection should occur Tuesday through Thursday during non-holiday weeks and not during the summer when schools are not in session.
- Weather conditions may affect the count data so data should be collected during dry weather conditions. Additionally, construction sites, traffic detours or diversions can also affect the count data so these conditions should be avoided as much as possible.

- Certain land uses may require data collection during nonstandard peak periods such as stadium, movie theatres, projects that have peak weekend traffic.
- The four highest consecutive 15-minute count intervals is used to determine the peak hour.
- New count data should be submitted to City staff for review and approval.



Figure 23 Local intersection Milpitas Boulevard and Escuela Parkway

Intersection Operations (LOS)

Intersection operations analysis measures traffic operations and delay at signalized intersections and is usually expressed in LOS. The City's acceptable intersection operations standard is LOS "D". The standards used to measure intersection operations are described in Table 5.

Table 5. Intersection Operation Standards for Signalized Intersections

Standard	Description	Average Delay (seconds/vehicle)
A	Operations with very low delay occurring with favorable progression and /or short cycle lengths.	10.0 or less

B	Operations with low delay occurring with good progression and/or short cycle lengths	10.01 and 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear	20.1 and 35.0
D	Operations with longer delay due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures are noticeable	35.1 and 55.0
E	Operations with high delays indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences	55.1 and 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths	Higher than 80.0

Intersection Operations Analysis Methodologies

Intersection operations analysis should be completed for all study intersections using the *Highway Capacity Manual* methodologies and the VTA *Traffic Level of Service Analysis Guidelines (2003)* or subsequent adopted updated standards. The analysis should include all study periods specified in the scope of work.

Adverse Intersection Operation Effects

An adverse effect on intersection operations occurs when the analysis demonstrates that a project would cause the operations standard at a study intersection to fall below D with the addition of project vehicle trips when comparing either existing conditions (baseline) to project conditions or background conditions (baseline) to project conditions.

For intersection operating at E or F under baseline conditions, an adverse effect is defined as:

- An increase in average critical delay by 4.0 seconds or more AND an increase in the critical volume-to-capacity (V/C) ratio of 0.010 or more; OR
- A decrease in average critical delay AND an increase in the critical V/C ratio of 0.010 or more.

Addressing Adverse Effects on Intersection Operations

There are three possible approaches to address adverse effects at signalized intersections:

- Reduce project vehicle-trips to eliminate the adverse effect and bring the intersections back to the background or baseline condition. The Santa Clara County VMT Evaluation Tool can be used to select measures that would achieve the reduction of vehicle-trips.

- Construct improvements to the affected intersection or other roadway segments of the citywide transportation system to increase overall capacity
- Construct multimodal improvements to increase transportation capacity for pedestrian, bicycle travel and/or improve access to transit

A project should prioritize improvements related to multimodal transportation, particularly active transportation, parking measures, and/or TDM measures; however, there are adverse effects where intersection operations may need additional left-turn or right-turn capacity or traffic signal phasing upgrades to accommodate vehicle traffic. In all cases, improvements that increase vehicle capacity must not have unacceptable effects on existing or planned transportation facilities. Unacceptable effects on existing or planned transportation facilities are described as the following:

- Inconsistent with the General Plan and other adopted plans and policies (See list of guiding documents in Chapter 1).
- Reduction of any physical dimension of a transportation facility below the minimum design standard per Complete Street Design Standards and other adopted engineering design standards
- Deterioration in the quality of existing or planned transportation facilities, including pedestrian, bicycle and transit systems and facilities as determined by Director of Public Works.

Congestion Management Program (CMP)

In accordance with California Statute, Government Code 65088, Santa Clara County has established a Congestion Management Program. The intent of the CMP legislation is to develop a comprehensive transportation improvement program among local jurisdictions that will reduce traffic congestion and improve land use decision-making and air quality. The Valley Transportation Authority (VTA) serves as the Congestion Management Agency (CMA) for Santa Clara County's CMP.

As a CMA, VTA is required by California Statute to monitor roadway vehicle congestion and the impact of land use and transportation decisions on a Countywide level, at least every two years. VTA conducts CMP monitoring and produces the *CMP Monitoring and Conformance Report* annually.

Milpitas, as a member agency, is required to conform to the CMP requirements for evaluating the transportation effects of land use decision on the designated CMP roadway system. The program is established to address regional transportation issues across City boundaries. The TOA is intended to meet the CMP requirements by conducting intersection level of service analysis at designated CMP intersection and conform to the CMP requirements for bringing intersections into compliance. Projects should continue to assess their effects on the designated CMP roadway system using the VTA *Transportation Analysis Guidelines*, the VTA *Traffic Level of Service Analysis Guidelines*, and this handbook.

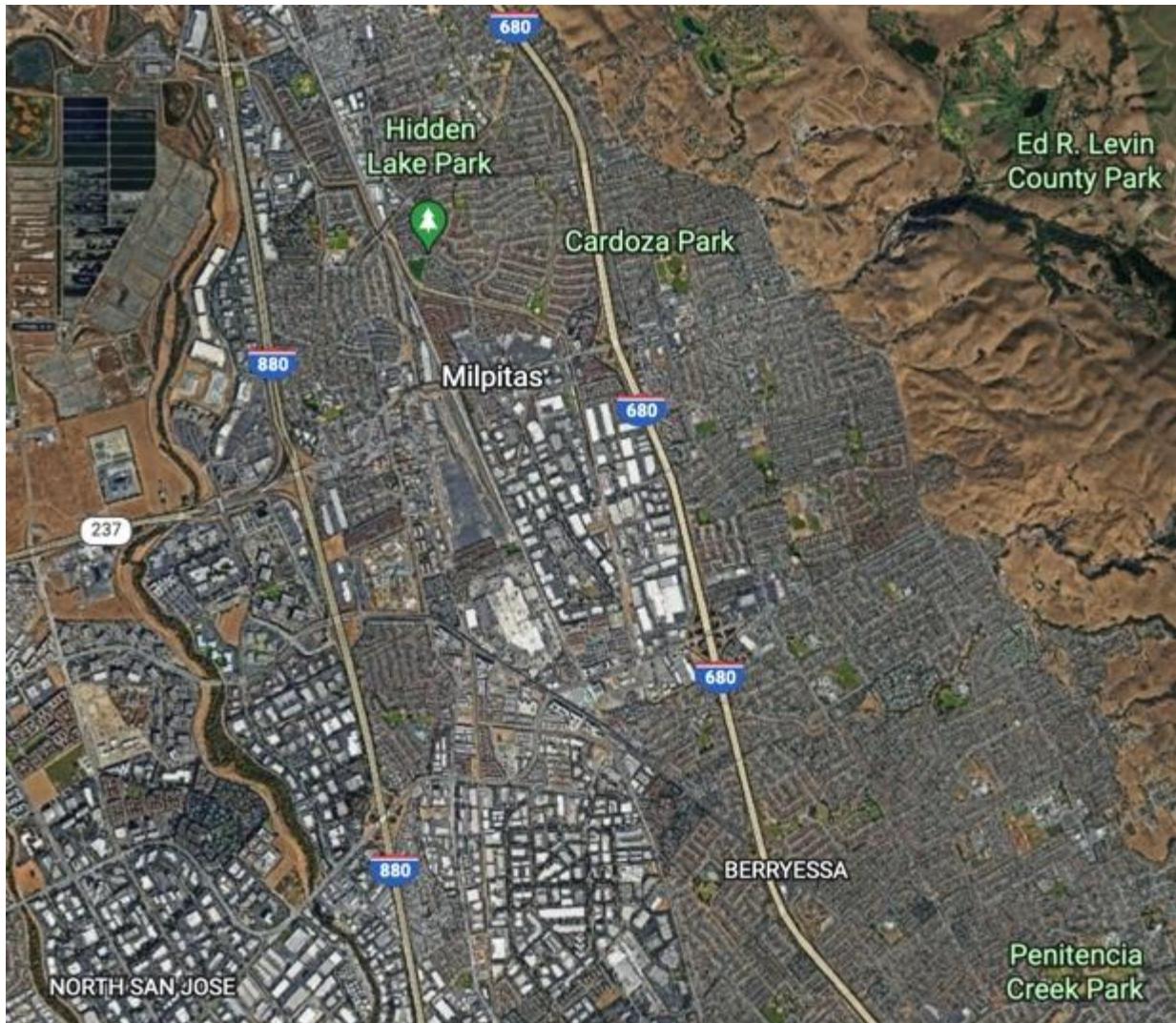


Figure 24 Milpitas Congestion Management Program Regional Roadway Network

Intersection Phasing and Queuing Analysis

At intersection phasing and queuing analysis may be required for the following instances:

- At signalized intersections where the intersection operations analysis indicates there will be an adverse effect;
- At other intersections or freeway ramps, based on proximity of the development project to a freeway interchange, existing queuing spillback conditions, or localized conditions along a project's frontage.

Intersection Phasing Analysis

In intersection phasing analysis evaluates the added project vehicle trips to an existing traffic signal to determine if the existing phasing needs to be upgraded.

Left-turn or Right-turn Storage Analysis

Left-turn or right-turn storage analysis measures how many vehicle-trips a project would add to an existing left-turn pocket. The determination for improving intersection operations or lengthening an existing pocket is based on a comparison between the existing pocket conditions with and without the project trips added. If a previously approved project also studied the same pocket, then those project trips and/or improvements should be included in the analysis.

Adverse effects on queuing should be identified by comparing the calculated design queue to the available queue and pocket length. An adverse effect on queuing maybe identified when the addition of project traffic causes or exacerbates existing conditions such that:

- Spillback queues from left-turn lanes at intersections block through traffic
- Queues from an intersection that extend back and affects the downstream intersection
- Queues from bottleneck locations such as lane drops that affect intersection operations
- Spillback queues from freeway ramps that affect local street or freeway ramp operations
- Queues at intersections proximate to freeway ramps
- Right-turn pockets are typically adjacent to or include bike sharrows. With the goal of a balanced transportation system, consideration for adverse effects on bicycles should be considered when proposing to lengthen right turn pockets.

Unsignalized Intersections

Unsignalized intersection analysis may be required where intersection provide direct/indirect project access. There are various evaluation methods for studying unsignalized intersection including:

- Unsignalized LOS
- Traffic Signal Warrant Studies
- Intersection Stop Warrants
- Traffic Circle LOS
- Overall intersection operations
- Accident Data

Unsignalized intersection analysis indicates if improvements such as a new traffic signal, stop controls, median island modifications, traffic circle, pedestrian, bicycle improvements, etc., would be needed. Methodology and proposed traffic control devices for intersection operations and traffic control should conform to Highway Capacity Manual (HCM) and Manual on Uniform Traffic Control Devices (MUTCD).

Traffic Signal Warrant Study

Traffic signal warrant studies may be required when a project proposes a signalized entrance or has the potential to effect operations and safety at an existing unsignalized intersection near the project. For most intersections, only the peak hour warrant will be required; however, the project may be required to perform other traffic signal warrants, if determined necessary.

Traffic signal warrant studies are required to conform to the *California Manual on Uniform Traffic Control Devices* (CA MUTCD) standards. Investigation of the need for a new traffic signal should include an analysis

of factors related to the existing operations and safety at a study intersection and the potential to improve the conditions. The study may include an evaluation of the following traffic signal warrants:

- Warrant 1: Eight-hour Vehicular Volume
- Warrant 2: Four-hour Vehicular Volume
- Warrant 3: Peak Hour
- Warrant 4: Pedestrian Volume
- Warrant 5: School Crossing
- Warrant 6: Coordinated Signal System
- Warrant 7: Crash Experience
- Warrant 8: Roadway Network
- Warrant 9: Intersection near a Grade Crossing

Traffic signal warrant or warrants shall not, in itself, require the installation of a traffic signal. The Department of Public Works will determine if a traffic signal is appropriate based on the traffic signal warrant study(s) and other factors.

Site Access and Circulation

The goal of evaluating site access and circulation is to establish safe and efficient site access and circulation to and from a project by identifying potential conflicts and proposed solutions. This section evaluates the interface of a project to the public right-of-way. The evaluation of the site access and circulation should consider the following:

- Frontage conditions. The assessment of a project includes an evaluation of the existing project frontage conditions, addressing unacceptable sidewalk conditions, unused driveway cuts, and proposed driveway locations or curb-side drop-off or any parking conditions and/or necessary signage.
- Proposed pedestrian access and on-site circulation with recommendations to encourage pedestrian trips to and within the site. Sidewalk, walkways, trails, and path of travel to building entrances should be evaluated. Pedestrian access between the site and the nearest transit stop/station should be assessed. Any identified adverse effect to access and circulation should be addressed.
- Proposed bicycle access and on-site circulation with recommendations to encourage bicycle trips to and within the site. Bike lanes and paths to bike parking and or building entrances should be addressed.
- The extent to which the ability of pedestrians and bicyclists to access the site is inhibited by manmade and natural barriers such as railroad crossings, rivers, freeways, dead-end streets, and cul-de-sacs, should be addressed.
- Trips entering and exiting the site at each driveway and parking garage entrance. Project vehicle traffic should consider street configuration, storage lengths, acceleration and deceleration lanes, and site distance.

- Site driveways and parking garage entrances where pedestrians, bicyclists and vehicles all converge. The analysis should ensure adequate site distance for vehicles existing the site and pedestrian or bicycle traffic crossing the driveway or garage entrance. Parking garage support structures often block the line of sight of the adjacent sidewalks.
- A site plan with adequate detail to indicate pedestrian, bicycle and vehicle circulation within the site and connections to the transportation network.
- Emergency vehicle and service vehicle such as delivery, moving vans and waste management trucks.
- Number of site access points shall not be excessive and have spacing and design that minimize conflict points and be least intrusive and disruptive to traffic flow.

Sight Distance

A sight distance analysis will be required at the project driveway if there is a potential obstruction, or the driveway includes a horizontal or vertical curve. A sight distance evaluation should be conducted in accordance with the *American Association of State Highway Transportation Officials* (AASHTO) standards. The evaluation ensures driveways and parking garage access have a clear line of sight.

For parking garage entrances, especially where parking structures are proposed at the back of a driveway, sight distance evaluations should consider the intersection of vehicles accessing the parking garage with pedestrian and bicyclists crossing the driveway.

Driveway Operations

All project access driveways should be evaluated to ensure driveway locations are safe, visible and do not conflict with pedestrians or bicyclists, or bike facilities. Driveways should be minimized in both number and size. The MTA may evaluate driveways for the following:

- Location; driveways should be a minimum of 150 feet from any intersection
- Number of driveways: Approximately 300 to 600 peak hour trips per driveway
- Driveway design: Standard driveway (apron) or modified curb-return with ADA accessible ramps. Modified driveways may be allowed for signalized entrances, large truck use such as warehouses or distribution centers with primary truck traffic, or ceremonial or major entrances to large developments



Figure 25 Driveway operations at the parking structure on Main Street

Traffic Gap Analysis

For projects located along busy arterials with no traffic control (signalized intersection), gap analysis may be required to ensure adequate gaps in traffic to accommodate project traffic and provide safe access. The analysis measures speed and volume of traffic on an existing roadway to determine whether existing gaps in traffic are available to provide safe access, typically left turns from the project driveway, from the project onto the adjacent roadway.

Parking

The evaluation of off-street parking may be required to identify the number of parking spaces provided by a project and whether the proposed parking is consistent with Milpitas zoning code. If the project does not meet the parking requirements, TDM measures may be required to reduce the number of vehicles generated by the project.

Projects may be required to evaluate nearby neighborhoods for potential parking intrusion by doing the following:

- Conduct parking survey on identified streets prior to implementing the project
- Conduct parking survey on identified streets approximately Six (6) to Twelve (12) months after the project is occupied.

- Implement a parking plan as recommended by the City based on the survey results. The parking plan may include establishing a Residential Parking Permit Program RPP, installation of parking control signs, and other parking management actions.

Delivery, Waste, and Moving Trucks

An evaluation of a truck turning template and truck loading area(s) may be required. If the project proposes loading areas in the public right-of-way, the analysis should determine feasibility, location, hours of operation, to ensure there are no conflicts with the surrounding pedestrian, bicycle and transit facilities.

Traffic Calming and Neighborhood Intrusion

If the project is anticipated to generate conflicting traffic with adjacent neighborhoods or result in excessive speeds and/or volumes on neighborhood streets, the project may be required to construct traffic calming devices. Traffic calming measures may include bulb-outs, median refuge island, speed bumps, electronic speed limit signs or other measures.

To evaluate nearby neighborhoods for potential intrusion, projects may be required to:

- Conduct speed and volume study on identified streets prior to project implementation
- Conduct speed and volume study on identified streets approximately Six (6) to Twelve (12) months after the project is occupied
- Implement approved traffic calming or traffic control as warranted by the analysis

Some traffic calming devices such as bulb-outs, median refuges, etc. can be implemented by the project without conducting a study.

Construction

Projects are still required to evaluate and disclose construction impacts as part the approval process. Although LOS can no longer be used to identify CEQA transportation impacts, LOS can be used to evaluate temporary construction impacts, and measure effects of street closures, diversions, effectiveness of detours. To the extent possible operational analysis should include information about project construction schedule and include anticipated duration, hours of operation, and any haul routes, construction traffic, traffic control plans, closure or relocation of transit stops, full or partial street closures, construction entrances, etc., especially where adjacent to residents and businesses.

Other Relevant Analyses

Other types of analyses that may be requested in the MTA include:

- Evaluating existing median island, modifications to an existing median island, or evaluating a proposed median island with the project traffic.
- New median island required by the project
- Acceleration or deceleration lanes (typically along Expressways).
- Average Daily Traffic (ADT) volumes and speeds
- Drive-thru use – adequate stacking, sight distance at driveways, etc.
- Emergency vehicle access (on private property).
- Mid-block pedestrian crossings and relevant traffic control devices



Figure 26 Main Street. Milpitas' Multimodal Streets. Narrow roadway width reduces speed improving walking, bicycling environment

Appendix A. Transportation Related General Plan Policies

Land Use	
Goal LU-1	Accommodate a well-balanced mix of land uses that meets the diverse needs of Milpitas residents, businesses, and visitors with places to live, work, shop, be entertained, and culturally enriched
Policy LU 1-1	Support a full spectrum of conveniently located residential, commercial, public and quasi-public uses that support and enhance business development, regional transportation objectives and promote livability of residential neighborhoods
Policy LU 1-8	Maintain equitable land use patterns to ensure that all residents in neighborhoods have access to community amenities and transportation choices, and have safe places to walk and bike
Special Planning Areas	
Goal LU -2	Promote land use objectives and development patterns in special planning areas consistent with adopted specific plans, overlay districts, and density bonus provisions
Local and Regional Land Use	
LU 3-1	Support regional efforts that promote higher densities near major transit and travel facilities and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking and public transit. Support local and regional land use decisions that promote safe access to and the use of alternatives to auto transit.
LU 3-2	Continue to utilize planning tools (including specific plans and overlay districts) that promote transit-oriented and mixed-use development objectives near the Milpitas Transit Center
Transportation Land Use	
Goal LU-4	Coordinate and integrate land use and transportation objectives
LU 4-1	Coordinate land use and development decisions with the capacity of the transportation systems and plans for future transportation improvements. (See the Circulation Element for additional policies related to transportation and circulation).
LU 4-2	Emphasize efforts to reduce regional vehicle miles traveled by supporting land use patterns and site designs that promote active modes of transportation, including walking, biking, and public transit.
LU 4-3	Support conveniently located neighborhood-serving commercial centers that provide desired services to local neighborhoods workers and visitors, reduce automobile dependency and contribute positively to the surrounding neighborhoods
LU 4-4	Encourage new development to facilitate pedestrian, bicycle and transit access through techniques such as minimizing building separation from public sidewalks; providing safe, direct, accessible, convenient, and pleasant pedestrian connections; including secure and convenient bike storage; and orienting building entrances to transit service

New Development	
LU 5-7	In considering land use change requests, consider factors such as compatibility with the residential surrounding, privacy, noise, and changes in traffic levels on residential streets.
Commercial Centers	
LU 6-4	Maintain viable neighborhood-serving commercial uses throughout the City in order to serve surrounding neighborhoods and minimize vehicle miles traveled. Encourage a diverse mix of commercial uses including retail, service, office, entertainment, and assembly uses.
Job Generation	
LU 7-1	Increase high wage job growth and capitalize on Milpitas' location within Silicon Valley, regional transportation facilities, and educated and skilled work force.
LU 7-3	Encourage the development of new industrial, manufacturing, and business park areas and the redevelopment of existing older or marginal areas with new similar uses, especially those in locations which facilitate efficient multi-modal commute patterns. Use available public financing to provide necessary infrastructure improvements to encourage economic development and revitalization.
LU 7-5	Encourage the provisions of employee-serving amenities in workplaces, such as parks and plazas, outdoor seating areas, fitness facilities, daycare centers, bicycle storage areas and showers. This policy is particularly applicable to the Business Park Research & Development and areas of higher intensity job centers as a means to reduce vehicle trips, encourage walking and bicycling, and support air quality, public health, and sustainability goals.
Circulation and Transportation Network	
Goal CIR-1	Provide a transportation system that efficiently and equitably supports the City's land use vision, minimizes vehicle miles traveled (VMT), enhances connectivity of the existing network, and supports the use of all modes of transportation
CIR-1	Prioritize and measure infrastructure and facility safety on streets and public right-of-way.
CIR-2	Ensure that the City's transportation system supports planned land uses and removes barriers to all types of transportation options as envisioned in the Land Use Element
CIR-3	Promote interconnectivity of the transportation network in existing and new developments and actively measure the quality of conditions in neighborhoods to better understand what barriers exist in order to support use of and access to the network
CIR-4	Coordinate development of safe, inclusive and health-promoting transportation infrastructure with local, county, regional, and

	state agencies to optimize efficiency of the transportation network for all users and increase opportunities for physical activity for all types of users.
CIR-5	Encourage reduced block size in new developments to develop a grid or modified grid network to enhance walkability.
CIR-6	Continue to participate in county and regional transportation processes through VTA and MTC to facilitate interagency coordination and education, maintain awareness of programmatic and funding opportunities, and advocate for the City's interests for the community.
CIR-7	Coordinate with neighboring jurisdictions regarding planned developments and transportation improvements that impact communities in both jurisdictions.
CIR-8	Prioritize multi-modal infrastructure improvements that improve pedestrian, bicyclist and transit user safety and equity for inclusion in the CIP
Action CIR-1a	Adopt a Vision Zero or similar policy with a goal of eliminating severe injury and fatal collisions
Action CIR-1b	Update the City's functional classification system as needed to support the City's future land use and multimodal transportation vision
Action CIR-1c	Adopt the methodology developed by the VTA to estimate Vehicle Miles Traveled (VMT) generated by development projects to determine transportation impacts under CEQA (to meet SB743 requirements, which require use of VMT rather than Level of Service (LOS) to measure transportation impacts).
Action CIR-1d	Establish modal priorities through the functional classification system for streets to guide the selection of viability of appropriate locations for infrastructure to serve pedestrians, transit, bicyclists, and vehicular traffic.
Action CIR-1e	Develop performance measures to assess progress in implementing projects and strategies to achieve city goals. Examples of performance measures included reduced collision or injury rates, Bicycle Level of Traffic Stress ratings, and improvements to transit travel time.
Action CIR-1f	Require new developments to provide public access and infrastructure, as appropriate, that supports internal connectivity, multimodal transportation, and integration into the surrounding transportation networks. Examples include dedication of easements and development of connections between cul-de sacs.
Action CIR-1g	Street design should be undertaken through consultation among multiple departments, including Public Works, Planning, Police, and Fire departments, to ensure that the streets meet multiple City goals and serve the adjacent land uses.
Action CIR-1h	Design streets to operate with vehicles speeds that are safer for all users, especially pedestrians and bicyclists while providing adequate access for emergency vehicles. Speed reduction

	strategies include reduced lane widths and application of traffic calming measures in accordance with the street's designated functional classification.
Action CIR-1i	Minimize parking spillover from commercial areas, transit stations, or other destinations into residential neighborhoods through the implementation of preferential parking permit programs or other strategies.
Action CIR-1j	Seek opportunities to eliminate or close walking and bicycling network gaps across barriers to mobility, including I-680, I-880, SR 237, and the Union Pacific and BART tracks.
Action CIR-1k	Discourage pass-through vehicle traffic on local residential streets and promote high-quality streetscapes that encourage walking and biking.
Operations Policies	
CIR 1-9	Evaluate the impacts of development proposals and capital improvements on intersection and roadway operations using measures that may include Level of Service. Higher levels of delay may be considered acceptable at selected high activity locations where mitigations ¹ would negatively impact other transportation modes.
CIR 1-10	Strive to maintain CMP LOS standards and goals for the CMP Roadway System in Milpitas
CIR 1-11	Maintain acceptable service standards for all major streets and intersections for all modes of transportation, with an emphasis on comfort and safety to increase choices for pedestrians and people who ride bicycles. Examples of multimodal evaluation considerations may include tradeoffs between addition of turn lanes and the resulting impacts to continuity of bike lanes or increases in pedestrian crossing distance and delay.
CIR 1-12	Identify strategies to maximize person throughput to support the efficient and safe mobility of people, regardless of transportation mode. Approaches to achieving this may include transportation systems management (TSM), intelligent transportation systems (ITS), traffic signal coordination, and transit signal priority.
Action CIR 1-11	<p>As part of the development review process, the Planning Department and Engineering Department shall require developers to complete and fund the following:</p> <ul style="list-style-type: none"> • Fund transportation analyses to ensure that the site design incorporates City transportation goals, policies, and standards, identifies the effects of their project on the local transportation system and impacts on human health and safety and identifies improvements, including

¹ Senate Bill 743 mandated that LOS can no longer be used to measure significant transportation impacts and recommends adoption of VMT as the metric used to measure significant transportation impacts. Consistent with State direction, Milpitas City Council adopted an updated Transportation Analysis Policy (May 18, 2021) which identifies VMT as the metric for measuring potential significant transportation impacts for land development.

	<p>improvements to maintain adopted LOS standards for operations at signalized city-controlled intersections.</p> <ul style="list-style-type: none"> • Address the project's proportional share of the effects on the City's circulation network through payment of fees, and • For local project-related circulation effects requiring improvements that are not included in an adopted fee program, either complete the necessary improvements or pay a proportional share of the cost.
Action CIR-1m	<p>Develop offsetting improvements that recognize where traffic congestion cannot be mitigated² and accept congestions levels that do not meet the citywide LOS or queueing standards. Examples of such standards may include, but are not necessarily limited to:</p> <ul style="list-style-type: none"> • Where constructing facilities with enough capacity to meet the LOS standard is found to be unreasonably expensive, as determined collaboratively by Engineering and Planning. • Where conditions are worse than the adopted LOS standard and are caused primarily by traffic from adjacent jurisdictions. • Where maintaining the adopted LOS standard will be a disincentive to use transit and active transportation modes (i.e., walking and bicycling) or to the implementation of new transportation modes that would reduce vehicle travel. Examples include roadway or intersection widening in areas with substantial pedestrian activity or near major transit centers.
Action CIR-1n	<p>On streets where substandard service levels are anticipated, investigate and implement improvement projects that will enhance traffic operations but not compromise pedestrian, bicyclist or transit rider safety and accessibility.</p>
Action CIR-1o	<p>Continue to monitor traffic service levels and implement improvements prior to deterioration in levels of service to below the stated standard.</p>
Action CIR-1p	<p>For collectors and arterials east of Interstate 880 operating at baseline LOS F, require any development project that impacts the facility at or greater than one percent of facility capacity to implement mitigation³ measures to reduce the development</p>

²Senate Bill 743 mandated that LOS can no longer be used to measure significant transportation impacts and recommends adoption of VMT as the metric used to measure significant transportation impacts. Consistent with State direction, Milpitas City Council adopted an updated Transportation Analysis Policy (May 18, 2021) which identifies VMT as the metric for measuring potential significant transportation impacts for land development.

³Senate Bill 743 mandated that LOS can no longer be used to measure significant transportation impacts and recommends adoption of VMT as the metric used to measure significant transportation impacts. Consistent with State direction, Milpitas City Council adopted an updated Transportation Analysis Policy (May 18, 2021) which identifies VMT as the metric for measuring potential significant transportation impacts for land development.

	project's impacts below the one percent level. These mitigations ⁴ shall not adversely impact the safety, circulation, or accessibilities of pedestrian, bicycle, and transit travel. If an identified location cannot be mitigated ⁵ , measures designed to improve systemwide levels of service can be implemented. These system-wide improvement strategies will be contained in the Citywide Deficiency Plan.
Complete Streets	
Goal CIR-2	Provide safe, healthy, comfortable, equitable and efficient transportation choices for all modes of transportation that enable people of all races, cultures, ethnicities, religions, sexual orientation, genders, income levels, ages and abilities, especially people of color and those disproportionately affected by access to a personal vehicle, systemic transportation inequities, racism, oppression, and poverty to increase safe physical activity, reduce usage of personal vehicles, access goods and services, employment opportunities, and for personal travel to provide for efficient goods, movement.
Policies	
CIR 2-1	Promote multimodal transportation options by development an interconnected system of streets, roads, bridges, and highways that provides continuous, efficient, safe and convenient travel for all users regardless of mode, age or ability and encourage users to walk, ride a bicycle, or use transit for shorter, local trips.
CIR 2-2	Design intersections to safely and comfortably accommodate all transportation modes and users, especially those who are disproportionately impacted by health, income, or access disparities.
CIR 2-3	Seek opportunities to implement and assess traffic calming strategies that reduce vehicle speeds and establish a safer, more comfortable environment for pedestrians and bicyclists.
CIR 2-4	To enhance the City's multimodal network in a cost-effective and forward-thinking manner, view all public capital improvement project as opportunities to enhance mobility, access, health and safety for all modes of transportation, especially for those who are more vulnerable.
CIR 2-5	Ensure adequate routes to meet needs of truck traffic to serve the needs for regional and local goods movement.

⁴ Senate Bill 743 mandated that LOS can no longer be used to measure significant transportation impacts and recommends adoption of VMT as the metric used to measure significant transportation impacts. Consistent with State direction, Milpitas City Council adopted an updated Transportation Analysis Policy (May 18, 2021) which identifies VMT as the metric for measuring potential significant transportation impacts for land development.

⁵ Senate Bill 743 mandated that LOS can no longer be used to measure significant transportation impacts and recommends adoption of VMT as the metric used to measure significant transportation impacts. Consistent with State direction, Milpitas City Council adopted an updated Transportation Analysis Policy (May 18, 2021) which identifies VMT as the metric for measuring potential significant transportation impacts for land development.

CIR 2-6	Provide thoughtful circulation and off-street parking and loading facilities for trucks while not compromising pedestrian or bicycling access to goods and services.
CIR 2-7	Provide inclusive and diverse wayfinding measures to provide directional guidance for pedestrians, bicyclists, and transit riders.
Action CIR-2a	Adopt multimodal performance measures to quantify the quality of accommodations that are desirable for each transportation mode.
Action CIR-2b	Adopt traffic calming metrics and strategies to reduce vehicle speeds, enhance safety, increase options for physical activity and account for the needs of emergency vehicle access.
Action CIR-2c	Develop a traffic calming plan including priority corridors, specific locations, and an implementation strategy.
Action CIR-2d	Coordinate with Caltrans to implement complete streets and traffic calming projects along state highways.
Action CIR-2e	Provide training in complete streets principals, planning, and design to City staff in Public Works, Planning, Police, Fire and other departments (as appropriate) to help ensure consistency in the interpretation of City policies and the routine incorporation of appropriate infrastructure designs to achieve multimodal access, safety for users, and other City goals.
Action CIR-2f	Limit trucks to routes except where they must deviate to access local delivery destinations, per Section V11.12.05 of the Municipal Code.
Action CIR-2g	Clearly sign and provide information to inform users of the appropriate routes.
Action CIR-2h	Ensure that adequate pavement depth, lane widths, bridge capacities, loading areas, and turn radii are maintained on designated truck routes and transit corridors.
Action CIR-2i	Develop wayfinding system to support pedestrian access to major destinations, including transit stations and commercial areas.
Action CIR-2j	Provide dedicated staff support to work with transit providers, local businesses, and the public to develop and implement effective transportation demand management (TDM) strategies.
Action CIR-2k	Enhance community education to raise awareness of the City's priorities in designing streets, including increased safety for users of all transportation modes.
Transit	
Goal CIR-3	Support the development and maintenance of the public transit system to provide integrated accessible, convenient, safe, equitable, health-promoting, comfortable, and effective mobility options.
POLICIES	

CIR 3-1	Coordinate with VTA and BART to design and implement capital improvements that support safety and access to rail stations and bus stops.
CIR 3-2	Coordinate transit planning and provision of transit-supportive infrastructure with CALTRANS, VTA, BART, and other service providers to provide seamless service for users across transit modes and to facilitate transfers.
CIR 3-3	Work with local stakeholders and VTA to ensure that paratransit services adequately meet the needs of people with disabilities in Milpitas.
CIR 3-4	Ensure that all transit-supportive infrastructure, sidewalks, and bike lanes are adequately maintained to provide high-quality facilities for users.
Action CIR-3a	Prioritize, install, and maintain bus stop amenities to enhance the transit user experience, especially for vulnerable populations, including shelters benches and lighting.
Action CIR-3b	Support regional planning efforts for the development of mass transit facilities such as transit priority for designated bus rapid transit, transit signal priority, bus queue jump lanes, exclusive bus queue jump lanes, exclusive transit lanes, and other transit preferential treatments, where appropriate.
Action CIR-3c	Coordinate with transit agencies and local stakeholders to pursue development of feeder services and/or a local circulator to carry commuters to transit stations, such as shuttle connections from businesses, residences, attractions, and schools to bus and rail services.
Bicycle/Pedestrian/Trails	
GOAL CIR-4	Promote, provide, and maintain an expanded, safe, convenient and comprehensive network of facilities for pedestrians and bicyclists of all ages and abilities to support walking and bicycling as viable modes of transportation, for recreational use, and to promote public health.
Policies <i>Active Transportation</i>	
CIR 4-1	Encourage a shift to active transportation modes by expanding and enhancing current pedestrian and bicycle facilities to accommodate pedestrians and bicyclist to all ages and abilities and encourage all users to reduce vehicle trips and utilize active transportation options with an increase in density of pedestrian and bicycle-supportive infrastructure.
CIR 4-2	Link and expand City pedestrian and bicycle circulation facilities to existing and planned local and regional networks, with an emphasis on expanding infrastructure options near transit.
Action CIR-4a	Prioritize, fund, and implement a comprehensive system of sidewalks, bikeways, and off-street trails that connects all parts of the City as identified in the Bikeway and Pedestrian Master Plan

	and Trails Master Plan and in accordance with the City of Milpitas Municipal Code.
Action CIR-4b	Invest in and support Safe Routes to School efforts – including infrastructure improvements education and encouragement programs, and enforcement activities – to encourage walking and bicycling to school and to support the reduction of greenhouse gas emissions and vehicle miles traveled, with an emphasis on areas near schools where higher health disparities are present and traffic conflicts are common.
Action CIR-4c	Support bicycle education programs for people of all ages and abilities.
Action CIR-4d	Distribute the Municipal Bicycle Map, Trail Map, bicycle safety information and other related materials on the City's web site, at City buildings and schools, and special events.
Action CIR-4e	Update the Municipal Code to include street standards and a wayfinding program to improve the appearance and enjoyment of public streets and sidewalks in Milpitas, particularly with regards to landscaping, street furniture and the identification of significant entryways and corridors.
Action CIR-4f	In conjunction with neighboring jurisdictions, establish a safe and viable bike share program that will serve communities throughout Milpitas.
Action CIR-4g	Adopt policies to ensure that bikeshare and other micro mobility modes are safe for the user, do not create significant lifecycle environmental impact, and do not create a public nuisance on sidewalks or other public and private outdoor amenities.
Action CIR-4h	Adopt policies to ensure that bikeshare and other micro mobility modes are available in neighborhoods throughout Milpitas, including disadvantaged neighborhoods, but do not create additional access barriers for vulnerable populations.
Action CIR-4i	Develop guidelines and priority locations for implementing enhanced pedestrian crossings and safe, adequate infrastructure for pedestrians and bicyclists.
Policies <i>Multimodal Network Enhancement</i>	
CIR 4-3	Encourage walking, biking and transit use by prioritizing and implementing “first-mile/last mile” improvements, wayfinding and educational efforts in the vicinity of the Great Mall transit center, light rail stations, the BART station, and heavily used bus stops.
CIR 4-4	Provide secure bicycle parking and end-of-trip support facilities (publicly accessible lockers, changing rooms and showers) at centers of civic, retail, recreation, education, and work activity.

CIR 4-5	Support building bridges or undercrossings across creek channels, railroad lines and roadways in a manner that will enhance safety improve network connectivity and facilitate bicycling and walking between high density residential developments, retail centers, civic buildings, and recreational centers.
CIR 4-6	Eliminate gaps in the pedestrian and bicycle network, especially between neighborhoods, trails that access schools, and areas with higher health disparities.
Action CIR-4j	Modify the Milpitas Zoning Ordinance to require the amount, type and location of bicycle parking, to be determined based on land use to best serve the needs of employees, customers, and visitors.
Action CIR-4k	Modify the Milpitas Zoning Ordinance to include requirements for new developments to provide end-of-trip facilities such as on-site showers, changing rooms, and clothing storage lockers where feasible.
Action CIR-4l	Require developer contributions toward pedestrian and bicycle capital improvement projects, bicycle parking, and first and last-mile connections to promote active modes of transportation and install needed infrastructure.
Action CIR-4m	Develop a local wayfinding signage system to support the City's bicycle facilities network and guide users to destinations including commercial centers and transit stations.
Action CIR-4n	Provide accessible pedestrian signals and appropriate signal timing to pedestrian crossings at priority locations, including the transit center and BART station, senior residential complexes, civic buildings, schools, libraries and medical facilities.
Action CIR-4o	Identify pedestrian facilities which are not ADA compliant throughout the City and implement necessary improvements.
Action CIR-4p	Require sidewalks to be provided on both sides of the streets throughout the City as a condition of development approval, to ensure pedestrian access that is comfortable, convenient, and serves the needs of all users. Encourage exceedance of minimum standards, especially at locations where large numbers of pedestrians are anticipated.
Action CIR-4q	Make improvements to roads, signs, and traffic signals as needed to improve accessible, safe, and convenient bicycle and pedestrian travel.
Action CIR-4r	Review City street improvement standards to see if there are ways to decrease high stress walking and bicycling environments and increase walking enjoyment and safety, particularly with regards to increased sidewalk width, landscape buffers between sidewalk, streets and pedestrian lighting, and other amenities.
Action CIR-4s	Provide bicycle actuated traffic signal detection

Action CIR-4t	Include evaluation of bicycle and pedestrian facility needs in all planning applications for new developments and major remodeling or improvement projects.
Transportation Demand Management	
Goal CIR-5	Implement measures that increase transit use and other non-motorized travel modes that lead to improved utilization of the existing transportation system, such as accessibility improvements to public transit stops and stations by walking and biking, and provide transit stops near employment centers and higher density residential developments and in areas where infrastructure is lacking and access without a car is unsafe.
Policies	
CIR 5-1	Develop, implement, and monitor vehicle trip reduction requirements for large development projects – including all land use types – to minimize the impact of new development on traffic congestion and to reduce vehicle emissions.
CIR 5-2	Adopt a citywide TDM ordinance to require and encourage vehicle trip reduction at employment sites, businesses, and multi-unit residential facilities, and hire dedicated staff to work closely with communities throughout the City on ongoing education and encouragement efforts.
CIR 5-3	Encourage existing employers to adopt strategies to implement programs to reduce employee vehicle trips, including purchasing passes through VTA's annual transit pass program, providing facilities such as secure bike parking, lockers, changing rooms, and showers, telework, and flexible work schedules.
CIR 5-4	Encourage developers to provide enhanced TDM programs and alternative transportation infrastructure that exceeds minimum requirements in exchange for reduced parking requirements, with a focus on priority development areas and locations in proximity to high capacity transit.
CIR 5-5	Cooperate with other private entities and public agencies to promote local and regional transit serving Milpitas
Action CIR-5a	Provide incentives to developers to unbundle parking from tenant rents.
Action CIR-5b	Explore development of a privately-operated citywide transportation management association to facilitate implementation of TDM strategies on a broader scale and enable participation from small employers and residential complexes.
Action CIR-5c	Encourage
	Flexible strategies to maximize the efficient use of the available parking supply. Review and modify existing City parking requirements to reduce barriers to incoming development.
Sustainability	
Goal CIR-6	Support and expand the City's efforts to promote economic, environmental and social sustainability through initiatives to

	reduce greenhouse gas emissions and other air pollutants, reduce runoff, promote public health, equity and engage the community in an inclusive planning process.
Policies	
CIR 6-2	Support development of healthier communities through the use of lower or non-polluting modes of transportation to reduce GHG vehicle emissions and local air pollution levels.
CIR 6-3	Encourage walking and bicycling as strategies to promote public health and reduce the long-term transportation costs of owning and maintaining a vehicle.
CIR 6-4	Prioritize transportation improvements in part based on consideration of benefits to disadvantaged communities.
CIR 6-5	Include a robust, inclusive and interactive community engagement and educational process in transportation planning efforts to help ensure that project will address the needs of local stakeholders, especially disadvantaged populations.
CIR 6-6	Work with stakeholders to encourage the development of electric vehicle charging stations and other alternative fuel infrastructure at publicly owned locations, near businesses, and employment sites.
CIR 6-7	Develop impact fees to provide revenues to be used to construct pedestrian and bicycle infrastructure that will support new development.
Action CIR-6a	Design sidewalks and pedestrian pathways using environmental design best practices principles or other techniques to provide safe and comfortable facilities for pedestrians at ionall times of day and night.
Action CIR-6b	Develop requirements for new commercial and multifamily residential development to provide electric vehicle charging infrastructure.

Appendix B. Adopted Transportation Analysis Policy

Transportation Analysis Policy

April 2021

Purpose/Intent

The California Environmental Quality Act (CEQA) requires all California Cities to evaluate and disclose potential transportation environmental impacts of any proposed "Project". This policy establishes Vehicle Miles Traveled (VMT) as the methodology for analyzing transportation environmental impacts and establishes baseline, threshold and exemption criteria for environmental review to comply with State law. This policy also establishes the requirement of a transportation operation analysis to address transportation deficiencies and to conform with the Santa Clara County Congestion Management Program (CMP).

Policy Statement

This policy requires all projects to evaluate and disclose transportation environmental impacts by measuring Vehicle Miles Traveled (VMT) per CEQA and establishes intersection Level of Service (LOS) as an operational measure of intersection efficiency, which is not defined as a transportation environmental impact per CEQA.

Consistency with Milpitas City Policy

General Plan 2020 recognizes how land development and transportation goals affect VMT and embraces the ideals that result in reduced VMT. The general plan focuses new development in key areas, bringing together office, residential and service land uses to reduce VMT and encourage the use of non-automobile transportation modes. There are several General Plan policies that are related to VMT including CIR 1-8, Action CIR-1c, Goal CIR-2, Goal Cir-5, Goal Cir-6, CIR 6-2, CIR 6-3, LU 1-1, CON 7-1, CON 7-10; however, the following general plan goals are the most prominent in support of this new policy:

Goal CIR-1 Provide a transportation system that efficiently, Equitably and effectively supports the City's land use vision, minimizes vehicle miles traveled (VMT), enhances connectivity of the existing network, and supports the use of all modes of transportation

LU 3-1 Support regional efforts that promote higher densities near major transit and travel facilities and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit. Support local and regional land use decisions that promote safe access to and the use of alternatives to auto transit.

LU 4-2 Emphasize efforts to reduce regional vehicle miles traveled by supporting land use patterns and site designs that promote active modes of transportation, including walking, biking, and public transit.

Evaluating Vehicle Miles Traveled (VMT)

The policy formally establishes the Countywide Average VMT⁶ as the environmental baseline for land development projects. To evaluate whether a project will have a significant impact under CEQA, the City will compare the project's VMT with this baseline. For residential and office and industrial projects, a Project will have a less than significant impact if the Project results in a 15%VMT reduction compared to the baseline. For industrial projects, the 15% threshold applies to the employee commute trip only.

Evaluating Level of Service (LOS)

The City will continue to measure intersection and roadway operations to comply with the standards set by the City's General Plan and the Congestion Management Program to ensure intersection and roadway efficiency.

Applicability

All proposed projects are required to undergo environmental review as part of the City's approval process. This includes an analysis of CEQA impacts (VMT) and non CEQA operational analysis (LOS).

⁶ Countywide Average VMT for residential land uses and employment land uses in Santa Clara County obtained from the VTA Countywide Model December 2019.

In addition to establish the baseline and significant impact threshold, this policy establishes certain projects that are presumed to have a less than significant impact per the State's guidance and will not require a VMT analysis. The following is the list of projects that do not require VMT analysis.

Project Screening Criteria

The following screening criteria is recommended in alignment with Office of Planning and Research, Technical Advisory⁷. Projects shall be presumed to have a less-than-significant transportation impact if they meet any of the following screening criteria:

- **Small Projects:** All projects that generate 110 daily trips or less.
- **Retail Projects:** 100,000 square feet or less (local serving⁸)
- **Local serving City facilities:** fire stations, neighborhood parks, branch libraries, community centers
- **Restricted Affordable Housing Projects** that meet the following:
 - For 100% Affordable developments:
 - Rental developments with all units at or below 80% Area Median Income.
 - Ownership with all units at or below 100% Area Median Income.
 - For mixed-income rental developments: A 10% minimum of the total residential units must be affordable to households with income at or below 80% Area Median Income. An additional 10% minimum of the total residential units must be affordable to households with income at or below 50% Area Median Income.
 - For mixed-income ownership developments: A 10% minimum of the total residential units must be affordable to households with income at or below 100% Area Median Income. An additional 10% minimum of the total residential units must be affordable to households with income at or below 80% Area Median Income.
- For all residential development:
If the requirements for the City's Affordable Housing Ordinance (Title XII, Chapter 1 of the City's Municipal Code) or from State Density Bonus law differ from this policy, the project sponsor shall provide the larger number of affordable units and the lowest level of affordability that is required by any of these policies.
- **Transit Screening:** All land-use projects located within one half mile of a major transit stop⁹, or a stop along a high-quality transit corridor¹⁰, pursuant to State definitions for such facilities; provided the projects include all the following characteristics: Floor Area Ratio (FAR) equal to 0.75; or residential density 35 dwelling units/acre except the Metro plan area which requires a residential density of 50 dwelling units/acre and Serra Center which requires a residential density of 40 units to the acre¹¹.
 - Consistent with the applicable Sustainable Communities Strategy (SCS);
 - Does not provide more parking than required by the jurisdiction, or
 - Does not replaces affordable housing with a fewer number of moderate or high-income residential units.
- **Transportation Projects** that reduce or do not increase VMT including, but not limited to:
 - Roadway maintenance, rehabilitation, repair and safety improvements designed to improve the conditions of existing transportation facilities that do not add additional motor vehicle capacity;
 - Roadway safety devices or hardware installation such as median barriers or guardrails;
 - Roadway shoulder enhancements to provide "breakdown space", to improve safety but will not be used as automobile vehicle travel lanes;
 - Addition of auxiliary lane less than one mile designed to improve safety;
 - Installation or reconfigured traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left-turn lanes, or emergency breakdown lanes that are not utilized as through lanes
 - Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit.
 - Conversion of existing lanes to managed or transit lanes;
 - Reduction in number of through lanes.
 - Multimodal improvements that promote walking, bicycling and transit;

⁷ Office of Planning and Research, Technical Advisory on Evaluating Transportation Impacts in CEQA, (December 2018)

⁸ Land uses within a community that have neighborhood context, accessible by walking, bicyclist, transit or vehicle.

⁹"Major transit stop" means a site containing any of the following: (a) an existing rail or bus rapid transit station; (b) 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; or (c) a major transit stop that is included in Plan Bay area 2040. Pub. Res Code 21064.3, 21155(b).

¹⁰ "High-Quality Transit Corridor" means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours. Pub. Res. Code 21155(b)

¹¹ See Serra Center boundary on Heat Maps (Attachment A).

- Technology projects that optimize intersection operations, and traffic metering systems, detection, cameras and other electronics designed to optimize traffic flow;
- Installation of traffic control devices and roundabouts;
- Relocation or removal of parking; and
- Installation of publicly available alternative fuel/charging infrastructure.

Projects that do not meet the above requirements are required to evaluate and disclose potential VMT environmental impacts using the established baseline and threshold criteria. The most commonly available methods for evaluating VMT is the Santa Clara County VMT Evaluation Tool and the Travel Demand Model. Typical VMT mitigation can include multimodal transportation improvements designed to improve pedestrian, bicycle, transit facilities, parking strategies, and Transportation Demand Management (TDM) strategies that provide subsidized transit passes, carpool and shuttle programs, telecommuting, etc.

Transportation Projects

Project types that would likely lead to a measurable increase in vehicle travel such as addition of through lanes on existing or new highways, including general purpose lanes, HOV lanes, peak period lanes, auxiliary lanes or lanes through grade separated interchanges. Transportation projects that add vehicle capacity to the roadway network will be required to analyze:

- Direct, indirect and cumulative effects of the transportation project
- Near-term and long-term induced vehicle traffic in total VMT
- Consistency with state and local greenhouse gas reduction goals
- Impacts on the development of multimodal transportation networks
- Impacts on the development of diversity of land uses.

Regional Land Use Projects

For projects such as regional retail, hospitals, stadium, sports complexes, or schools not regulated by a public-school district or that require permits from local jurisdiction, a net increase in total VMT may indicate a significant transportation impact.

Transportation Operational Analysis Requirement

In addition to conforming to the VMT CEQA requirements above, land use and transportation projects may be required to conduct a Transportation Operational Analysis (TOA) to evaluate a project's adverse effects or identify operational deficiencies caused or exacerbated by a project which may include but not limited to the following:

- Intersection Level of Service Analysis
- CMP Conformance
 - Intersection LOS at CMP intersections
 - Freeway Operations
 - Queuing Analysis at freeway ramps
- Multimodal analysis of pedestrian, bicycle and transit facilities
- Traffic signal warrant studies and other intersection traffic control
- Site Access and Circulation
- Neighborhood cut-through, traffic calming, parking issues
- Other transportation related analysis as deemed necessary by the "City Engineer"

Existing Approvals

Projects that are currently approved will not require any supplemental VMT environmental review unless the "Project" requires supplemental environmental review not covered by an addendum.

Outcomes

Implementation of this policy will result in reducing VMT growth, promoting the reduction of greenhouse gas emissions, expansion of the multimodal transportation network, increased density and diversity of land uses and ultimately, meeting the State's long-term climate goals. This policy supports and aligns with the General Plan land use and transportation goals, facilitates implementation of the General Plan 2020 and supports a more sustainable City as outlined in the Climate Action Plan.

Appendix C. VMT Screening Checklist

VMT Screening Checklist

Date _____

VMT Required (Y/N) _____

Project Description (proposed square footage, number of residential units, any existing uses):

Project Location: _____

VMT Analysis Requirement Checklist: Project does not require VMT if it meets one of the following screening criteria:

Screening Criteria	Land Use 1		Land Use 2		Land Use 3	
Yes	No	Yes	No	Yes	No	
1. Small Project Screening: Projects generating 110 or less daily trips ¹²						
2. Local Serving Retail Screening: Commercial Retail 100K or less?						
3. Local Serving City Facilities: Fire stations, neighborhood parks, branch libraries, community centers						
4. Transit Screening: Transit Screening Boundaries - Is the project located within Transit boundary (See Milpitas heat maps below)? If yes, then project must meet the following, if applicable.						
A. Nonresidential density - Minimum Floor Area Ratio (FAR) 0.75;						
B. Residential density (Must meet one of the following):						
• 35 dwelling units/acre except:						
• Metro plan area which requires a residential density of 50 dwelling units/acre or						
• Sierra Center which requires a residential density of 40 units to the acre						
C. Consistent with the applicable Sustainable Communities Strategy (SCS)						
D. Does not provide more parking than required by Milpitas Code						
E. Does not replace affordable housing with a fewer number of moderate or high-income residential units. (Res. Only)						
5. Restricted Affordable Housing Projects that meet one of the following (A, B or C):						
A. For 100% Affordable projects: (2 criteria)						
• Rental projects with all units at or below 80% Area Median Income or						

¹² Use ITE *Trip Generation Manual, 11th Edition*, or other City approved trip generation reference.

• Ownership projects with all units at or below 100% Area Median Income						
B. Mixed-income rental projects:						
• A 10% minimum of the total residential units must be affordable to households with income at or below 80% Area Median Income. An additional 10% minimum of the total residential units must be affordable to households with income at or below 50% Area Median Income						
C. For mixed-income ownership projects:						
• A 10% minimum of the total residential units must be affordable to households with income at or below 100% Area Median Income. An additional 10% minimum of the total residential units must be affordable to households with income at or below 80% Area Median Income						
For all residential development: If the requirements for the City's Affordable Housing Ordinance (Title XII, Chapter 1 of the City's Municipal Code) or from State Density Bonus law differ from this policy, the project sponsor shall provide the larger number of affordable units and the lowest level of affordability that is required by any of these policies.						

VMT Required (Y/N) _____ based on the above screening.

Additional comments:
