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RESOLUTION NO. 26-180 N.C.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF VALLEJO AMENDING THE VALLEJO GENERAL PLAN BY ADOPTING THE JULY 2026 TRANSPORTATION ANALYSIS GUIDELINES AND FINDING SUCH ACTION EXEMPT FROM ENVIRONMENTAL REVIEW UNDER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) PURSUANT TO CEQA GUIDELINES SECTION 15061(b)(3)

WHEREAS, the City of Vallejo has prepared updated Transportation Analysis Guidelines to establish a consistent methodology and set of requirements for evaluating the transportation effects of development projects, including roadway operations, access and circulation, safety, pedestrian, bicycle and transit facilities, roadway adequacy, traffic calming, and appropriate transportation improvements and mitigation; and

WHEREAS, the updated Guidelines distinguish between non-CEQA transportation analysis, which may evaluate roadway operations, access and circulation, traffic safety, roadway adequacy, pedestrian, bicycle, and transit facilities, and Level of Service ("LOS"), and CEQA transportation analysis, which implements Senate Bill 743 by generally using vehicle miles traveled ("VMT") as the primary metric for evaluating transportation impacts and establishes City-specific VMT thresholds and screening criteria; and

WHEREAS, the updated Guidelines are proposed to be incorporated into the City's General Plan through a General Plan amendment and would supersede and replace the City's Interim CEQA Transportation Impact Analysis Guidelines adopted in July 2020 and revised in October 2020 (currently incorporated into General Plan 2040 as **Exhibit A**), thereby providing updated technical direction for transportation impact analysis, VMT screening, thresholds of significance, and mitigation for development and transportation projects within the City of Vallejo (the "Project"); and

WHEREAS, Vallejo Municipal Code (VMC) Section 17.04.060 provides that the Vallejo General Plan 2040 may be amended when the City finds that doing so is in the public interest; and

WHEREAS, Government Code Section 65353 requires the Planning Commission to hold at least one noticed public hearing before approving a recommendation on the amendment of a general plan; and

WHEREAS, on September 9, 2026, after giving all public notices required by State law and the VMC, the Planning Commission conducted a duly noticed public hearing and voted 7-0 to adopt Resolution No. PC26-16 recommending the City Council adopt the updated Guidelines; and

WHEREAS, on September 22, 2026, notices describing the City Council's public hearing on the updated Guidelines were mailed to all persons requesting notice pursuant to VMC Section 16.602.08, emailed to the members of the City Council, and published in a 1/8th page advertisement in the Times-Herald, a newspaper of general circulation; and

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WHEREAS, on October 13, 2026, the City Council, after giving all public notices required by State law and the VMC, conducted a duly noticed public hearing to consider and review public testimony on the updated Guidelines.

NOW, THEREFORE, LET IT BE RESOLVED that the City Council hereby finds, determines, and resolves as follows:

Section 1. Recitals.

The foregoing recitals are true and correct, and the same are incorporated herein by reference.

Section 2. Record.

The Record of Proceedings ("Record") upon which the City Council bases its decision includes but is not limited to: (1) the staff report, City files and records, and other documents prepared for the Project; (2) the evidence, facts, findings, and other determinations set forth in this Resolution; (3) the Vallejo General Plan 2040 and its Final Environmental Impact Report; (4) the Vallejo Municipal Code; (5) all designs, plans, studies, data and correspondence submitted to the City in connection with the Project; (6) all documentary and oral evidence received at public meetings and hearings or otherwise submitted to the City relating to the Project; and (7) all other matters of common knowledge to the City Council, including City, State, and federal laws, policies, rules, regulations, reports, records, and projections related to development within the City of Vallejo and its surrounding areas.

The location and custodian of the records is the Office of the City Clerk, 555 Santa Clara Street, Vallejo, California 94590.

Section 3. California Environmental Quality Act Findings.

Based on the Record as described above, and all matters deemed material and relevant prior to adopting this Resolution, the City Council hereby determines that the proposed amendment to the General Plan and adoption of the updated Transportation Analysis Guidelines are exempt from the California Environmental Quality Act (CEQA) pursuant to the common sense exemption set forth in California Code of Regulations, Title 14, section 15061(b)(3). Under this exemption, where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA.

The proposed amendment and updated Guidelines establish transportation analysis policies, procedures, thresholds, screening criteria, and methodologies for evaluating future development projects. They do not approve any development project, authorize construction, modify land-use designations or development standards, increase development capacity, fund or authorize transportation improvements, or commit the City to any particular physical project. Accordingly, the City Council finds that the proposed action will not itself result in a physical change to the environment and that it can be seen with certainty that there is no possibility that the proposed action may have a significant effect on the environment.

The City Council further finds that adoption of the proposed General Plan amendment and updated Guidelines does not approve or authorize any future development project or transportation improvement and does not commit the City to any particular future physical change. Future

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development projects and transportation improvements will remain subject to applicable CEQA requirements and will be evaluated on a case-by-case basis, based on project-specific information and substantial evidence, to determine whether additional environmental review is required.

Based on these findings, the City Council determines that the proposed amendment to the General Plan and adoption of the updated Transportation Analysis Guidelines are exempt from CEQA pursuant to California Code of Regulations, Title 14, section 15061(b)(3), and no further environmental review is required for the proposed action.

Section 4. Findings.
In accordance with VMC Section 17.04.060 and applicable State law governing General Plan amendments, the City Council hereby makes the following findings regarding the proposed General Plan amendment adopting the updated Guidelines, attached hereto as **Exhibit A** and incorporated herein by reference.

A. The proposed General Plan amendment is in the public interest.

Facts in support: *The amendment will replace the interim 2020 transportation-analysis framework with comprehensive and current procedures for evaluating transportation effects associated with future development. The updated Guidelines will provide clearer screening criteria and methodologies that will promote more consistent and appropriately scaled transportation analysis based on the characteristics of individual development projects, and thereby will improve the transparency, predictability, and efficiency of transportation review for applicants, consultants, staff, decisionmakers, and the public.*

B. The proposed General Plan amendment is consistent with and advances the Vallejo General Plan 2040.

Facts in support: *The updated Guidelines support Goal MTC-2, Mobile Community, and implement policies addressing transportation safety, citywide mobility, street performance, complete streets, transportation demand management, active transportation, infill development, and reduction of VMT. The updated Guidelines also support General Plan objectives to focus development near existing and planned transit facilities and expand alternatives to automobile travel.*

C. The Vallejo General Plan 2040 will remain internally consistent following the amendment.

Facts in support: *The amendment would remove and replace an existing transportation-analysis exhibit with an updated exhibit addressing the same subject. It will not amend the General Plan land-use map, change permitted uses or densities, increase development capacity, or modify the General Plan's growth assumptions.*

D. The proposed amendment will not be detrimental to the public health, safety, or general welfare.

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Facts in support: *The updated Guidelines will strengthen the City's ability to evaluate roadway operations, collision history, pedestrian and bicycle conditions, emergency access, VMT, and feasible mitigation. They will not authorize development or reduce existing health or safety protections.*

Section 5. Decision.

BE IT FURTHER RESOLVED that, based on the findings set forth herein and the Record as a whole, the City Council hereby amends the Vallejo General Plan by adopting the July 2026 Transportation Analysis Guidelines, attached hereto as **Exhibit A** and incorporated herein by reference, and by removing and replacing the City's Interim CEQA Transportation Impact Analysis Guidelines adopted in July 2020 and revised in October 2020, currently incorporated into the Vallejo General Plan 2040 as **Exhibit A**.

PASSED AND ADOPTED at a regular meeting held on October 13, 2026, with the following vote:

AYES:	Mayor Sorce, Vice Mayor Matulac, Councilmembers Bregenzer, Gordon, Matias and Palmares
NOES:	None
ABSENT:	Councilmember Lediju
ABSTAIN:	None

Signed by:
Andrea Sorce
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ANDREA SORCE, MAYOR

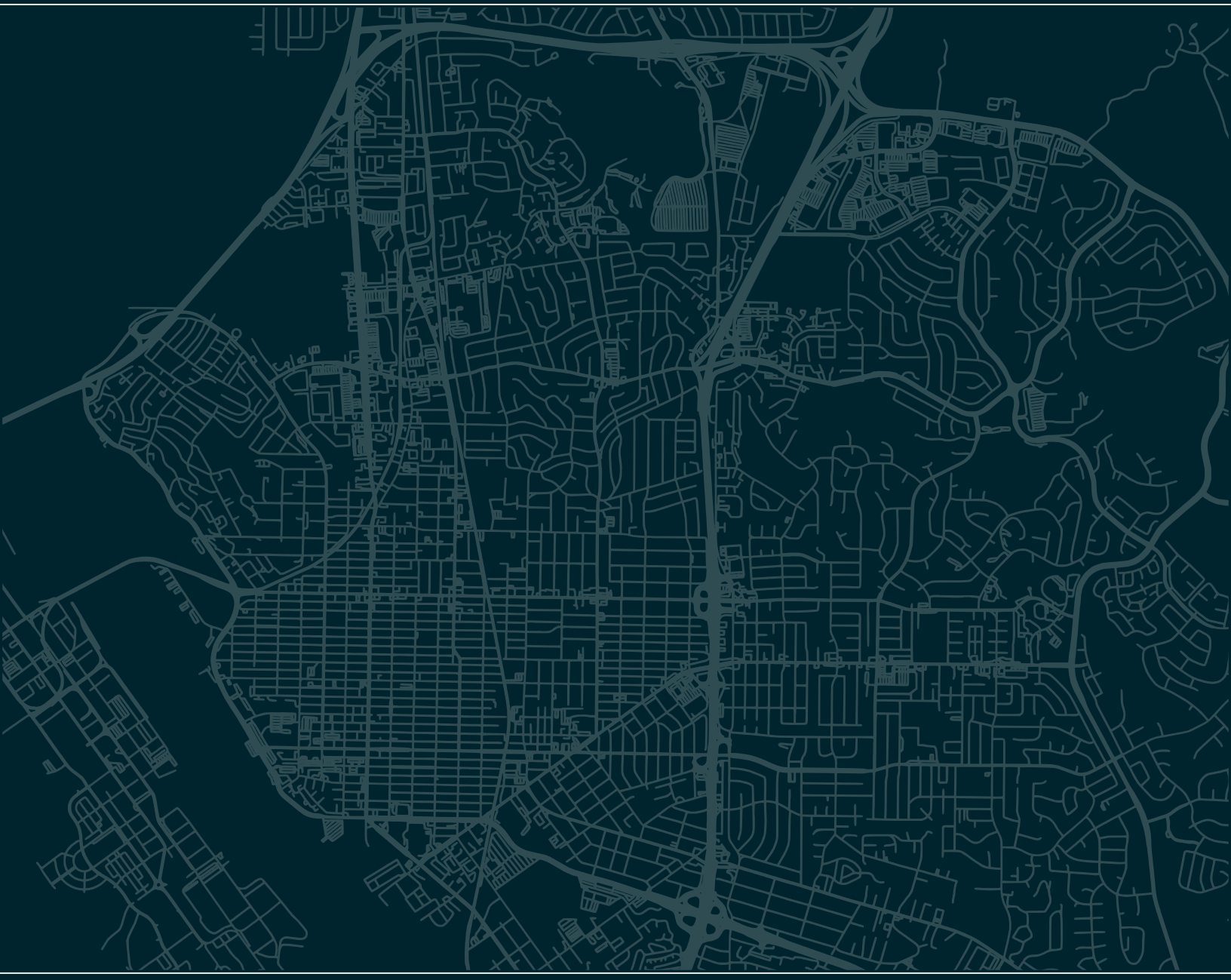
ATTEST:

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Dawn G. Abrahamson
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DAWN G. ABRAHAMSON, CITY CLERK

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City of VALLEJO California

Transportation Analysis Guidelines



Fehr & Peers

July 2026

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Introduction

These Transportation Analysis Guidelines establish general transportation impact study procedures and requirements for development projects within the City of Vallejo. They are designed for transportation engineering and California Environmental Quality Act (CEQA) professionals because of their technical contents. The term "guideline" is important: the City recognizes that every project and study context is unique. The guidelines are intended as a checklist for study preparers to ensure all required study items are included. They establish a uniform approach, methodology, and tool set to evaluate the effects of land use decisions and related transportation projects on the City's transportation system. They are not intended to eliminate professional judgment or creativity; however, the need for and final scope of a TIA shall be determined by the City of Vallejo.

The guidelines contain two sections which describe different analyses and requirements. The first section details the City's requirements related to the type of non-CEQA traffic analysis necessary for development projects, particularly as they relate to roadway levels of service (LOS). The second section details the City's transportation analysis requirements for CEQA projects, including the City's guidelines related to implementation of Senate Bill 743 (SB 743). SB 743 shifted the State of California's environmental regulations away from automobile delay and LOS to vehicle miles traveled (VMT). However, SB 743 does not prevent a city from continuing to analyze delay or level of service outside of CEQA review for other transportation planning or analysis purposes (i.e., general plans, impact fee programs, corridor studies, congestion mitigation, or ongoing network monitoring); but these metrics may no longer constitute the sole basis for CEQA impacts.

Non-CEQA Traffic Impact Analysis

The City Engineer, under the authority of the Public Works Director and recommendations from the City Traffic Engineer, will make the final decision on the requirement for a Traffic Impact Analysis (TIA) Study. The purpose of the TIA Study is to identify the impacts to traffic operations, including roadway network LOS calculations and identify feasible solutions to mitigate impacts of new development. The purpose of these guidelines is to provide the standard requirements for the preparation of a TIA study.

Traffic Impact Analysis (TIA) Study Requirement

The City's Public Works Department shall do an initial assessment of the project based upon the description and proposed land use(s). All consulting fees to perform the TIA study will be borne by the applicant. All studies shall be completed consistent with the City's General Plan and/or Solano Transportation Authority policies. The City may assume responsibility for administering the consultant agreement to perform the TIA study in certain circumstances (to be determined by the City at our sole discretion). In general, the requirement for a TIA study as part of the project review process will be based upon, but not limited to, the following criteria:

- Any project with initial traffic generation estimates showing that the project is likely to add 500 or more daily trips, and/or likely to add 100 or more trips in either peak period to the existing circulation system, without consideration of pass-by trip reductions. Phased projects must be evaluated assuming full build-out

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conditions for purposes of determining the need for a TIA.

- Any project within a 1½-mile radius of any key intersections that currently operate at a level of service (LOS) D or worse and project is likely to contribute traffic and worsen this condition.
- Any project that generates more than 40 percent of its total traffic in the form of truck traffic using passenger car equivalents (PCE).
- Any project that intensifies the usage, density, or traffic generation of the site above the level currently allowed by zoning codes, requiring a General Plan or Zoning Amendment.
- Modifications are required to the original TIA that is more than three years old, or where the increase in traffic volume as measured by ADT, peak hour, or peak hour of the critical movement is more than 10%.

Trip Generation Estimates

1. **Trip Generation Rates**: Passenger vehicle trips shall be estimated using the rates and methodologies outlined in Trip Generation, latest edition, published by the Institute of Transportation Engineers (ITE). Approval must be obtained from the Public Works Director, City Engineer, or City Traffic Engineer prior to using any other source to establish project trips.

2. **Trip Generation Basis**: The basis of all trip generation calculations will depend on the type of land use proposed. The trips generated by most commercial and industrial uses should be based on gross floor area. The trips generated by most residential uses should be based on the number of dwelling units. A basis for how trips are established, including any methodologies and assumptions shall be noted in the report. An alternate basis for estimating the project trips may be approved and/or required by the Public Works Director, City Engineer, or City Traffic Engineer for certain special uses where more appropriate and known features of the project will result in a more accurate estimate.

3. **Unknown Trip Generation Rates**: Some unique types of development or uses may not have rates/formulas published by ITE. In this case, a trip generation study may be conducted at a similar existing facility to determine acceptable trip generation rates to be used in the study. The type and location of the similar existing facility and the study methodology must be pre-approved by the Public Works Director, City Engineer, or City Traffic Engineer.

4. **Pass-By and Diverted-Link Trips**: With prior Public Works Director, City Engineer, or City Traffic Engineer approval, pass-by and/or diverted-link trips may be calculated and used in estimating the project-generated trips using the procedures specified in the latest edition of Trip Generation. The pass-by and/or diverted-link trips must be justified by appropriate calculations. However, the reduced or net trips generated by the project should not be used to analyze project driveways and intersection(s) immediately adjacent to the project site (i.e., driveways and intersections in the immediate vicinity shall be analyzed using the full trip generation of the project). Typically, pass-by trips are associated with new fast-food restaurants, gas stations, and shopping centers, etc.

5. **Truck Trips**: Truck trips shall be calculated and shown separately. Peak hour distribution of inbound and outbound trucks shall be identified separately from passenger cars. For light industrial, industrial parks and warehouse uses, trip rates contained in the latest edition of Trip Generation shall be used. All truck trips shall be converted into passenger car equivalents (PCE) for intersection capacity analysis using the following factors:

    - 2-axle trucks: 2.0 PCE
    - 3-axle trucks: 2.5 PCE
    - 4- and more axle trucks: 3.0 PCE

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Trip Distribution Assumptions

The study preparer shall specify, either independently or in consultation with the Public Works Department, the trip distribution assumptions to be used in the study and have them approved by the Department prior to completing the study. The distribution should be based on general socioeconomic characteristics of the study area, location and intensity of major trip generation and attraction centers, trip length information, origin-destination information (specifically for industrial and warehouse uses) and any other known but verifiable information. For heavy truck related uses, where truck trips comprise a minimum of 20 percent of the total generated trips after converting into passenger car equivalents, trip distribution assumptions for truck trips should be shown separately and presented in the report text and figures separately. Use of the Solano Napa Activity-Based Model (SNABM) or other approved model may be required to establish the project trip distribution.

Study Area

The scope of the TIA shall include at a minimum any key intersection or roadway segment within a one and a half (1 ½) mile radius area from the project site. All key intersections and roadway segments within this study area must be analyzed to identify impacts to capacity and LOS. The study intersections and roadway segments should be clearly identified for review and approval by the Public Works Department prior to initiating the study.

Projects located within Specific Plan areas for which a program level Environmental Impact Report (EIR) has been previously approved by the city, may be allowed to use a study area limited to the immediate vicinity of the project to determine the need for any traffic improvements, in addition to those already identified in the EIR. The TIA for this type of project must specifically identify any differences between the project and the land use assumed for the site in the Specific Plan and EIR. A meeting with Public Works or Planning Department staff will generally be necessary to discuss the specific scope of the study prior to preparing the study.

Analysis Procedure and Methodology

1. ***Traffic Counts:*** Existing average daily traffic volumes for study intersections and roadways shall be developed from 24-hour automatic machine counters or a recognized traffic counting agency or company. Existing peak period intersection turning movement volumes shall be developed from skilled personnel/technician manual counts or a recognized traffic counting agency or company. Typical count days are Tuesday, Wednesday, and Thursday of a typical non-holiday work week when local schools are in normal session. Counts taken on holidays and the day before and after a holiday should not be used. Days with abnormal traffic conditions (such as rain, construction activities, road closures, etc.) must be avoided. Counts in the vicinity of schools should be taken when the school is in session and pick-up and drop-off are occurring. New traffic counts may not be necessary if counts are available from another source such as traffic studies and/or City records if they have been obtained within the last two years and are pre-approved for use by the Public Works Department.

2. ***Peak Periods:*** Generally, both weekday morning (7 a.m. to 9 a.m.) and evening (4 p.m. to 6 p.m.) peak periods should be used in the analysis to identify traffic impacts and any level of service problems. In some cases, an off-peak or weekend period may be required as directed and approved by the Public Works Director, City Engineer, or City Traffic Engineer. The peak hours will be verified by 24-hour volume counts.

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3. ***Analysis Scenarios:*** The following analysis scenarios, in the order shown, shall be included for roadway and intersection capacity analysis:

    a. Existing Year Traffic Condition (identify any existing deficiencies)

    b. Project Opening (Near – Term) Year Base Traffic Condition

    c. Project Opening (Near – Term) Year Base plus Other Proposed Projects Traffic Condition (Obtain Other Proposed Project information from the City in advance)

    d. Project Opening (Near – Term) Year Base plus Other Projects plus Project Traffic Condition

    e. Project Opening (Near – Term) Year Base plus Other Projects plus Project Traffic Condition with Mitigations, if necessary

    f. Future Build-out Year Cumulative Base (TBD – approved projection method) Traffic Condition

    g. Future Build-out Year Cumulative Base plus Project Traffic Condition

    h. Future Build-out Year Cumulative Base plus Project Traffic Condition with Mitigations, if necessary

    Additionally, a staging analysis may be required for phased projects to identify the timing of future phases and needed mitigation measures.

4. ***Internal Circulation & Access Management:*** Include a discussion on internal circulation and proposed on-site parking. Show and discuss how vehicles would enter and exit via the main access driveways and identify any on-site or off-site circulation problems. Identify the need for signal controls using traffic signal warrants specified in the latest edition of the California Manual on Uniform Traffic Control Devices (CAMUTCD).

    Requests for site access or access modification shall be addressed in the Traffic Impact Analysis. Study recommendations shall include site access and transportation improvements needed to maintain traffic flow to, from, within, and past the site at an acceptable and safe level of service. Areas to address include:

    - Separate conflict areas. Reduce the number of access points or increase their spacing so conflict areas or maneuvering areas do not overlap.
    - Limit the type of conflict areas by preventing certain maneuvers.
    - Remove turning vehicles or queues from through lanes
    - Safety of a proposed access (sight distance both horizontally and vertically), including pedestrian features.
    - Reduce the speed differential in through lanes between through vehicles and turning vehicles.
    - Consider the impact of access points on adjacent or nearby properties on both sides of the roadway.

    Improvements include such things as: relocation, restriction, or elimination of access points, roadway widening, turning lanes, traffic signals, and pedestrian facilities.

    The number of vehicle access points should be minimized by sharing driveways and linking parking lots between adjacent uses. Commercial developments shall provide coordinated internal circulation and connected parking facilities. Well-defined accessible walkways must be designed into all parking lots, with interconnections between walkways to create safe walking conditions and access to the site from the public right of way.

5. ***Capacity Analysis Method:*** The latest version of the Transportation Research Board's Highway Capacity Manual (HCM) shall be the basis for operational delay/LOS

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calculations for signalized and unsignalized intersections. Several software packages are available for conducting LOS analysis. The latest version of the software package used must be identified in the report.

6. ***Traffic Growth:*** Use of the SNABM or other approved model may be required to determine the future traffic volumes and growth. It shall be the responsibility of the traffic consultant to obtain these from whatever source that provides the most accurate projection within that area.

   In the absence of traffic model information, the future build-out year base traffic volumes shall be estimated using an annual growth factor of 2 percent per year, unless a different rate can be justified and is approved and/or required by the Public Works Department. The horizon year for the cumulative analysis shall be the current horizon year of the SNABM travel demand model at the time of the TIA's preparation.

7. ***Traffic Impacts:*** The following criteria shall be used to assess when a project is determined to have a "significant" impact related to the operations of roadway facilities:

   The project deteriorates the operations of a signalized intersection from acceptable to unacceptable based on the level of service standard established in the General Plan.

   - The project results in a signalized intersection deteriorating from LOS E to LOS F.
   - The project adds ten or more trips to a signalized intersection projected to operate at an unacceptable level F prior to the addition of project traffic.
   - The project deteriorates the operations of a controlled movement at an unsignalized intersection from LOS E or better to LOS F, or at intersections where a controlled movement already operates at LOS F, one of the following:
     - Project traffic results in satisfaction at the peak hour volume traffic signal warrant; or
     - Project traffic increases minor movement delay by more than 30 seconds; or
     - Where the peak hour volume signal warrant is met without project traffic and delay cannot be measured, project increases traffic by 10 or more vehicles per lane on the controlled approach.
   - The addition of project traffic at a study intersection would result in the 95th percentile vehicle queue exceeding the available storage or would increase 95th percentile queue by more than two vehicles (50 feet) where the queue already exceeds the available storage space (for example, vehicle queues spilling back from ramp terminal intersections to the freeway mainline, or vehicle queues extending beyond the available turn pocket length, impeding travel in the adjacent lanes).

8. ***Mitigation Requirements:*** The report should identify level of service problems under existing conditions and identify measures that will provide an acceptable LOS. These measures shall be assumed to be in place for subsequent analyses. Mitigation measures must be identified for intersections that show a significant project impact per item 7 above and operate at LOS E or worse under the conditions identified in Items 3d and/or 3g above. The LOS with mitigation must be improved to LOS D or better for intersections and LOS C or better for roadway segments, under the conditions identified in Items 3e and/or 3h above. Identify mitigation measures for both opening year and future build-out year conditions. Mitigation measures may need to be identified for other conditions, depending on the project phasing and timing.

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9. ***Mitigation Fair-share Cost Calculations:*** The percentage of fair-share for the project shall be calculated at each location using the total trips generated by the project divided by the total "new" traffic, which is the net increase in traffic volume from all proposed projects (Other Projects plus Project) and growth. The cost of mitigation shall be estimated using verifiable cost estimates from reliable and recognized sources. Fair-share cost of mitigation shall be calculated using the fair-share percentage of the project volumes multiplied by total estimated cost of mitigation.

10. ***Sight Distance:*** Sight distance restrictions shall be addressed in the TIA. Sight distance is the length of roadway visible to the driver. Specified areas along intersection approach legs and across their included corners should be clear of obstructions that might block a driver's view of potentially conflicting vehicles. These specified areas are known as clear sight triangles. The dimensions of the legs of the sight triangles depend on the design speeds of the intersecting roadways and the type of traffic control used at the intersection. Intersection sight distance calculations shall be based on the most recent edition of the AASHTO Manual or Caltrans Highway Design Manual.

11. ***Alternate Modes of Transportation:*** The TIA shall identify other transportation modes that may be applicable, such as transit use, bicycle, and pedestrian facilities. New developments are encouraged to implement Transportation Demand Management practices and introduce methods for trip reduction.

12. ***Safe Walking Conditions:*** The TIA must consider pedestrian connections and provision of safe and accessible walking routes. It shall consider sidewalks and other planning features to assure safe walking conditions. For sites near schools, the TIA will consider how site conditions will support safe routes to school for students.

13. ***Road Adequacy:*** The TIA shall include detailed discussion and analysis of the adequacy of roads serving the site and within the project. Recommendations for needed upgrades to local roadways shall be included in the TIA. For projects with significant heavy vehicle traffic, a preferred access route to/from the site for most heavy vehicle trips will be identified and the road segment's traffic index along that route will be analyzed.

14. ***Collision History:*** The TIA shall evaluate the most recent five years of vehicle, pedestrian, and bicycle collision data for all study intersections plus roadway segments in proximity to the project site as determined by the scope of work. The analysis shall:

    - Calculate street segment and intersection collision frequencies based on existing geometric configurations and five years of collision data.
    - Identify if there are crash patterns in the data by analyzing vehicle, pedestrian, and bicycle collisions by collision type, severity, primary collision factor, and movement. Summarize findings and observations, and collision rate using tables and narrative. For additional guidance, see chapters 5 and 6 of the AASHTO Highway Safety Manual (HSM).
    - Determine if the project would contribute to an existing problem or if any improvements are recommended to alleviate potential effects of the project. Consult the Federal Highway Administration's Crash Modification Factor (CMF) Clearinghouse and/or Part D of the HSM to identify potential needed safety treatments at study intersections. Review available CMFs related to assess potential treatments for the purposes of addressing project effects on safety. Identify the CMFs that are applicable based on the study

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intersection characteristics and the source of the CMFs. Include a listing of CMF values, CMF standard errors (if given), and CMF quality based on FHWA 5-star rating system, with a focus on CMFs with 4-star or 5-star ratings.

- Identify potential improvements to geometric design, lane configuration, and/or signal equipment to improve transportation safety at study intersections.

15. ***Traffic Calming:*** Internal traffic calming shall be incorporated into all developments to control cut-through traffic and reduce speed within the development. The Traffic Impact Analysis shall identify and propose specific traffic calming measures and locations to be incorporated in the development. Traffic calming shall be aesthetically pleasing. Public transportation shall also be evaluated. The traffic-calming plan shall include an overall drawing of the development and identify specific locations and features to be included in the development. The proponent's traffic engineer shall work with the City Traffic Engineer to develop a traffic-calming plan for the development.

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Report Format

To address traffic impact concerns, the TIA report shall contain the following:

Cover Page with an appropriate title of the Study and applicable application numbers, Preparer's name, mailing address, email address, phone and fax numbers, and preparation date.

Certification Page with a statement indicating that the study has been prepared by, or under the supervision of, a registered traffic engineer or professional engineer licensed to practice as a traffic engineer, and the preparer's signature and seal of registration.

Table of Contents

An **Executive Summary** (describing the study scope and findings) **Introduction** – (describing the project and the purpose of the study) **Data Collection, Data Source and Analysis Methodology**

Documentation of Analysis and Findings (details may be included in an appendix)

Identification of traffic impacts associated with the project

Identification of measures required to mitigate the traffic impacts associated with the project and their timing, if needed

Project Mitigation Fair-Share Cost Calculation as a percent of impact, if needed

Figures showing, at a minimum, the following:

- Vicinity Map
- Site Plan showing project driveways
- Existing traffic volumes (peak hours and ADT)
- Existing intersection lane configuration and traffic control Location of Related Projects
- Cumulative traffic volumes from other projects Project trip distribution percentages
- Project related traffic volumes, including at site-access driveways Project opening year cumulative traffic volume
- Build-out year traffic volume with Project
- Future lane configuration and traffic control used in future analysis
- Future lane configuration and traffic control used in future analysis with identified mitigation, if necessary.

Tables showing, at a minimum, the following:

- Project trip generation
- Other projects' trip generation
- Intersection Capacity Analysis results for various scenarios, identifying locations with significant impacts that require mitigation, if necessary
- Mitigation Measures, if necessary
- Calculation of Project's fair-share cost of mitigation, if necessary

Discussion of **internal circulation and access management**

Sight distance and safety at intersections and access points Transit, pedestrian, and bike access opportunities

Roadway adequacy

Conclusion

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CEQA Transportation Assessment

This section describes the transportation analysis guidelines that establish general procedures and requirements for the preparation of California Environmental Quality Act compliant transportation studies for land-use development projects within the City of Vallejo. The guidelines outlined in this section shall be used in the preparation of the analysis contained within the transportation and circulation section of a CEQA document. This CEQA Transportation section is a standalone document different and separate from the TIA report outlined on pages 1 through 8 of this document. In general, the guidelines are designed for use by transportation engineering and CEQA professionals. These guidelines supersede and replace the City of Vallejo's prior guidelines on this topic (*City of Vallejo CEQA Transportation Impact Analysis Guidelines*, Fehr & Peers, July 2020, Revised October 2020).

SB 743 and the Updated CEQA Guidelines

Senate Bill 743, signed by the governor in 2013, changed the way transportation impacts are identified and measured in California. Specifically, the legislation directed the then Office of Planning and Research (now the Office of Land Use and Climate Innovation/LCI) to consider different metrics for identifying transportation impacts under the California Environmental Quality Act. OPR/LCI released its *Technical Advisory on Evaluating Transportation Impacts in CEQA*[1] in December 2018 in conjunction with the formal adoption of the CEQA Guidelines requiring vehicle miles traveled analysis for CEQA transportation analyses after July 1, 2020.

The updated guidelines include revised CEQA Appendix G Checklist criteria for transportation impact evaluation. The four criteria are as follows:

Would the project:

1. *Conflict with a program, plan, ordinance, or policy addressing the circulation system, including public transit, roadway, bicycle, and pedestrian facilities?*
2. *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*
3. *Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?*
4. *Result in inadequate emergency access?*

Criteria 2 addresses the implementation of the SB 743 requirement. CEQA Guidelines section 15064.3, subdivision (b) reads, in part, as follows:

1. *Land Use Projects. Vehicle-miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one half-mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.*
2. *Transportation Projects. Transportation projects that reduce, or have no impact*

[1] http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

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on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.

3. *Qualitative Analysis. If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.*

4. *Methodology. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita, per household, or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.*

Can LOS Analysis Still be Conducted as Part of Development Review?

A key element of SB 743 is the elimination of automobile delay and Level of Service (LOS) as the sole basis of determining CEQA impacts. The most recent CEQA guidelines, released in December 2018, recommend VMT as the most appropriate measure of project transportation impacts. However, SB 743 does not prevent a city or county from continuing to analyze delay or LOS outside of CEQA review as part of other transportation planning or analysis purposes (i.e., general plans, impact fee programs, corridor studies, congestion mitigation, or ongoing network monitoring); but these metrics may no longer constitute the sole basis for CEQA impacts. These guidelines provide technical direction regarding the assessment of VMT, thresholds of significance, and mitigation measures for land development and transportation projects within the City of Vallejo.

The City's General Plan 2040 establishes an advisory standard of LOS E or better, to be considered along with, but not override, metrics for pedestrian, bicycle, transit, and emergency access performance (General Plan Policy MTC-2.5). LOS can continue to be assessed relative to this standard during development review, to promote the city's interest in maintaining and operating a functional roadway network. However, assessment of a development project's effect on intersection level of service must be conducted outside the CEQA process. The assessment can be performed as part of a General Plan consistency assessment, within a separate traffic impact analysis document. Within the City of Vallejo, this is performed within a non-CEQA Traffic Impact Analysis per the guidelines on pages 1 through 8 of this document.

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Congestion Management Program Compliance Changes

SB 743 contains amendments to current congestion management law that allows cities and counties to effectively opt-out of the LOS standards that would otherwise apply in areas where Congestion Management Programs (CMPs) are still used (see Government Code Sections 65088.1 and 65088.4). Solano County's Congestion Management Program was recently updated in September 2023. The CMP network in Vallejo includes I-80, SR 37, SR 29 (Sonoma Boulevard), Curtola Parkway, Mare Island Way, and Tennessee Street west of I-80. Three intersections are also monitored in the CMP: Tennessee Street/Sonoma Boulevard, Tennessee Street/Mare Island Way, and Curtola Parkway/Sonoma Boulevard. The LOS standard for these intersections is LOS E. The 2023 monitoring indicated all three intersections operated at LOS D or better.

VMT Analysis

For the purposes of SB 743 compliance, a VMT assessment should be conducted for land use projects. In general, VMT is an efficiency metric and should be normalized on a per capita basis relative to the number of residents, employees, or service population depending on the project type (service population is residents plus employees).Normalizing VMT per service population, resident, or employee essentially provides a transportation efficiency metric. Using an efficiency metric allows the analyst to compare the project to the city, region, or county, for purposes of identifying transportation impacts.

For the purposes of assessing significant impacts, the City of Vallejo has established the following standards of significance.

VMT Thresholds of Significance

The following are the City of Vallejo's thresholds of significance related to substantial additional VMT:

- For **residential projects**, a project would cause substantial additional VMT if it exceeds existing citywide household VMT per capita minus 15 percent.
- For **employment projects**, a project would cause substantial additional VMT if it exceeds the existing regionwide VMT per employee minus 15 percent.
- For **regional retail projects** a project would cause substantial additional VMT if it would increase net regional VMT.
- **Mixed-use projects** shall be divided into their individual constituent parts and evaluated against their individual components' standards.

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Project VMT Screening

The State of California allows, and the City of Vallejo has adopted screening criteria that can be used to quickly assess if certain project types can be presumed to have a less than significant adverse impact relative to VMT. If a project or components of the project meet any of the adopted screening criteria, then it is presumed VMT impacts would be less than significant for the project or component of the project, and a detailed VMT analysis is not required. City staff can deny the use of screening criteria if substantial evidence suggests the project is not appropriate for screening. Projects meeting the screening criteria would not be subject to a VMT analysis for the purposes of the CEQA Transportation section; however, a project's effect on VMT, or the VMT generated by the project, would still be studied as part of the CEQA Air Quality, Greenhouse Gas, and/or Energy sections, as applicable.

The screening criteria are—in addition to other CEQA exemptions—unchanged by SB 743, including CEQA exemptions for projects consistent with an adopted General or Specific Plan (CEQA Guidelines §15183). Claiming a CEQA exemption on the basis of §15183 may carry additional legal risk in the post-SB 743 CEQA legal environment, especially if the EIR for the General Plan does not include an analysis of VMT; the city may choose to require an informational VMT analysis to prove that a project is consistent (on a VMT basis) with the land uses previously environmentally cleared as part of an adopted Specific Plan or General Plan. This approach is similar to the approach taken when CEQA Transportation section impacts were evaluated on the basis of delay and level of service, whereby a project applicant would be required to provide a trip generation memorandum prepared by a qualified consultant to demonstrate that a project adds a negligible number of trips to the roadway system.

Absent substantial evidence that the project in question might generate a potentially significant level of VMT, projects that meet at least one of the following screening criteria would be presumed to cause a less-than-significant VMT impact and would not require VMT analysis.

VMT Screening Criteria

The City of Vallejo has three key screening criteria for projects: project type, project location in a low VMT area, and project location near transit stations. A project only needs to meet one of the three screening criteria to "screen out." Projects that do not meet any of the identified screening criteria are required to conduct a detailed VMT assessment.

Screening Criteria 1: Project Type

Absent evidence indicating that a project would generate a potentially significant level of VMT, the following types of projects should be expected to cause a less-than-significant impact under CEQA and would not require further VMT analysis. Evidence indicating that a project may not be eligible to screen could include unusual or unique land use types or uses, site locations requiring atypical travel or other characteristics identified by city staff.

- Small Scale, Local-Serving Retail: Local-serving retail projects are defined as projects of less than or equal to 50,000 square feet in size on the basis that they attract trips that would otherwise travel longer distances. Local-serving retail generally improves the convenience of shopping and other activities close to home and has the effect of reducing vehicle travel.

- Transportation Projects Not Likely to Lead to Substantial Increase in Vehicle Travel: Screened transportation projects include

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transit projects, bicycle and pedestrian projects, and roadway projects that do not result in vehicle capacity increase.

- Public Services: Police stations, fire stations, public utilities, and parks do not generally generate VMT. Instead, these land uses are often built in response to development from other land uses (e.g., office and residential). Therefore, these land uses can be presumed to have less-than-significant impacts on VMT. However, this presumption would not apply if the project is sited in a location that would require employees or visitors to travel substantial distances (such as locations on the outskirts of the city or sites requiring abnormal levels of vehicle travel), and the project is not located within one half-mile of a major transit stop or does not meet the small project screening criterion.

- Small Projects: Projects that generate very few trips per day can be reasonably expected to not generate significant impacts related to greenhouse gas emissions (GHG).

  According to findings from the CAPCOA's CEQA and climate change white paper (Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, CAPCOA, January 2008), small developments that generate less than 900 $MTCO_2$ per year are considered to have de minimis impact on GHG emissions.

  The CAPCOA screening level threshold of 900 $MTCO_2$ is more conservative than the level provided historically by BAAQMD. The CAPCOA threshold is in line with the post-2020 reduction goals established by SB 32. Thus, for the purposes of this assessment, the 900 $MTCO_2$ per year screening level was examined in accordance with CAPCOA guidance. The screening level does not indicate impact significance; rather, it is intended to screen out smaller projects that do not generate substantial amounts of GHG emissions, and it allows regulatory and discretionary actions to focus on more significant sources of GHG emissions. Projects that emit less than 900 $MTCO_2$ per year would likely not be considered cumulatively considerable and would not interfere with the ability of the state to achieve its GHG reduction targets.

METHODOLOGY TO DETERMINE SMALL PROJECT TRIP THRESHOLD

The methodology for applying the de minimis GHG emissions screening threshold to develop a locally applicable VMT screening threshold involves calculating how many daily residential or commercial trips would equate to the transportation-related GHG emissions of a local development whose total annual emissions would fall under the 900 $MTCO_2$ per year level. CARB estimated the on and off-site transportation-related emissions (including energy production for transportation) to be approximately 37% of regional GHG emissions.[2] Therefore, the transportation component of a development's total emissions falling under the screening threshold would be 333 $MTCO_2$ per year.

The methodology estimates the annual GHG emissions from a given number of daily vehicle trips as the sum of vehicle starting emissions and vehicle running emissions, multiplied by an annualization factor. The vehicle starting emissions are proportional to the daily vehicle trips and the vehicle running emissions are proportional to the daily VMT, both of which are obtained from the Solano Napa Activity Based Model (SNBAM), which is locally approved and calibrated. Parameters from the California Emissions Estimator Model

[2] California Air Resources Board (November 2025). https://ww2.arb.ca.gov/sites/default/files/2025-11/nc-2000_2023_ghg_inventory_trends.pdf

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(CalEEMod) Version 2020.4.0 informed the conversion of vehicle trips and VMT to CO_2-equivalent emissions.[3] Analysis of countywide StreetLight data resulted in a VMT annualization factor of 353.

Figure 1 illustrates the subareas by which small project VMT screening should be conducted. These areas were developed through multiple runs of the SNBAM to assess geographic areas and boundaries that represent land uses with comparable and analogous travel behavior.

Table 1 shows the maximum daily residential or commercial trips that generate annual GHG emissions falling under the 333 $MTCO_2$ per year threshold, for each subarea. Developments that generate fewer daily trips than those presented in the table as the threshold can be "screened out" and presumed to have a less than significant impact on VMT.

The thresholds differ by subarea based on the average trip distance for household and employee trips. Some geographic subareas are more VMT efficient than others. **Table 2** provides more detailed information for each area.

Table 1. Small Project VMT Screening Criteria

Subarea	Daily Residential Trips[1]	Daily Employment Trips[1]
One	300	220
Two	310	180
Three	300	230
Four	330	200
Five	300	220
Six	250	110
Seven	280	200
Citywide	300	190

Source: SNABM and Fehr & Peers.
[1] Value is rounded down to the nearest 10.

EXAMPLE OF SMALL PROJECT SCREENING CRITERIA USE

To assess if a project falls below the City's small project screening criteria, an analyst would first calculate the number of daily trips that the development would generate. Then the analyst would locate the project site on **Figure 1** and compare the daily trip calculation to the values in **Table 1**. As an example, a residential project in Subarea 6 would be screened out if it generated less than 250 daily trips.

[3] CAPCOA (2021). Appendix D: Default Data Tables. https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12.

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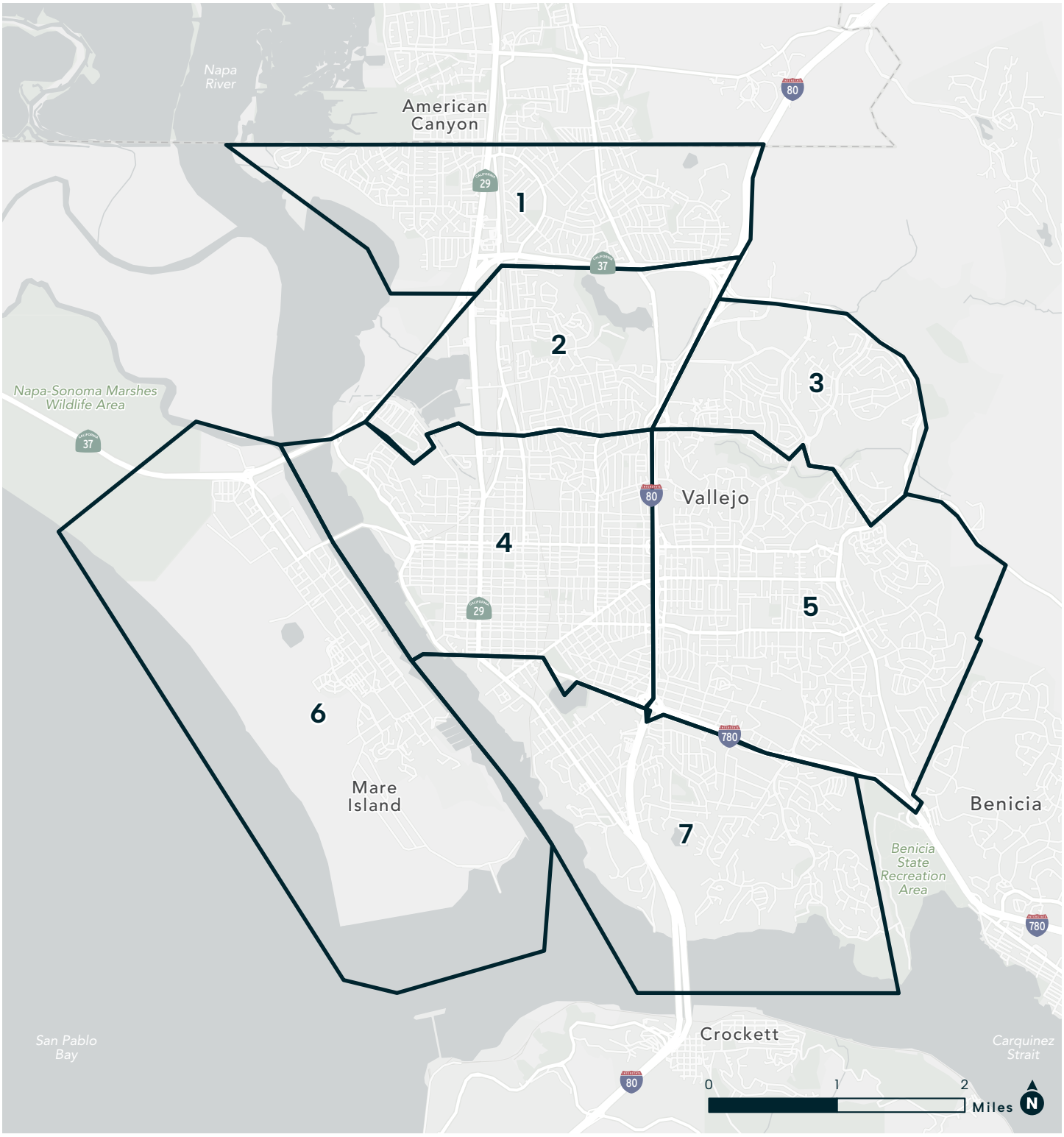


FIGURE 1

VMT Screening Subareas

Fehr & Peers

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Table 2: Small Project ADT Screening Thresholds

Area One: Residential			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	1,684.2	216,003,726	216.0
250	2,105.2	270,004,658	270.0
300	2,526.2	324,005,589	324.0
305	2,568.4	329,405,683	329.4
350	2,947.3	378,006,521	378.0
400	3,368.3	432,007,453	432.0
450	3,789.4	486,008,384	486.0
500	4,210.4	540,009,316	540.0
550	4,631.5	594,010,247	594.0
600	5,052.5	648,011,179	648.0
650	5,473.5	702,012,110	702.0
676	5,692.5	730,092,595	730.1
700	5,894.6	756,013,042	756.0
750	6,315.6	810,013,974	810.0
800	6,736.7	864,014,905	864.0
850	7,157.7	918,015,837	918.0
900	7,578.7	972,016,768	972.0

Average trip distance: 8.42 miles

Area One: Employment			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	2,342.1	298,357,059	298.4
223	2,611.5	332,668,121	332.7
250	2,927.7	372,946,324	372.9
300	3,513.2	447,535,588	447.5
350	4,098.7	522,124,853	522.1
400	4,684.3	596,714,118	596.7
450	5,269.8	671,303,382	671.3
500	5,855.3	745,892,647	745.9
550	6,440.9	820,481,912	820.5
600	7,026.4	895,071,176	895.1
650	7,611.9	969,660,441	969.7
676	7,916.4	1,008,446,859	1008.4
700	8,197.5	1,044,249,706	1044.2
750	8,783.0	1,118,838,971	1118.8
800	9,368.5	1,193,428,235	1193.4
850	9,954.1	1,268,017,500	1268.0
900	10,539.6	1,342,606,765	1342.6

Average trip distance: 11.71 miles

Annualization factor for VMT: 353
Yolo/Solano AQMD 2026 Annual CO_2 Running for LDA (g/VMT): 354.57 [1]
Yolo/Solano AQMD 2026 Annual CO_2 Starting for LDA (g/VT):73.77 [1]
[1] https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12

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Area Two: Residential			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	1,635.0	209,852,939	209.9
250	2,043.8	262,316,174	262.3
300	2,452.5	314,779,409	314.8
316	2,583.3	331,567,644	331.6
333	2,722.3	349,405,144	349.4
400	3,270.0	419,705,878	419.7
450	3,678.8	472,169,113	472.2
500	4,087.6	524,632,348	524.6
550	4,496.3	577,095,583	577.1
600	4,905.1	629,558,817	629.6
650	5,313.8	682,022,052	682.0
676	5,526.4	709,302,934	709.3
700	5,722.6	734,485,287	734.5
750	6,131.3	786,948,522	786.9
800	6,540.1	839,411,756	839.4
850	6,948.8	891,874,991	891.9
900	7,357.6	944,338,226	944.3

Average trip distance: 8.18 miles

Area Two: Employment			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
188	2,620.3	332,861,786	332.9
200	2,787.6	354,108,284	354.1
250	3,484.5	442,635,354	442.6
300	4,181.3	531,162,425	531.2
350	4,878.2	619,689,496	619.7
400	5,575.1	708,216,567	708.2
450	6,272.0	796,743,638	796.7
500	6,968.9	885,270,709	885.3
550	7,665.8	973,797,780	973.8
600	8,362.7	1,062,324,851	1062.3
650	9,059.6	1,150,851,921	1150.9
676	9,422.0	1,196,885,998	1196.9
700	9,756.5	1,239,378,992	1239.4
750	10,453.4	1,327,906,063	1327.9
800	11,150.2	1,416,433,134	1416.4
850	11,847.1	1,504,960,205	1505.0
900	12,544.0	1,593,487,276	1593.5

Average trip distance: 13.94 miles

Annualization factor for VMT: 353
Yolo/Solano AQMD 2026 Annual CO_2 Running for LDA (g/VMT): 354.57 [1]
Yolo/Solano AQMD 2026 Annual CO_2 Starting for LDA (g/VT):73.77 [1]
[1] https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12

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Area Three: Residential			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	1,691.0	216,859,636	216.9
250	2,113.8	271,074,545	271.1
300	2,536.5	325,289,454	325.3
307	2,595.7	332,879,541	332.9
350	2,959.3	379,504,363	379.5
400	3,382.0	433,719,272	433.7
450	3,804.8	487,934,181	487.9
500	4,227.5	542,149,090	542.1
550	4,650.3	596,363,999	596.4
600	5,073.0	650,578,908	650.6
650	5,495.8	704,793,817	704.8
676	5,715.6	732,985,570	733.0
700	5,918.5	759,008,726	759.0
750	6,341.3	813,223,636	813.2
800	6,764.0	867,438,545	867.4
850	7,186.8	921,653,454	921.7
900	7,609.5	975,868,363	975.9

Average trip distance: 8.46 miles

Area Three: Employment			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	2,213.9	282,309,211	282.3
235	2,601.4	331,713,323	331.7
250	2,767.4	352,886,514	352.9
300	3,320.9	423,463,817	423.5
350	3,874.4	494,041,119	494.0
400	4,427.8	564,618,422	564.6
450	4,981.3	635,195,725	635.2
500	5,534.8	705,773,028	705.8
550	6,088.3	776,350,331	776.4
600	6,641.8	846,927,633	846.9
650	7,195.2	917,504,936	917.5
676	7,483.0	954,205,134	954.2
700	7,748.7	988,082,239	988.1
750	8,302.2	1,058,659,542	1058.7
800	8,855.7	1,129,236,844	1129.2
850	9,409.2	1,199,814,147	1199.8
900	9,962.6	1,270,391,450	1270.4

Average trip distance: 11.07 miles

Annualization factor for VMT: 353
Yolo/Solano AQMD 2026 Annual CO_2 Running for LDA (g/VMT): 354.57 [1]
Yolo/Solano AQMD 2026 Annual CO_2 Starting for LDA (g/VT):73.77 [1]
[1] https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12

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Area Four: Residential			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	1,551.6	199,405,871	199.4
250	1,939.4	249,257,339	249.3
300	2,327.3	299,108,806	299.1
333	2,583.3	332,010,775	332.0
350	2,715.2	348,960,274	349.0
400	3,103.1	398,811,742	398.8
450	3,491.0	448,663,210	448.7
500	3,878.9	498,514,677	498.5
550	4,266.8	548,366,145	548.4
600	4,654.7	598,217,613	598.2
650	5,042.6	648,069,081	648.1
676	5,244.3	673,991,844	674.0
700	5,430.4	697,920,548	697.9
750	5,818.3	747,772,016	747.8
800	6,206.2	797,623,484	797.6
850	6,594.1	847,474,951	847.5
900	6,982.0	897,326,419	897.3

Average trip distance: 7.76 miles

Area Four: Employment			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	2,539.0	322,995,804	323.0
206	2,615.2	332,685,678	332.7
250	3,173.7	403,744,755	403.7
300	3,808.5	484,493,706	484.5
350	4,443.2	565,242,657	565.2
400	5,078.0	645,991,608	646.0
450	5,712.7	726,740,559	726.7
500	6,347.5	807,489,510	807.5
550	6,982.2	888,238,461	888.2
600	7,617.0	968,987,411	969.0
650	8,251.7	1,049,736,362	1049.7
676	8,581.8	1,091,725,817	1091.7
700	8,886.5	1,130,485,313	1130.5
750	9,521.2	1,211,234,264	1211.2
800	10,155.9	1,291,983,215	1292.0
850	10,790.7	1,372,732,166	1372.7
900	11,425.4	1,453,481,117	1453.5

Average trip distance: 12.96 miles

Annualization factor for VMT: 353
Yolo/Solano AQMD 2026 Annual CO_2 Running for LDA (g/VMT): 354.57 [1]
Yolo/Solano AQMD 2026 Annual CO_2 Starting for LDA (g/VT):73.77 [1]
[1] https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12

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Area Five: Residential			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	1,678.1	215,246,956	215.2
250	2,097.6	269,058,695	269.1
300	2,517.2	322,870,434	322.9
309	2,592.7	332,556,547	332.6
350	2,936.7	376,682,173	376.7
400	3,356.2	430,493,912	430.5
450	3,775.8	484,305,651	484.3
500	4,195.3	538,117,390	538.1
550	4,614.8	591,929,129	591.9
600	5,034.4	645,740,868	645.7
650	5,453.9	699,552,607	699.6
676	5,672.0	727,534,711	727.5
700	5,873.4	753,364,346	753.4
750	6,292.9	807,176,085	807.2
800	6,712.5	860,987,824	861.0
850	7,132.0	914,799,563	914.8
900	7,551.5	968,611,302	968.6

Average trip distance: 8.39 miles

Area Five: Employment			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	2,323.7	296,049,707	296.0
224	2,602.5	331,575,671	331.6
250	2,904.6	370,062,133	370.1
300	3,485.5	444,074,560	444.1
350	4,066.5	518,086,987	518.1
400	4,647.4	592,099,413	592.1
450	5,228.3	666,111,840	666.1
500	5,809.2	740,124,266	740.1
550	6,390.2	814,136,693	814.1
600	6,971.1	888,149,120	888.1
650	7,552.0	962,161,546	962.2
676	7,854.1	1,000,648,008	1000.6
700	8,132.9	1,036,173,973	1036.2
750	8,713.9	1,110,186,400	1110.2
800	9,294.8	1,184,198,826	1184.2
850	9,875.7	1,258,211,253	1258.2
900	10,456.6	1,332,223,680	1332.2

Average trip distance: 11.62 miles

Annualization factor for VMT: 353
Yolo/Solano AQMD 2026 Annual CO_2 Running for LDA (g/VMT): 354.57 [1]
Yolo/Solano AQMD 2026 Annual CO_2 Starting for LDA (g/VT):73.77 [1]
[1] https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12

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Area Six: Residential			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	2,077.4	260,167,456	260.2
250	2,596.8	325,209,320	325.2
255	2,648.7	331,713,506	331.7
300	3,116.1	390,251,184	390.3
350	3,635.5	455,293,048	455.3
400	4,154.8	520,334,912	520.3
450	4,674.2	585,376,776	585.4
500	5,193.5	650,418,640	650.4
550	5,712.9	715,460,504	715.5
600	6,232.2	780,502,368	780.5
650	6,751.6	845,544,232	845.5
676	7,021.6	879,366,001	879.4
700	7,270.9	910,586,096	910.6
750	7,790.3	975,627,960	975.6
800	8,309.6	1,040,669,824	1040.7
850	8,829.0	1,105,711,688	1105.7
900	9,348.3	1,170,753,552	1170.8

Average trip distance: 10.39 miles

Area Six: Employment			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
118	2,654.5	332,440,545	332.4
200	4,499.1	563,458,550	563.5
250	5,623.9	704,323,188	704.3
300	6,748.7	845,187,825	845.2
350	7,873.5	986,052,463	986.1
400	8,998.3	1,126,917,100	1126.9
450	10,123.1	1,267,781,738	1267.8
500	11,247.8	1,408,646,375	1408.6
550	12,372.6	1,549,511,013	1549.5
600	13,497.4	1,690,375,650	1690.4
650	14,622.2	1,831,240,288	1831.2
676	15,207.1	1,904,489,899	1904.5
700	15,747.0	1,972,104,925	1972.1
750	16,871.8	2,112,969,563	2113.0
800	17,996.6	2,253,834,200	2253.8
850	19,121.3	2,394,698,838	2394.7
900	20,246.1	2,535,563,475	2535.6

Average trip distance: 22.50 miles

Annualization factor for VMT: 353
Yolo/Solano AQMD 2026 Annual CO_2 Running for LDA (g/VMT): 354.57 [1]
Yolo/Solano AQMD 2026 Annual CO_2 Starting for LDA (g/VT):73.77 [1]
[1] https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12

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Area Seven: Residential			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	1,824.0	233,524,367	233.5
250	2,280.0	291,905,458	291.9
285	2,599.1	332,772,223	332.8
300	2,735.9	350,286,550	350.3
350	3,191.9	408,667,642	408.7
400	3,647.9	467,048,734	467.0
500	4,559.9	583,810,917	583.8
550	5,015.9	642,192,009	642.2
600	5,471.9	700,573,100	700.6
650	5,927.9	758,954,192	759.0
676	6,165.0	789,312,360	789.3
700	6,383.9	817,335,284	817.3
750	6,839.9	875,716,375	875.7
800	7,295.9	934,097,467	934.1
850	7,751.8	992,478,559	992.5
900	8,207.8	1,050,859,650	1050.9

Average trip distance: 9.12 miles

Area Seven: Employment			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	2,522.3	320,929,482	320.9
207	2,610.6	332,162,013	332.2
250	3,152.9	401,161,852	401.2
300	3,783.4	481,394,222	481.4
350	4,414.0	561,626,593	561.6
400	5,044.6	641,858,963	641.9
500	6,305.7	802,323,704	802.3
550	6,936.3	882,556,075	882.6
600	7,566.9	962,788,445	962.8
650	8,197.4	1,043,020,815	1043.0
676	8,525.3	1,084,741,648	1084.7
700	8,828.0	1,123,253,186	1123.3
750	9,458.6	1,203,485,556	1203.5
800	10,089.2	1,283,717,927	1283.7
850	10,719.7	1,363,950,297	1364.0
900	11,350.3	1,444,182,667	1444.2

Average trip distance: 13.33 miles

Annualization factor for VMT: 353
Yolo/Solano AQMD 2026 Annual CO_2 Running for LDA (g/VMT): 354.57 [1]
Yolo/Solano AQMD 2026 Annual CO_2 Starting for LDA (g/VT):73.77 [1]
[1] https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12

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Citywide: Residential			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
200	1,708.8	219,104,449	219.1
250	2,135.9	273,880,562	273.9
300	2,563.1	328,656,674	328.7
303	2,588.8	331,943,241	331.9
350	2,990.3	383,432,787	383.4
400	3,417.5	438,208,899	438.2
500	4,271.9	547,761,124	547.8
550	4,699.1	602,537,236	602.5
600	5,126.3	657,313,348	657.3
650	5,553.5	712,089,461	712.1
676	5,775.6	740,573,039	740.6
700	5,980.6	766,865,573	766.9
750	6,407.8	821,641,685	821.6
800	6,835.0	876,417,798	876.4
850	7,262.2	931,193,910	931.2
900	7,689.4	985,970,022	986.0

Average trip distance: 8.54 miles

Citywide: Employment			
Veh. trips/day (HB VT)	VMT/day (HB VMT)	CO_2 Eq.	
		g/year	MT/year
196	2,612.7	332,138,189	332.1
200	2,666.0	338,916,519	338.9
250	3,332.5	423,645,649	423.6
300	3,999.0	508,374,778	508.4
350	4,665.5	593,103,908	593.1
400	5,332.0	677,833,038	677.8
500	6,665.0	847,291,297	847.3
550	7,331.5	932,020,427	932.0
600	7,998.0	1,016,749,557	1016.7
650	8,664.5	1,101,478,687	1101.5
676	9,011.1	1,145,537,834	1145.5
700	9,331.0	1,186,207,816	1186.2
750	9,997.5	1,270,936,946	1270.9
800	10,664.0	1,355,666,076	1355.7
850	11,330.5	1,440,395,206	1440.4
900	11,997.0	1,525,124,335	1525.1

Average trip distance: 13.33 miles

Annualization factor for VMT: 353
Yolo/Solano AQMD 2026 Annual CO_2 Running for LDA (g/VMT): 354.57 [1]
Yolo/Solano AQMD 2026 Annual CO_2 Starting for LDA (g/VT):73.77 [1]
[1] https://www.aqmd.gov/docs/default-source/caleemod/user-guide-2021/appendix-d2020-4-0-full-merge.pdf?sfvrsn=12

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Screening Criteria 2: Low VMT Area Screening

Residential and employment-generating projects located within a low VMT generating area of the city may be presumed to have a less than significant impact absent substantial evidence to the contrary. For this screening, Solano–Napa County Activity Based Travel Demand Model shall be used to compare the project's characteristics to land uses currently in the low-VMT area and for individual traffic analysis zones (TAZs). TAZs are geographic polygons (like census block groups) used to represent areas of homogenous travel behavior. For the low VMT area screening criterion to be satisfied, the analyst must verify that the project land uses would not alter the existing built environment in such a way as to increase the rate or length of vehicle trips (e.g., the proposed project is consistent with existing land use in the area, the project would be expected to contribute VMT consistent with existing land use in the area, and the project would not significantly alter travel patterns in the area).

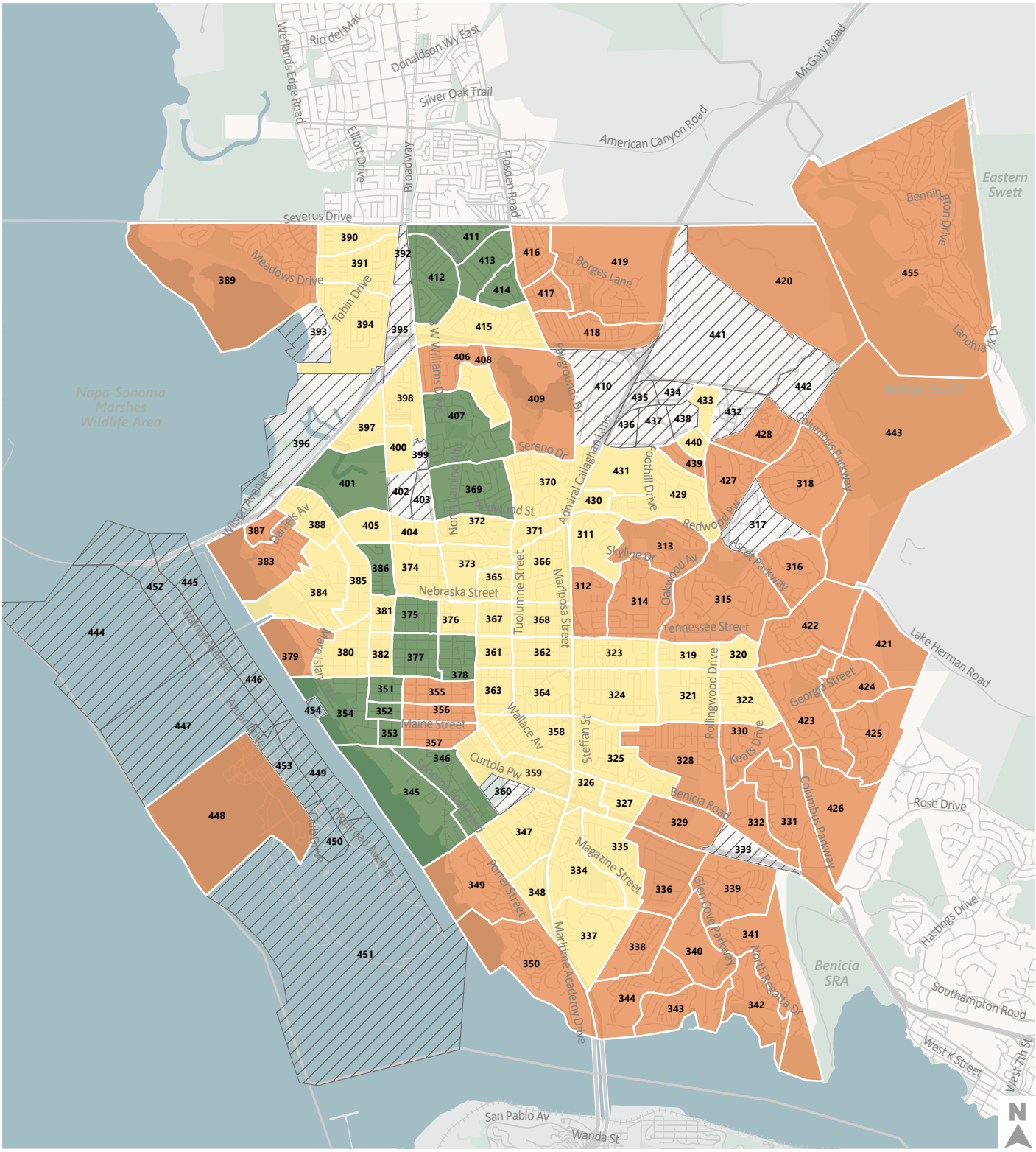
A low VMT area is defined as follows:

- For housing projects: TAZs that have a baseline home-based VMT per capita that is 85 percent or less of the existing citywide average.
- For employment-generating projects: TAZs that have baseline home-work VMT per worker that is 85 percent or less of the existing regionwide average.

To determine if a project is in a low VMT-generating area, the analyst may review the screening maps provided as **Figure 2** (residential project mapping) and **Figure 3** (employment-generating project mapping). Projects located in TAZs that are 15 percent below the relevant threshold (indicated in green on Figure 2 and Figure 3) can be presumed to have a less than significant impact.

Additionally, as noted above, the analyst must identify if the project is consistent with the General Plan land use designation(s) and zoning district(s) within that TAZ (e.g., if the project is proposing single-family housing, there should be existing single-family housing of approximately the same density) and use professional judgement to confirm that there is nothing unique about the project that would otherwise be misrepresented utilizing the data from the travel demand model.

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Source: Solano-Napa Activity Based Model, Solano Transportation Authority and TJKM (2024)

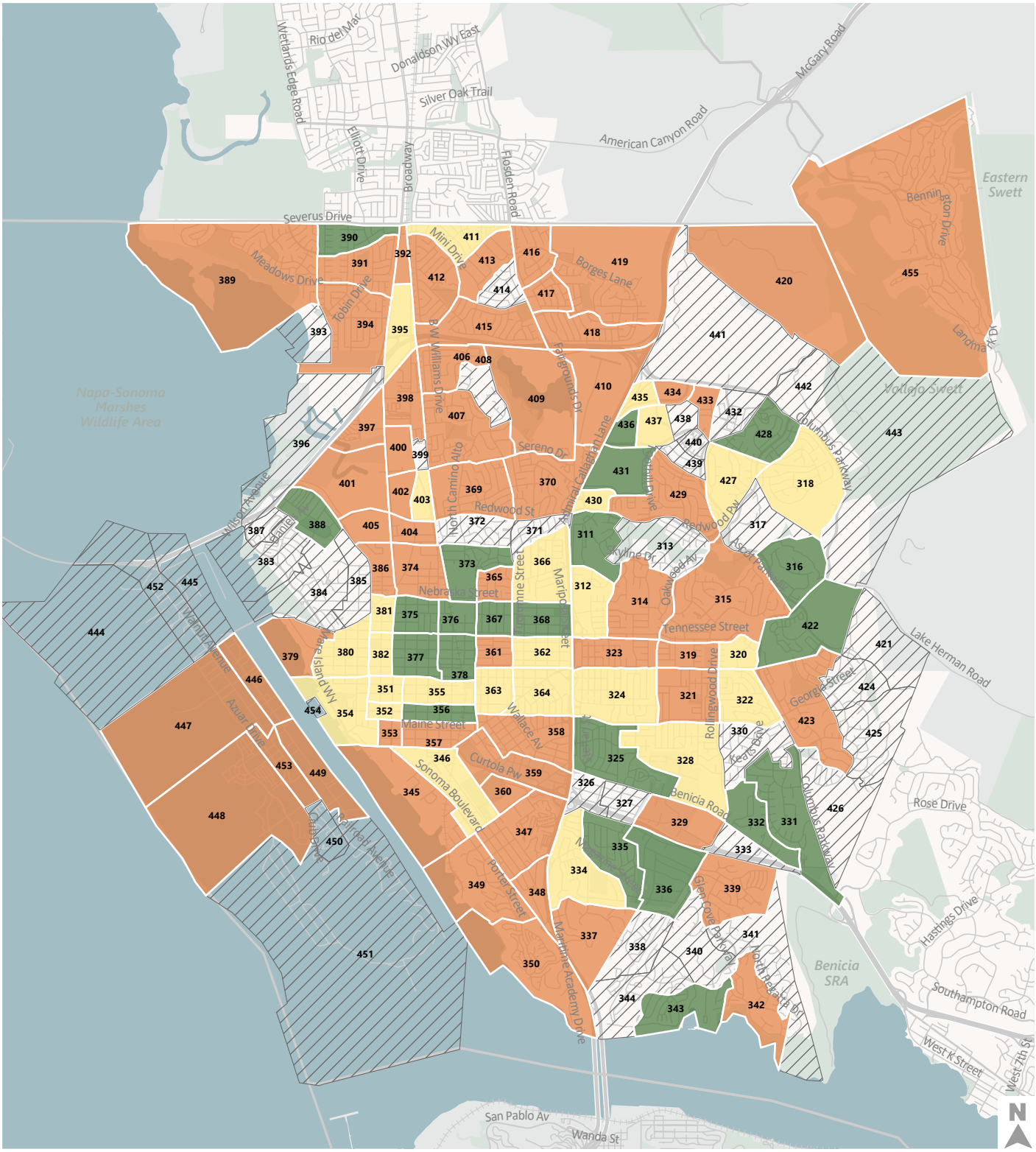
Vallejo City Average: 24.6

- 15% below Vallejo City average
- Between 15%-0% below Vallejo City average
- Above Vallejo City average
- TAZ with no (or very low) population
- ### TAZ ID

Figure 2

City of Vallejo
2025 Residential VMT Per Resident Compared to Citywide Average

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Source: Solano-Napa Activity Based Model, Solano Transportation Authority and TJKM (2024)

Bay Area Average: 19.9

- 15% below Bay Area average
- Between 15%-0% below Bay Area average
- Above Bay Area average
- TAZ with no (or very low) employment
- ### TAZ ID

Figure 3

City of Vallejo
2025 Work Tour VMT Per Employee Compared to Bay Area Regional Average

Docusign Envelope ID: B41ED1B2-01DA-8DB2-826C-AD03C62E2D05

Screening Criteria 3: Proximity to Transit

Projects located within a Transit Priority Area (TPA)[4] may be presumed to have a less than significant impact, absent substantial evidence to the contrary. This includes residential, retail, office projects, or mixed-use projects proposed within one half mile of an existing major transit stop or an existing stop along a high-quality transit corridor. In Vallejo, the Downtown and Mare Island Ferry Terminals are currently considered major transit stops (July 2026). This presumption would not apply, however, if project-specific or location-specific information indicates the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:

1. Has a Floor Area Ratio (FAR) of less than 0.75;
2. Includes more parking for use by residents, customers, or employees of the project than the maximum allowed by the city (if the city requires the project to supply parking);
3. Is inconsistent with the applicable Sustainable Communities Strategy/Plan Bay Area 2050;
4. Replaces existing deed-restricted affordable residential units with a smaller number of moderate- or high-income residential units; or
5. Has a retail component greater than 50,000 square feet.

Projects in proximity to an existing major transit stop or an existing stop along a high-quality transit corridor that do not satisfy all these criteria shall prepare a detailed VMT analysis. At the time of the preparation of these guidelines no transit lines within the city qualified as high quality transit corridors. However, transit lines and bus schedules are dynamic and change in response to demand and funding levels. Current transit service levels should be reviewed at the time of a project's application is deemed complete or a project's Notice of Preparation (NOP) to determine if this screening criteria is satisfied.

VMT Assessment for Non-Screened Development

Projects not screened through the steps above should prepare a complete VMT analysis and forecasting through SNABM to determine if they have a significant VMT impact. This analysis shall include "projected generated

[4] A TPA is defined as a half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor per the definitions below. The city measures the half mile based on actual walking routes. Academic research has demonstrated that walking distance is an important factor that influences the choice to take transit and thereby reduce VMT. For more background on this, see the following article: http://www.reconnectingamerica.org/assets/Uploads/20111018UCB-ITS-VWP-2011-5.pdf).

Pub. Resources Code, § 21064.3 – 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 20 minutes or less during the morning and afternoon peak commute periods.' Note that this requirement means that both intersecting routes must have the 20-minute or less frequency of service interval.

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

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VMT" and "project effect VMT" estimates for the project TAZ(s) under the following scenarios:

- **Baseline Conditions** – This data is available from the SNABM travel demand model; analysts should use caution to ensure the calculated baseline values reflect values at the time the Notice of Preparation for a project was released (consistent with guidance from LCI). The screening maps also provide the baseline VMT per capita in the City of Vallejo.
- **Baseline Plus Project** – The project land use would be added to the project TAZ, or a separate TAZ would be created to contain the project land uses. A full base year model run would be performed and VMT changes must be isolated for the project TAZ and across the full model network. The model output must include reasonableness checks of the production and attraction balancing to ensure the project effect is accurately captured. If this scenario results in a less-than-significant impact, then additional cumulative scenario analysis may not be required.

The results of the project's VMT analysis conducted as part of the Baseline Plus Project model evaluation should be compared against the relevant significance criteria presented above. If the conclusion is that the project would have the potential to cause a significant VMT impact per one or more of the significance thresholds defined above, then mitigation is required. Additional details on VMT mitigation are presented in the section below. CEQA requires that all feasible measures be implemented to reduce identified impacts to less-than-significant levels. Projects that are unable to mitigate their project-specific VMT impacts to less-than-significant levels require a Cumulative VMT analysis.

The flowchart on the next page details the step-by-step methodology for assessing VMT impacts, including the cumulative evaluation.

Cumulative Analysis

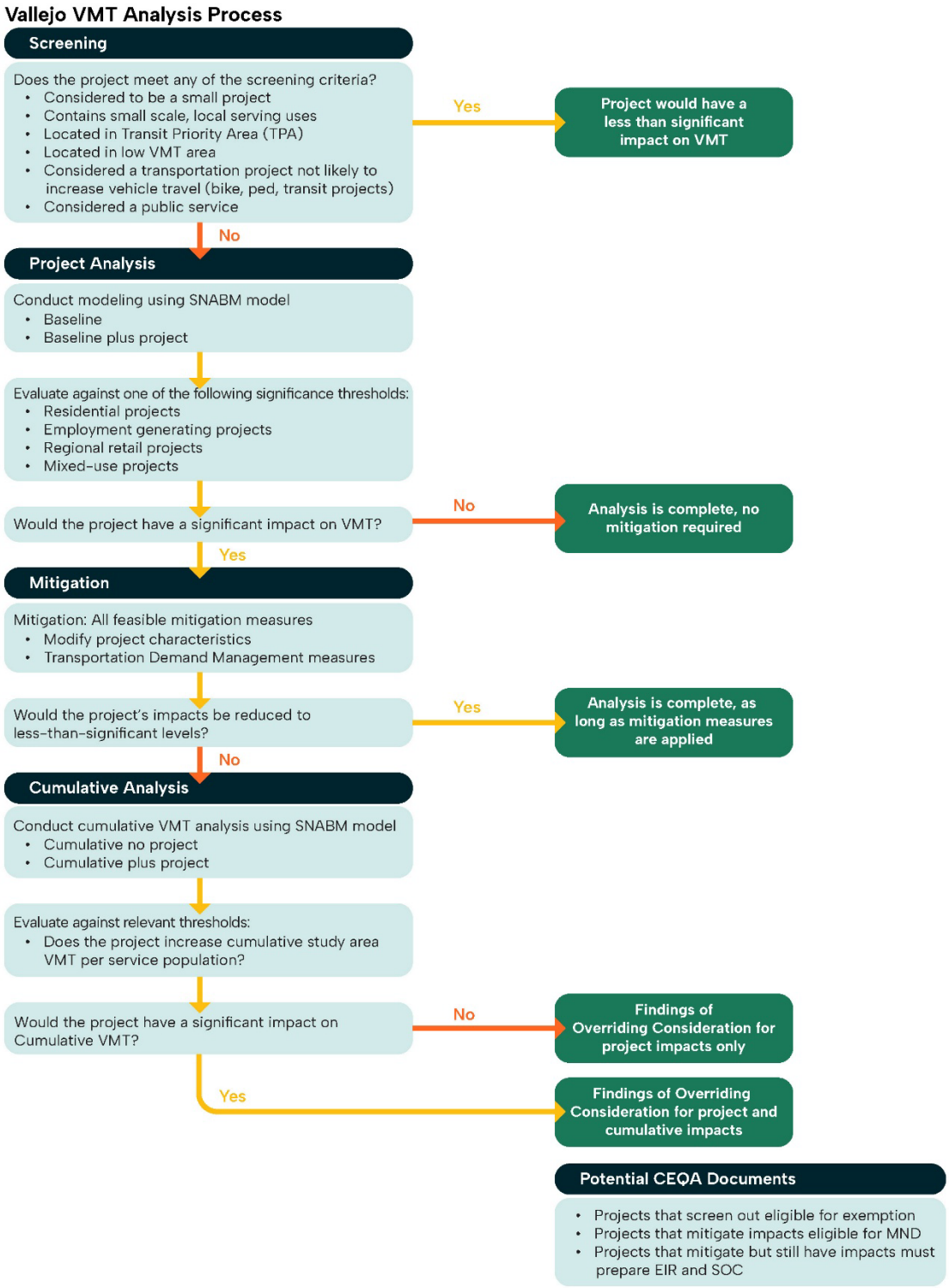
The cumulative analysis of a project involves understanding the project's effect on overall VMT within its study area. This analysis is needed to address circumstances where an individual project might affect travel patterns from other developments in the broader area; this might happen for a variety of reasons, such as that the project offers different housing, employment or other opportunities than would otherwise exist in the area and that causes other users to change their travel decisions, or because the drivers and transit users generated by the project take up available system capacity and cause other users to change their travel routes or modes. The cumulative analysis shall identify the project's effect on overall VMT within the study area under the following scenarios:

- **Cumulative No Project**– This data is available from the SNABM travel demand model. The recommended cumulative year is the horizon year of the current SNABM (currently 2040), but should be confirmed with City staff prior to beginning the analysis.
- **Cumulative Plus Project** – The project land use would either be added to the project TAZ, or a separate TAZ would be created to contain the project land uses. The addition of project land uses may need to be accompanied by a reallocation of a similar amount of land use from other TAZs; especially if the proposed project is significant in size such that it could change other future developments. Land use projects are often represented in the assumed growth of the cumulative year population and employment. It may be appropriate to remove land use growth that represents the project from the cumulative year model to represent the cumulative no project scenario. If project land uses are simply added to the cumulative no project scenario, then the analysis should reflect this limitation in the methodology and

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acknowledge that the analysis may overestimate the project's effect on VMT.

The model output should include total VMT, which includes all vehicle trips and trip purposes, and VMT per service population (population plus employment), home-based VMT per resident for residential, and home-based work VMT per worker for employment uses. Total VMT (by speed bin, which documents how total VMT occurs across various travel speeds) is a required input for air quality, greenhouse gas (GHG), and energy impact analysis while total VMT per service



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population is recommended for the CEQA transportation impact assessment.

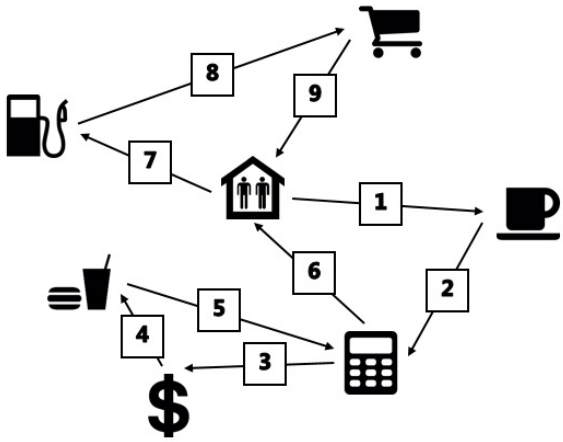
The project's effect on VMT should be measured by defining a VMT study area and calculating the total VMT occurring on all network links inside that study area, in both the cumulative no project and cumulative plus project scenarios. To allow for a reasonable comparison between those two scenarios, the total study area VMT should be normalized in some fashion to reflect that there are different numbers of people within the study area (i.e., because the project has added people to the study area as compared to the no project scenario). If the project adds residents to the study area, then it would be reasonable to present the VMT results as total study area VMT divided by number of study area residents. If the project adds employees to the study area, then it would be reasonable to use total study area VMT divided by number of study area employees. The exact method for normalizing the VMT number is not critical; what is essential is that the same method be used for both the cumulative no project and the cumulative plus project scenarios, to allow for an apples-to-apples comparison between the two scenarios.

- **Cumulative Significance Threshold –** Cumulative VMT impacts should be considered significant if there is a net increase in the total study area VMT normalized to the number of people within the study area, when comparing cumulative no project to cumulative plus project conditions.

Detailed VMT Forecasting Information (SNABM)

Travel demand models generate daily person trip-ends for each TAZ across various trip purposes (Home-Based-Work, Home-Based-Other, and Non-Home-Based, for example) based on population, household, and employment variables. Travel demand models are simplifications of reality and as such, TAZs often contain a large amount of population, households, and employment. Travel models do not tie trip generation to individual land uses but instead aggregate them all up to the TAZ level. This can create challenges for complying with the SB 743 guidance because the thresholds are tied to specific land use categories and their behavior. The following methodology addresses this particular challenge.

To better understand the trips used in each metric, consider the following daily vehicle trip tour for an individual residential worker in a given TAZ. Note that each TAZ would have many individual residential workers and thus the calculations would be a sum of these individual calculations:



These nine daily vehicle trips include a variety of trip purposes: home-based work (HBW), home-based other (HBO), work-based other (WBO), and other-based other (OBO). WBO and OBO trips are often grouped into a non-home based (NHB) category. The table below categorizes the nine daily trips into trip purposes.

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Trip	Tour	Origin	Destination	Purpose	Distance
1	Work	Residence	Coffee Shop	HBO	2 miles
2	Work	Coffee Shop	Work	WBO (NHB)	10 miles
3	Work	Work	ATM	WBO (NHB)	1 mile
4	Work	ATM	Sandwich Shop	OBO (NHB)	1 mile
5	Work	Sandwich Shop	Work	WBO (NHB)	1 mile
6	Work	Work	Residence	HBW	11 miles
7	Home	Residence	Gas Station	HBO	3 miles
8	Home	Gas Station	Grocery Store	OBO (NHB)	1 mile
9	Home	Grocery Store	Residence	HBO	2 miles

SNABM is an activity-based model that links an individual's trips into "tours." Therefore, it is straightforward to calculated VMT associated with residential or work locations based on the type of "tour." The table below describes the calculation for the partial VMT metrics.

Description	Trips	VMT	Comments
Residential Tour	1-9	32 miles	Includes all trips by a resident
Home-Work Tour	1, 2, 6	23 miles	Includes all trips part of a home-work tour

The Total VMT calculation (all trip purposes for both resident and worker) is more easily calculated using the final origin-destination vehicle matrices and summing all origin and destination trip ends for each TAZ. The Total VMT calculation includes all trips, all trip purposes, for any interaction with the TAZ regardless of whether they are a resident or worker of the TAZ.

Each of these metrics needs to be adjusted to account for the length of trips that get truncated at the travel model boundary.

Adjusting the length of trips leaving a model boundary requires appending extra distance at the model gateway zone (or external centroid) connector based on calculations from a parent travel demand model, such as the California Statewide Travel Demand Model (CSTDM). This process results in new gateway distances that are weighted based on the amount and location of external travel origins and destinations. The calculations would need to address the distance of trips outside the travel model boundary; in the case of SNABM, this is the nine-county Bay Area.

Detailed VMT Calculation Instructions

The following outlines the process used to estimate City of Vallejo VMT Metrics via SNABM.

1. Adapted MTC's "Core Summaries" R script that was used for MTC Travel Model 1 to work for SNABM (script available upon request). The script takes approximately 5-15 minutes to run after a complete SNABM model run and summarizes the large trip and tour list files used in SNABM for use in further VMT summaries

2. Output of script is collection of files in new "core_summaries" and "updated_output" folders within model scenario folder (see below)

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3. The files needed to calculate Residential and Office/Employment VMT metrics are the following:
    a. AutoTripsVMT_personHome.csv – summarizes population for each TAZ as output from the population synthesizer
    b. AutoTripsVMT_perHome.csv – summarizes all VMT made by resident tied back to residence TAZ, sorted by tour purpose and trip purpose
    c. AutoTripsVMT_personsWork.csv – summarizes workers/employees for each TAZ as output from the population synthesizer
    d. AutoTripsVMT_perwork.csv – summarizes all VMT made by workers tied back to workplace TAZ, sorted by tour purpose and trip purpose. Note that WorkLocation = 0 means VMT made by non-workers
4. Summarizing Residential VMT Metric
    a. Defined as all trips/VMT by resident traced back to the residence location
    b. To summarize by TAZ: sum of all VMT records on 'AutoTripsVMT_perHome.csv' by TAZ divided by sum of all population records on 'AutoTripsVMT_personsHome.csv' by TAZ
    c. To summarize by jurisdiction (place/county/etc.): sum of all VMT records on 'AutoTripsVMT_perHome.csv' by TAZs corresponding to jurisdiction divided by sum of all population records on 'AutoTripsVMT_personHome.csv' by TAZs corresponding to jurisdiction
    d. To summarize by region: same process described above for jurisdiction, but including all TAZs in Bay Area counties
5. Summarizing Office/Employment VMT Metric
    a. Defined as all trips part of home-work tour traced back to the workplace location
    b. To summarize by TAZ: sum of VMT records with home-work tour purposes (see below) on 'AutoTripsVMT_perWork.csv' by TAZ divided by sum of all worker records on 'AutoTrips_VMT_personsWork.csv' by TAZ
    c. Home-work tour purposes defined as 'work_low,' 'work_med,' 'work high,' and 'work_very_high'
    d. To summarize by jurisdiction (place/county/etc.): sum of VMT records with home-work tour purposes (see below) on 'AutoTripsVMT_perWork.csv' by TAZs corresponding to jurisdiction divided by sum of all worker records on 'AutoTrips_VMT_personsWork.csv' by TAZs corresponding to jurisdiction
    e. To summarize by region: same process described above for jurisdiction, but including all TAZs in Bay Area counties
6. Adjust VMT metrics to account for length of trips that get truncated at travel model boundary
    a. Run the California Statewide Travel Demand Model (CSTDM) to estimate amount of extra distance to append to trips leaving the SNABM model area
    b. Select zone of SNABM model area zones within CSTDM and calculation of trip lengths outside of SNABM model area for internal-external (IX)/ external-internal (XI) trips by gateway.
    c. Apply this average extra distance by gateway to SNABM model estimate of IX/XI trips and summarize "extra" VMT per TAZ (on top of the VMT already summarized within the model boundaries)
        i. Thus, TAZs with more IX/XI trips (e.g., near a model boundary) would

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take on more extra distance than a TAZ with fewer IX/XI trips (e.g., within the core Bay Area)

d. End product is "extra" VMT to add to the VMT metrics calculated in previous steps

VMT Mitigation Measures

To mitigate VMT impacts, the following general choices are available to development projects:

- Modify the project's design features and/or land uses to reduce project trips or reduce trip length.
- Moving the proposed development to a more travel-efficient area (i.e., area with access to high-quality transit, or other transportation solutions that reduce the length/number of trips).
- Implement Transportation Demand Management (TDM) measures to reduce VMT generated by the project.

Of the strategies included within these general categories, only a subset of the strategies is likely to be effective in a suburban setting such as Vallejo. Proposed projects shall utilize the latest version of the California Air Pollution Control Officers Association ("CAPCOA") Quantifying Greenhouse Gas Mitigation Measures document to estimate the maximum feasible VMT mitigation. However, it should be noted that most of the data used to develop the CAPCOA mitigation strategies are based on projects from urban or relatively dense suburban areas. The effectiveness of VMT mitigations will vary from project to project based on the surrounding land use context, the combination of its uses, and the availability of alternative transportation modes. The proposed project's transportation impact analysis must quantifiably demonstrate, through the use of reliable calculation tools, that proposed VMT mitigations will result in the estimated reductions when applied to the project. In the event a proposed project's characteristics render most or all the aforementioned mitigation strategies infeasible or ineffective, city staff will consider other mitigation options.

The following VMT mitigation strategies may be considered by projects for the mitigation of VMT impacts within the city. The numbering and titling of the mitigation measures, along with the maximum effectiveness, are taken from the CAPCOA *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, Final Draft*, October 2024.

Land Use

T-1: Increase Residential Density – This measure accounts for the VMT reduction achieved by a project that is designed with a higher density of dwelling units (du) compared to the average residential density in the U.S. Increased densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing residential density results in shorter and fewer trips by single-occupancy vehicles and thus a reduction in GHG emissions. This measure is best quantified when applied to larger developments and developments where the density is somewhat similar to the surrounding area due to the underlying research being founded in data from the neighborhood level.

T-2: Increase Job Density – This measure accounts for the VMT reduction achieved by a project designed with a higher density of jobs compared to the average job density in the U.S. Increased job densities affect the distance people travel and provide greater options for the mode of travel they choose. Increasing job density results in shorter and fewer trips by single-occupancy vehicles and thus a reduction in GHG emissions.

T-3: Provide Transit-Oriented Development – This measure would reduce project VMT in the

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study area relative to the same project sited in a non-transit-oriented development (TOD) location. TOD refers to projects built in compact, walkable areas with easy access to public transit, ideally in a location containing a mix of uses including housing, retail offices, and community facilities. Project site residents, employees, and visitors would have easy access to high-quality public transit, thereby encouraging transit ridership and reducing the number of single-occupancy vehicle trips and associated GHG emissions.

T-4: Integrate Affordable and Below Market Rate Housing – This measure requires below market rate (BMR) housing. BMR housing provides greater opportunity for lower income families to live closer to job centers and achieve a jobs/housing match near transit. It is also an important strategy to address the limited availability of affordable housing that might force residents to live far away from jobs or school, requiring longer commutes. Incorporating affordability by design, such as the provision of ADUs could also qualify for this reduction. The quantification method for this measure accounts for VMT reductions achieved for multifamily residential projects that are deed restricted or otherwise permanently dedicated as affordable housing.

T-17: Improve Street Connectivity – This measure accounts for the VMT reduction achieved by a project designed with a higher density of vehicle intersections compared to the average intersection density in the U.S. Increased vehicle intersection density is a proxy for street connectivity improvements, facilitating a greater number of shorter trips and thus a reduction in GHG emissions.

T:55: Infill Development – This measure accounts for the VMT reduction achieved by infill housing development programs that allow residents to live closer to downtown areas where there is greater access to jobs and activities. Residents living at infill development projects typically do not need to travel as far to access essential destinations. This leads to lower VMT and associated GHG emissions compared to similar projects located farther from a downtown area. An example implementation of this measure is Sacramento Area Council of Government's Green Means Go program (SACOG 2021a, 2021b).

Trip Reduction Programs

T-5: Implement Commute Trip Reduction Program (Voluntary) – This measure will implement a voluntary commute trip reduction (CTR) program with employers. CTR programs discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, riding transit, walking, and biking, thereby reducing VMT and GHG emissions. Voluntary implementation elements are described in this measure.

T-6: Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring) – This measure will implement a mandatory CTR program with employers. CTR programs discourage single-occupancy vehicle trips and encourage alternative modes of transportation such as carpooling, riding transit, walking, and biking, thereby reducing VMT and GHG emissions.

T-7: Implement Commute Trip Reduction Marketing – This measure will implement a marketing strategy to promote the project site employer's CTR program. Information sharing and marketing promote and educate employees about their travel choices to the employment location beyond driving such as carpooling, riding transit, walking, and biking, thereby reducing VMT and GHG emissions.

T-8: Provide Ridesharing Program – This measure will implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. This strategy includes measures such as designating a proportion of parking spaces exclusive to ride sharing vehicles, providing adequate loading and unloading areas for passengers of ride-

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sharing vehicles and generating a web site or message board for ride coordination. The focus of this strategy is to increase vehicle occupancy by ridesharing between people driving similar trips, which will result in fewer cars, and thus a decrease in VMT.

T-9: Implement Subsidized or Discounted Transit Program – This measure will provide subsidized or discounted, or free transit passes for employees and/or residents. Reducing the out-of-pocket cost for choosing transit improves the competitiveness of transit against driving, increasing the total number of transit trips and decreasing vehicle trips. This decrease in vehicle trips results in reduced VMT and thus a reduction in GHG emissions.

T-10: Provide End-of-Trip Bicycle or Scooter Facilities – This measure will install and maintain end-of-trip facilities for employee use. End-of-trip facilities include bike parking, bike lockers, showers, and personal lockers. Charging stations for e-bikes and/or scooters can also qualify for this reduction. The provision and maintenance of secure bike parking and related facilities encourages commuting by bicycle, thereby reducing VMT and GHG emissions.

T-11: Provide Employer-Sponsored Vanpool – This measure will implement an employer-sponsored vanpool service. Vanpooling is a flexible form of public transportation that provides groups of 5 to 15 people with a cost-effective and convenient rideshare option for commuting. This strategy is appropriate for office, industrial, and mixed-use projects. In some cases this can be a community strategy, with employers within a particular area pooling resources to provide shuttles to transit. The mode shift from long-distance, single-occupancy vehicles to shared vehicles reduces overall commute VMT, thereby reducing GHG emissions.

T-12: Price Workplace Parking – This measure will price on-site parking at workplaces. Because free employee parking is a common benefit, charging employees to park on-site increases the cost of choosing to drive to work, so employees consider alternative modes. It may include explicitly charging a parking fee for its employees, implementing above market rate pricing, validating parking only for invited guests, not providing employee parking while offering transportation allowances, and educating employees about available alternatives. This is expected to reduce single-occupancy vehicle commute trips, resulting in decreased VMT, thereby reducing associated GHG emissions.

T-13: Implement Employee Parking Cash-Out – This measure will require project employers to offer employee parking cash-out. Cash-out is when employers provide employees with a choice of forgoing their current subsidized/free parking for a cash payment equivalent to or greater than the cost of the parking space. This encourages employees to use other modes of travel instead of single-occupancy vehicles. This mode shift results in people driving less and thereby reduces VMT and GHG emissions.

T-23: Community-Based Travel Planning – This measure will target residences in the plan/community with community-based travel planning (CBTP). CBTP is a residential based approach to outreach that provides households with customized information, incentives, and support to encourage the use of transportation alternatives in place of single-occupancy vehicles, thereby reducing VMT and associated GHG emissions.

Parking or Road Pricing/Management

T-14: Provide Electric Vehicle Charging Infrastructure – Install onsite electric vehicle chargers in an amount beyond what is required by the 2019 California Green Building Standards (CALGreen) at buildings with designated parking areas (e.g., commercial, educational, retail, multifamily). This will enable drivers of PHEVs to drive a larger share

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of miles in electric mode (eVMT), as opposed to gasoline-powered mode, thereby displacing GHG emissions from gasoline consumption with a lesser amount of indirect emissions from electricity. Most PHEVs owners charge their vehicles at home overnight. When making trips during the day, the vehicle will switch to gasoline mode if/when it reaches its maximum all-electric range.

T-15: Limit Residential Parking Supply – This measure will reduce the total parking supply available at a residential project or site. Limiting the amount of parking available creates scarcity and adds additional time and inconvenience to trips made by private auto, disincentivizing driving as a mode of travel. Reducing the convenience of driving results in a shift to other modes and decreased VMT and thus a reduction in GHG emissions. Evidence of the effects of reduced parking supply is strongest for residential developments.

T-16: Unbundle Residential Parking Costs from Property Cost – This strategy separates parking costs from property costs, removing the burden from those who do not utilize parking spaces and requiring those who wish to do so to purchase parking spaces at an additional cost. On the assumption that parking costs are passed onto the vehicle owners/drivers utilizing the parking spaces, this measure results in decreased vehicle ownership and, therefore, a reduction in VMT and GHG emissions.

T-24: Implement Market Price Public Parking (On-Street) – This measure will price all on-street parking in a given community, with a focus on parking near central business districts, employment centers, and retail centers. Increasing the cost of parking increases the total cost of driving to a location, incentivizing shifts to other modes and thus decreasing total VMT to and from the priced areas. This VMT reduction results in a corresponding reduction in GHG emissions.

Neighborhood Design

T-18: Provide Pedestrian Network Improvements – This strategy focuses on creating a pedestrian network and connecting projects to nearby destinations via pedestrian pathways. Projects in the City of Vallejo range in size, so the emphasis of this strategy for smaller projects would likely be the construction of network improvements that connect the project sites directly to nearby destinations. For larger projects, this strategy could focus on the development of a robust pedestrian network within the project itself or closing gaps that could connect the project to other areas. This strategy could also include improvements that improve safety outcomes for people walking, especially walking to/from transit stops. Alternatively, implementation could occur through an impact fee program or benefit/ assessment district based on local or regional plans. Providing sidewalks and an enhanced pedestrian network encourages people to walk instead of drive. This mode shift results in a reduction in VMT and GHG emissions.

T-19-A: Construct or Improve Bike Facility – This measure will construct or improve a single bicycle lane facility (only Class I, II, or IV) that connects to a larger existing bikeway network. Providing bicycle infrastructure improves biking conditions within an area. This encourages a mode shift on the roadway parallel to the bicycle facility from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. When constructing or improving bicycle facilities, the best practice is to consider local or state bike lane width standards. A variation of this measure is provided as T-19-B, Construct or Improve Bike Boulevard.

T-19-B: Construct or Improve Bike Boulevard – This measure will construct or improve a single bicycle boulevard that connects to a larger existing bikeway network. Bicycle boulevards are a designation within Class III

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Bikeway that create safe, low-stress connections for people biking and walking on streets. This encourages a mode shift from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. A variation of this measure is provided as T-19-A, Construct or Improve Bike Facility, which is for Class I, II, or IV bicycle infrastructure.

T-20: Expand Bikeway Network – This measure will increase the length of a city or community bikeway network. A bicycle network is an interconnected system of bike lanes, bike paths, bike routes, and cycle tracks. Providing bicycle infrastructure with markings and signage on appropriately sized roads with vehicle traffic traveling at safe speeds helps to improve biking conditions (e.g., safety and convenience). In addition, expanded bikeway networks can increase access to and from transit hubs, thereby expanding the "catchment area" of the transit stop or station and increasing ridership. This encourages a mode shift from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. When expanding a bicycle network, the best practice is to consider bike lane width standards from local agencies, state agencies, or the National Association of City Transportation Officials' Urban Bikeway Design Guide.

T-21-A: Implement Conventional Carshare Program – This measure will increase carshare access in the user's community by deploying conventional carshare vehicles. Carsharing offers people convenient access to a vehicle for personal or commuting purposes. This helps encourage transportation alternatives and reduces vehicle ownership, thereby avoiding VMT and associated GHG emissions. A variation of this measure, electric carsharing, is described in Measure T-20-B, Implement Electric Carshare Program.

T-21-B: Implement Electric Carshare Program – This measure will increase carshare access in the user's community by deploying electric carshare vehicles. Carsharing offers people convenient access to a vehicle for personal or commuting purposes. This helps encourage transportation alternatives and reduces vehicle ownership, thereby avoiding VMT and associated GHG emissions. This also encourages a mode shift from internal combustion engine vehicles to electric vehicles, displacing the emissions-intensive fossil fuel energy with less emissions-intensive electricity. Electric carshare vehicles require more staffing support compared to conventional carshare programs for shuttling electric vehicles to and from charging points. A variation of this measure, conventional carsharing, is described in Measure T-21-A, Implement Conventional Carshare Program.

T-22-A: Implement Pedal (Non-Electric) Bikeshare Program – This measure will establish a bikeshare program. Bikeshare programs provide users with on-demand access to bikes for short-term rentals. This encourages a mode shift from vehicles to bicycles, displacing VMT and thus reducing GHG emissions. Variations of this measure are described in Measure T-22-B, Implement Electric Bikeshare Program, and Measure T-22-C, Implement Scootershare Program.

T-22-B: Implement Electric Bikeshare Programs – This measure will establish an electric bikeshare program. Electric bikeshare programs provide users with on-demand access to electric pedal assist bikes for short-term rentals. This encourages a mode shift from vehicles to electric bicycles, displacing VMT and reducing GHG emissions. Variations of this measure are described in Measure T-22-A, Implement Pedal (Non-Electric) Bikeshare Program, and Measure T-22-C, Implement Scootershare Program.

T-22-C: Implement Scootershare Program – This measure will establish a scootershare program. Scootershare programs provide users with on-demand access to electric scooters for short-term rentals. This encourages a mode shift from vehicles to scooters, displacing VMT and thus reducing

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GHG emissions. Variations of this measure are described in Measure T-22-A, Implement Pedal (Non-Electric) Bikeshare Program, and Measure T-22-B, Implement Electric Bikeshare Program.

Transit

T-25: Extend Transit Network Coverage or Hours – This measure will expand the local transit network by either adding or modifying existing transit service or extending the operation hours to enhance the service near the project site. Starting services earlier in the morning and/or extending services to late-night hours can accommodate commute hours of alternative-shift workers. This will encourage the use of transit and therefore reduce VMT and associated GHG emissions.

T-26: Increase Transit Service Frequency – This measure will increase transit frequency on one or more transit lines serving the plan/community. Increased transit frequency reduces waiting and overall travel times, which improves the user experience and increases the attractiveness of transit service. This results in a mode shift from single-occupancy vehicles to transit, which reduces VMT and associated GHG emissions.

T-27: Implement Transit-Supportive Roadway Treatments – This measure will implement transit-supportive treatments on the transit routes serving the plan/community. Transit-supportive treatments incorporate a mix of roadway infrastructure improvements and/or traffic signal modifications to improve transit travel times and reliability. This results in a mode shift from single-occupancy vehicles to transit, which reduces VMT and associated GHG emissions.

T-28: Provide Bus Rapid Transit – This measure will convert an existing bus route to a bus rapid transit (BRT) system. BRT includes the following additional components, compared to traditional bus service: exclusive right-of-way (e.g., busways, queue jumping lanes) at congested intersections, increased limited-stop service (e.g., express service), intelligent transportation technology (e.g., transit signal priority, automatic vehicle location systems), advanced technology vehicles (e.g., articulated buses, low-floor buses), enhanced station design, efficient fare-payment smart cards or smartphone apps, branding of the system, and use of vehicle guidance systems. BRT can increase the transit mode share in a community due to improved travel times, service frequencies, and the unique components of the BRT system. This mode shift reduces VMT and the associated GHG emissions.

T-29: Reduce Transit Fares – This measure will reduce transit fares on the transit lines serving the plan/community. A reduction in transit fares creates incentives to shift travel to transit from single-occupancy vehicles and other traveling modes, which reduces VMT and associated GHG emissions. This measure differs from Measure T-9, Implement Subsidized or Discounted Transit Program, which can be offered through employer-based benefits programs in which the employer fully or partially pays the employee's cost of transit.

T-46: Provide Transit Shelters – For this measure, a local government or transit agency provides amenities that make it safer and more comfortable to wait for the bus. The two interventions that have proven to lead to changes in rider perceptions are adding bus shelters and adding real-time arrival information. Research into transit ridership shows that adding these amenities decreases both the real and the perceived wait time for riders, which impacts riders' willingness to ride.

Clean Vehicles and Fuels

T-30: Use Cleaner-Fuel Vehicles – This measure requires use of cleaner-fuel vehicles (electric vehicles, natural gas and propane vehicles, and vehicles powered by biofuels) in

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lieu of similar vehicles powered by gasoline or diesel fuel.

The above list should not be considered exhaustive, and projects can propose other TDM measures if appropriate and desired.

VMT Mitigation Measure Effectiveness

An important consideration when combining TDM measures is whether a maximum VMT reduction should be applied based on land use context. The CAPCOA methodology identifies VMT reduction maximums based on community types tied to land use context. The caps are applied at each step of the VMT reduction calculation (i.e., at the strategy scale, the combined strategy scale, and the global scale). However, these caps are not based on research related to the effectiveness of VMT reduction strategies in different land use contexts. The cap differences are largely based on VMT generation differences within different land use contexts and serve as a proxy for potential limits on VMT reduction strategy effectiveness. For suburban jurisdictions such as Vallejo, CAPCOA identifies a global VMT reduction maximum of 15 percent. **Table 3** presents a summary of the maximum allowable reductions recommended for individual VMT mitigation measures based on the available research and the city's local context.

If new or unusual VMT mitigation measures are proposed and/or the study proposes using a reduction near the higher end of the observed range, the City may hire a consultant (at the applicant's expense) to peer review the VMT study and recommendations. The cost of the peer review will be borne by the applicant/developer.

Each of the TDM measures described above can be combined with others to increase the effectiveness of VMT mitigation; however, the interaction between the various TDM measures is complex and sometimes counterintuitive. Generally, with each additional measure implemented, a VMT reduction is achieved, but the incremental benefit of VMT reduction may diminish. To quantify the VMT reduction that results from combining TDM measures, the analyst must consider multiplicative dampening as outlined in the CAPCOA documentation.

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Table 3. VMT Mitigation Measure Reduction Caps

Mitigation Measure	Maximum Potential Reduction[1]
Land Use	
T-1: Increase Residential Density	30.0%
T-2: Increase Job Density	30.0%
T-3: Provide Transit-Oriented Development	31.0%
T-4: Integrate Affordable and Below Market Rate Housing	28.6%
T-17: Improve Street Connectivity	30.0%
T-55: Infill Development	30.0%
Trip Reduction Programs	
T-5: Implement Commute Trip Reduction Program (Voluntary)	4.0%
T-6: Implement Commute Trip Reduction Program (Mandatory Implementation and Monitoring)	26.0%
T-7: Implement Commute Trip Reduction Marketing	4.0%
T-8: Provide Ridesharing Program	8.0%
T-9: Implement Subsidized or Discounted Transit Program	5.5%
T-10: Provide End-of-Trip Bicycle Facilities	4.4%
T-11: Provide Employer-Sponsored Van pool	8.1%
T-12: Price Workplace Parking	20.0%
T-13: Implement Employee Parking Cash-Out	12.0%
T-23: Community-Based Travel Planning	2.3%
Parking and Road Pricing/Management	
T-14: Provide Electric Vehicle Charging Infrastructure	11.9%
T-15: Limit Residential Parking Supply	13.7%
T-16: Unbundle Residential Parking Costs from Property Cost	15.7%
T-24: Implement Market Price Public Parking (On-Street)	30.0%
Neighborhood Design	
T-18: Provide Pedestrian Network Improvements	6.4%
T-19-A: Construct or Improve Bike Facility	0.8%
T-19-B: Construct or Improve Bike Boulevard	0.2%
T-20: Expand Bikeway Network	0.5%
T-21-A: Implement Conventional Carshare Program	0.15%
T-21-B: Implement Electric Carshare Program	0.18%
T-22-A: Implement Pedal (Non-Electric) Bikeshare Program	0.02%
T-22-B: Implement Electric Bikeshare Programs	0.06%

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Mitigation Measure	Maximum Potential Reduction[1]
T-22-C: Implement Scootershare Program	0.07%
Transit	
T-25: Extend Transit Network Coverage or Hours	4.6%
T-26: Increase Transit Service Frequency	11.3%
T-27: Implement Transit-Supportive Roadway Treatments	0.6%
T-28: Provide Bus Rapid Transit	13.8%
T-29: Reduce Transit Fares	1.2%
T-46: Provide Transit Shelters	0.32%

[1] These figures are the maximum potential reduction identified in the CAPCOA research. In general, lower reductions should be anticipated for land-use developments within Vallejo. For TDM reductions for projects within the city, supporting evidence and calculations should be provided.
Source: California Air Pollution Control Officers Association, *Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity, Final Draft*, October 2024.

Other Environmental Considerations

As noted in the Introduction, the updated CEQA Guidelines Appendix G Checklist contains three additional criteria beyond the VMT evaluation criteria discussed in the preceding section. They are listed below.

Would the project:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

4. Result in inadequate emergency access?

The CEQA Transportation section should address these three questions, considering the unique characteristics of the project, including its location, size, design, use mix, transportation and urban form context, and other relevant details. In the assessment of transit, bicycle, and pedestrian networks, the following standards of significance shall be used.

Transit System – The project would create a significant impact related to transit service if the following criteria is met:

1. The project interferes with existing transit facilities or precludes the construction of planned transit facilities.

Bicycle System – The project would create a significant impact related to the bicycle system if any of the following criteria are met:

1. The project disrupts existing bicycle facilities; or
2. Interferes with planned bicycle facilities; or
3. Creates inconsistencies with adopted bicycle system plans, guidelines, policies, or standards.

Pedestrian System – The project would create a significant impact related to the pedestrian system if any of the following criteria are met:

1. The project disrupts existing pedestrian facilities; or

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2. Interferes with planned pedestrian facilities; or
3. Creates inconsistencies with adopted pedestrian system plans, guidelines, policies, or standards.