Contra Costa County Transportation Analysis Guidelines

Conservation and Development Department

Public Works Department

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1. INTRODUCTION

The Contra Costa County Transportation Analysis Guidelines ("TAG" or "Guidelines") are provided to aid in the preparation of traffic analysis for project applicants and staff. The purpose of this document is to establish a uniform approach, methodology, and tool set to evaluate the impacts of land use decisions and related transportation projects on the County transportation system. This is a "living document" and will be updated periodically to reflect newly acquired data and relevant policies.

2. TRANSPORTATION POLICY FRAMEWORK

A. SENATE BILL 743 – CALIFORNIA ENVIRONMENTAL QUALITY ACT

In 2013, Governor Brown signed Senate Bill ("SB") 743 (Steinberg), which created a process to change the way that transportation impacts are analyzed under California Environmental Quality Act ("CEQA"). Specifically, SB 743 amended the CEQA guidelines to state that automobile delay metrics (i.e. level of service or "LOS") will no longer be considered a significant impact under CEQA. The Governor's Office of Planning and Research ("OPR") and the California Natural Resources Agency has certified and adopted changes to the CEQA Guidelines that identify Vehicle Miles Traveled ("VMT") as the most appropriate metric to evaluate a project's transportation impacts. In 2018, OPR released a "Technical Advisory" containing methodologies and thresholds for VMT, but the Technical Advisory is not regulatory, only advisory. The OPR Technical Advisory allows local agencies to retain their congestion-based standards (i.e. LOS) in general plans and for project planning purposes. Projects may therefore be required to provide two different traffic analyses.

In 2020, the California Department of Transportation's ("Caltrans") released their Transportation Impact Study Guide ("TISG") intended for use by local agencies as a guide to assist in the Local Development-Intergovernmental Review ("LD-IGR") program during environmental review of land use projects and plans. The LD-IGR program works with local jurisdictions early and throughout their land use planning and decision making processes – consistent with the requirements of CEQA and state planning law – to reduce single occupancy vehicle trips, provide a safe transportation system, reduce per capita VMT, increase accessibility to destinations via cycling, walking, carpooling, and transit, and reduce Greenhouse Gas ("GHG") emissions.

B. COUNTY GENERAL PLAN

The purpose of the Contra Costa County General Plan is to express the broad goals and policies, and specific implementation measures, which will guide decisions on future growth, development, and the conservation of resources. The goals, policies and implementation programs contained in the General Plan represent the hopes and concerns of the residents of the County in terms of defining and preserving a "quality of life." The various elements or chapters of the plan are intended to provide objectives, principles and standards to decision-making bodies in the County, as well as numerous other public agencies, that will be making decisions about the development of private and public lands and the locations and extent of improvements such as transportation infrastructure.

1. GROWTH MANAGEMENT ELEMENT

In 1988, the voters approved Measure C which established the Contra Costa Transportation Authority ("CCTA" or "Authority), added one-half cent to the county sales tax for the next 20 years to be used for transportation funding, and gave the Authority the charge to implement a Growth Management Program ("GMP"). That program requires the County and each city to develop a Growth Management Element ("GME") as part of its General Plan in order to be eligible to receive local street maintenance and improvement funds generated by Measure C-1988.

Contra Costa voters extended the Measure C-1988 transportation sales tax and GMP through 2034 when they approved Measure J in 2004. Measure J also maintained the requirement that each jurisdiction participating in the GMP to adopt a GME as part of its General Plan. The adopted GME must:

- Outline the jurisdiction's goals and policies for managing growth, and
- Show how the jurisdiction will comply with Measure J's requirements for a Growth Management Program.

The Growth Management Program in Measure J focuses on four key objectives:

- Assure that new residential, business and commercial growth pays for the facilities required to meet the demands resulting from that growth.
- Require cooperative transportation and land use planning among Contra Costa County, cities, towns, and transportation agencies.
- Support land use patterns within Contra Costa that make more efficient use of the transportation system, consistent with the General Plans of local jurisdictions.
- Support infill and redevelopment in existing urban and brownfield areas.

The County's GME establishes policies and performance standards for various public facilities (e.g. fire, police, parks, sanitary facilities, water, and flood control) and the transportation system to generally ensure that said facilities are provided consistent with adopted standards. The intent is to ensure that growth takes place in a manner that will ensure protection of the health, safety and welfare of both existing and future residents of Contra Costa County. Responsible management of growth in the county is key to preserving the quality of life for current and future county residents.

2. TRANSPORTATION AND CIRCULATION ELEMENT

The County's Transportation and Circulation Element ("TCE") establishes transportation goals, policies, and specific implementation measures to assure that the transportation system of the County will have adequate capacity to efficiently serve planned growth in Contra Costa County. The intention of the TCE is to provide a plan and implementing measures for an integrated, multi-modal transportation system that will safely and efficiently meet the transportation needs of all economic and social segments of the County and provide for the transport of goods and services throughout Contra Costa County.

The transportation system outlined in the TCE recognizes on the one hand the limited availability of transportation funding and, on the other hand, the growing need for improved accessibility to the activities important to our quality of life. As a result, the TCE emphasizes the efficient use of the existing transportation system and cost effective enhancements to this system to accommodate planned growth consistent with the Land Use Element. The County will continue to seek revenue from a variety of sources for needed transportation improvements and to work toward the establishment of new and creative funding mechanisms (i.e., private/public and regional partnerships) consistent with the goals and policies of the Growth Management Element, Measure C – 1988 and Measure J – 2004. The County will also seek improved land use patterns in Contra Costa that reduce the need to travel long distances to meet our daily needs through implementation of policies like Complete Streets and SB 743.

C. CAPITAL ROAD IMPROVEMENT & PRESERVATION PROGRAM

The Capital Road Improvement & Preservation Program ("CRIPP") is a programming document for the funding of capital road improvement projects within Contra Costa County. It includes estimated project costs, funding source information, and scheduling information for known potential projects within the next seven fiscal years. It also includes revenue projections and a summary of estimated project-related expenditures for each funding source.

The CRIPP was established by Resolution 89/306 under the County Road Improvement Policy. The Policy was authorized by Government Code Section 66002 and is required under the Growth Management Element of the Contra Costa Transportation and Growth Management Program Ordinance approved by the voters in Measure C-1988.

Approval of the CRIPP by the Board of Supervisors does not automatically approve each individual project listed in the CRIPP. Each project in the CRIPP is subject to a separate public review, engineering feasibility analysis, and environmental assessment before the Board of Supervisors will consider final approval of the project.

The project costs in the CRIPP are for the current year. The CRIPP does not escalate the project costs for future inflation. A large portion of the funding programmed in the CRIPP is from fees associated with the Area of Benefit ("AOB") Fee. AOB Fee Programs are adjusted annually to provide for inflation.

LINK: County Capital Road Improvement & Preservation Program

D. COMPLETE STREETS

"A complete street is a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including bicyclists, pedestrians, transit vehicles, truckers, and motorists, appropriate to the function and context of the facility. Every complete street looks different, according to its context, community preferences, the types of road users, and their needs." -Caltrans Complete Streets Program

In 2006, the Metropolitan Transportation Commission ("MTC") adopted a resolution to accommodate travelers who walk and bike as part of project planning and design work. MTC developed a "Complete Streets Checklist" that must be completed in order for project sponsors to be eligible to receive state or federal funding for transportation projects.

On September 30, 2008, the Governor of California signed Assembly Bill No. 1358, which required, commencing January 1, 2011, that each city or county substantially revise their general plan circulation elements to provide policies to plan for balanced, multimodal transportation networks that meet the needs of all users.

On July 12, 2016, the Board of Supervisors adopted Resolution No. 2016/374 approving the Complete Streets Policy of Contra Costa County. This Policy expanded on a 2008 General Plan amendment to support Complete Streets policies.

1. CONTRA COSTA COUNTY COMPLETE STREETS PRINCIPLES

a. **Complete Streets Serving All Users.** Contra Costa County expresses its commitment to creating and maintaining Complete Streets that provide safe, comfortable, and convenient travel along and across rights-of-way (including streets, roads, highways, bridges, paths, and other portions of the transportation system) through a comprehensive, integrated transportation network that

serves all categories of users, including pedestrians, bicyclists, persons with disabilities, motorists, movers of commercial goods, users and operators of public transportation, seniors, children, youth, students and families.

b. **Context Sensitivity.** In planning and implementing street projects, departments and agencies of Contra Costa County shall maintain sensitivity to local conditions in both residential and business districts as well as urban, suburban, and rural areas, and shall work with residents, merchants, school representatives, and other stakeholders to ensure that a strong sense of place ensues. Improvements that will be considered include sidewalks, shared use paths, separated bikeways/cycle tracks, bicycle lanes, bicycle routes, paved shoulders, street trees and landscaping, planting strips, accessible curb ramps, crosswalks, refuge islands, pedestrian signals, signs, street furniture, bicycle parking facilities, public transportation stops and facilities, transit priority signalization, traffic calming circles, transit bulb outs, road diets and other features assisting in the provision of safe travel for all users and those features and concepts identified in the Contra Costa County Complete Streets General Plan Amendment of April 2008.

c. **Complete Streets Routinely Addressed by All Departments.** All departments and agencies of Contra Costa County shall work towards making Complete Streets practices a routine part of everyday operations, approach every relevant project, program, and practice as an opportunity to improve streets and the transportation network for all categories of users/modes, and work in coordination with other departments, agencies, and jurisdictions to maximize opportunities for Complete Streets, connectivity, and cooperation. Example activities include, but are not necessarily limited to the following: pavement resurfacing, restriping, accessing above and underground utilities, signalization operations or modifications, maintenance of landscaping/related features, and shall exclude minor (catch basin cleaning, sign replacement, pothole repair, etc.) maintenance and emergency repairs.

d. **All Projects and Phases.** Complete Streets infrastructure sufficient to enable reasonably safe travel along and across the right of way for each category of users shall be incorporated into all planning, funding, design, approval, and implementation processes for any construction, reconstruction, retrofit, maintenance, operations, alteration, or repair of streets (including streets, roads, highways, bridges, and other portions of the transportation system), except that specific infrastructure for a given category of users may be excluded if an exemption is approved via the process set forth in section C.1 of this policy.

2. CONTRA COSTA COUNTY COMPLETE STREETS IMPLEMENTATION MEASURES

a. **Plan Consultation and Consistency.** Maintenance, planning, and design of projects affecting the transportation system shall be consistent with the Contra Costa County General Plan, as well as other applicable bicycle, pedestrian, transit, multimodal, best practices, and other relevant documents. Where such consistency cannot be achieved without negative consequences, consistency shall not be required if the head of the relevant departments, or designees, provides written approval explaining the basis of such deviation.

b. **Street Network/Connectivity.** As feasible, and as opportunities arise, Contra Costa County shall incorporate Complete Streets infrastructure into existing streets to improve the safety and

convenience of all users, with the particular goal of creating a connected network of facilities accommodating each category of users, increasing connectivity across jurisdictional boundaries, and for accommodating existing and anticipated future areas of travel origination or destination. A well-connected network should include non-motorized connectivity to schools, parks, commercial areas, civic destinations and regional non-motorized networks on both publically owned roads/land and private developments (or redevelopment areas).

c. **Countywide Bicycle Advisory Committee ("CBAC") Consultation.** The County CBAC may review the design principles used by staff to accommodate motor vehicle, bicycle, pedestrian, and transit modes of travel when reviewing projects. The CBAC will be engaged early in the planning and design stage to provide an opportunity for comments and recommendations regarding Complete Street features of major public transportation projects.

d. **Evaluation**. The County will establish a means to collect data and evaluate the implementation of Complete Streets policies. For example tracking the number of miles of paths, bike lanes and sidewalks, numbers of street crossings, signage etc.

3. EXCEPTIONS

a. **Required Findings and Leadership Approval for Exemptions.** Plans or projects that seek exemptions from incorporating Complete Streets design principles must provide a written explanation of why accommodations for all modes were not included in the project. An exemption may be granted by the Director of Public Works or Director of Conservation and Development upon finding that inclusion of Complete Streets design principles are not possible or appropriate under one or more of the following circumstances:

   i. Bicycles or pedestrians are not permitted on the subject transportation facility pursuant to state or local laws;

   ii. Inclusion of Complete Streets design principles would result in a disproportionate cost to the project;

   iii. There is a documented absence of current and future need and demand for Complete Streets design elements on the subject roadway; and,

   iv. One or more significant adverse effects would outweigh the positive effects of implementing Complete Streets design elements. Plans or projects that are granted exceptions must be made available for public review.

D. VISION ZERO CONTRA COSTA COUNTY

Originally adopted by the Swedish parliament in October 1997, Vision Zero is a comprehensive set of policies that prioritize safety in the planning and implementation of transportation infrastructure projects that aim to achieve a transportation system with no road traffic fatalities or serious injuries.

The County is developing a Vision Zero Plan ("Plan") to address severe and fatal collisions on County-owned roadways. The Plan, to be considered by the BOS in the future, would include strategies moving the County

towards the ultimate goal of zero fatalities and major injury collisions on its roadway network. The strategies outlined in the Plan include engineering, education, and/or enforcement measures, which implement the following primary goals:

- Meet the requirement for the County to have an equivalent Local Road Safety Program ("LRSP") in order to apply for certain grant funding.
- Aim for the Vision Zero Program goal to eliminate fatal and serious injury collisions throughout the unincorporated road network.
- Prioritize infrastructure projects that are in alignment with the Vision Zero Program through Engineering.
- Develop a Vision Zero campaign that, if funding allows, can be used to engage the general public through Education and Engagement.
- Eliminate high-risk behavior among the traveling public through Education and Enforcement.
- Foster relationships among various agencies related to the Vision Zero Program and facilitate maintenance of these relationships into the future.

LINK: County Vision Zero Program

E. COUNTY ORDINANCE CODE

The County Ordinance Code is the implementation tool of the General Plan and must be consistent with General Plan policies and land use designations. The County Ordinance Code contains specific provisions that address on and off-site circulation with the intent of preserving and improving the quality and efficiency of the County transportation system. All land development proposals must demonstrate compliance with these provisions.

1. SECTION 74-4.006 – ELECTRIC VEHICLE ("EV") CHARGING

In 2015, the Board of Supervisors adopted Ordinance No. 2015-22 amending the 2013 California Green Building Standards Code to establish electric vehicle parking and charging station building standards for the unincorporated County. County Code Section 74-4.006 - Amendments to CGBSC – Electric Vehicle ("EV") Charging standards apply to residential (single and multi-family) and non-residential development. See Appendix A for a quick guide to calculating EV parking.

LINK: County EV Ordinance

2. CHAPTER 82-16 – OFF-STREET PARKING

The County's Off-Street Parking Ordinance provides a unified set of standards for off-street vehicle and bicycle parking to meet the needs of persons employed at, or making use of, each land use during peak hours of parking needs. This chapter is intended to encourage the use of features, design strategies, materials, products, and best construction practices that preserve natural resources, conserve water and energy, and maximize energy efficiency in the design of parking facilities. This chapter also is intended to balance the needs of pedestrians, vehicles, bicycles, and public transportation.

LINK: County Off-Street Parking Ordinance

3. CHAPTER 82-32 – TRANSPORTATION DEMAND MANAGEMENT

The County's Transportation Demand Management ("TDM") Ordinance intends to further the transportation goals of the County General Plan, the Measure J Growth Management Program, Contra Costa County's Congestion Management Program, and the Bay Area Clean Air Plan. Its purpose is to implement the provisions of the General Plan to promote a more balanced transportation system that takes advantage of all modes of transportation by:

1. Incorporating pedestrian, bicycle, and transit access into improvements proposed in development applications;
2. Incorporating the overall intent and purpose of this chapter into the land use review and planning process;
3. Allowing requests for reductions in the off-street parking requirements for residential or nonresidential projects that have a conceptual TDM Program;
4. Providing information to residents on opportunities for walking, bicycling, ridesharing and transit.

The County TDM Ordinance applies to:

1. Residential projects containing thirteen or more dwelling units; and
2. Any non-residential or mixed-use development proposal.

LINK: County TDM Ordinance

4. TITLE 9 - SUBDIVISIONS

Title 9 of the Contra Costa County Ordinance Code, known as the "Subdivision Ordinance," contains regulations in accordance with the Subdivision Map Act.

LINK: County Subdivision Ordinance

F. CONTRA COSTA TRANSPORTATION AUTHORITY

August 3, 1988, the Contra Costa Transportation Partnership Commission was created by the Mayors' Conference and the Board of Supervisors to provide a countywide forum for transportation issues and to propose ways to reduce traffic congestion. To achieve this goal, the Transportation Partnership Commission, also established as the Contra Costa Transportation Authority ("CCTA") under State Law (SB 142), established principles to guide development of a Countywide Comprehensive Transportation Plan and to develop an Expenditure Plan for a one-half cent retail transactions and use tax measure which was approved by Contra Costa voters in November, 1988.

CCTA, whose board is comprised of representation from all 19 cities, the unincorporated County and the transit agencies, is responsible for ensuring the completion of a wide variety of projects that were included in the original Measure C Expenditure Plan and the Measure J (approved by Contra Costa voters in November

2004) Expenditure Plan. CCTA works cooperatively with local agencies on funding and implementation of transportation projects.

1. CCTA TECHNICAL PROCEDURES

The purpose of this document is to establish a uniform approach, methodology, and tool set that public agencies in Contra Costa may apply to evaluate the impacts of land use decisions and related transportation projects on the local and regional transportation system. Compliance with the Measure J Growth Management Program requires that local jurisdictions use these *Technical Procedures* to analyze the impact of proposed development projects, General Plans, and General Plan Amendments. Where there are overlapping/conflicting policies the more conservative policy will prevail.

2. CCTA COUNTYWIDE BICYCLE AND PEDESTRIAN PLAN

The Countywide Bicycle and Pedestrian Plan ("CBPP") builds on and expands the goals, policies and strategies of the Countywide Transportation Plan (CTP). Both plans set goals for increasing walking and bicycling and identify actions the Authority and its partners should take to achieve them.

3. CCTA ACTION PLANS FOR ROUTES OF REGIONAL SIGNIFICANCE

The Action Plans are intended to establish quantitative service objectives by which we can gauge the progress of our transportation system and assess the impacts of land use decisions on the regional transportation system. Each Action Plan identifies a system of Regional Routes – those freeways, arterials and other facilities that provide the main connections among Contra Costa's communities and to the surrounding areas. The Action Plans help local jurisdictions meet the requirement of the Measure J Growth Management Program (GMP) that requires local jurisdictions to participate in a cooperative, multi-jurisdictional planning process.

3. STAFF PROTOCOL FOR EVALUATING LAND DEVELOPMENT PROPOSALS

Each project planner, transportation planner, or engineer submitting transportation comments on a development application via email or memorandum is responsible for providing courtesy copies of these comments to their counterparts in Transportation Planning, Transportation Engineering, and Engineering Services who are also involved in reviewing that development application.

County staff is encouraged to assemble project teams for large or complex development applications to assist in coordination efforts. While there may be exceptions, this protocol and these diagrams cover most circumstances that are likely to occur as development applications are evaluated for their transportation impacts.

The department (either County Department of Conservation and Development ("DCD") or Public Works Department ("PWD")) with lead responsibility for review of transportation issues depends on the project.

This protocol designates one department with lead responsibility for the following:

- Informing Current Planning staff of their counterparts (DCD or PWD) who will also be involved in reviewing a development application for its transportation impacts;

- Ensuring the transportation comments from both departments are submitted on time;

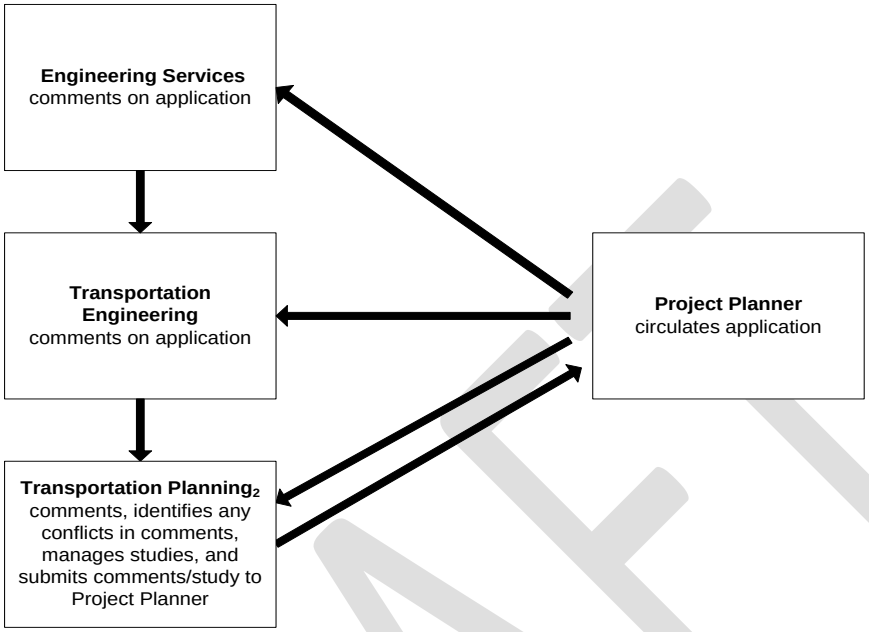
- Ensuring the transportation comments from both departments are internally consistent;
- Routing the proposal to the appropriate sub-regional transportation planning committee ("RTPC") for review and comment; and
- Managing the transportation consultants hired (if necessary) by the County.

Please be aware that designation of lead responsibility as indicated in the following table does not limit the ability of other interested staff to comment on the transportation impacts of a development application.

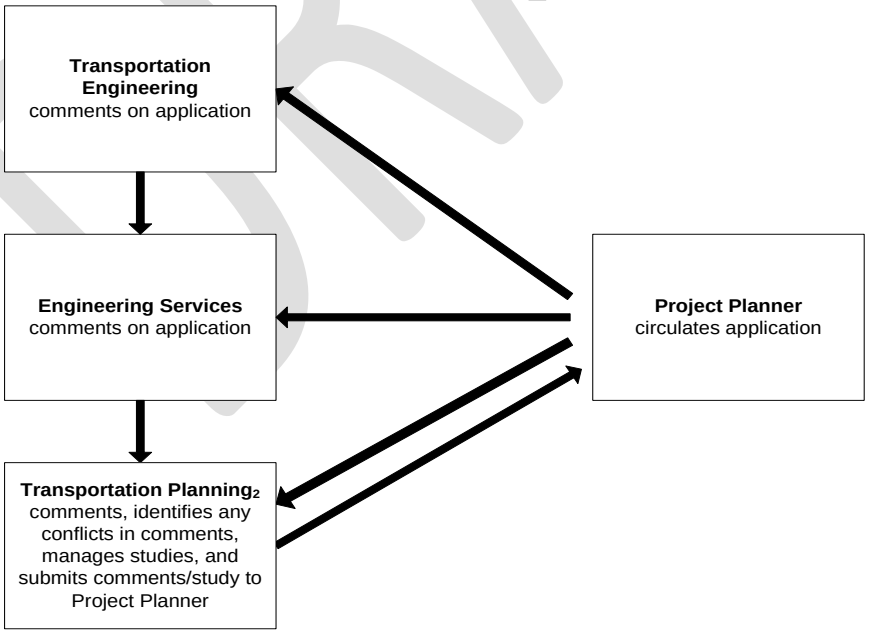
Type of Development Application	Transportation Staff with Lead Responsibility
General Plan Amendment	DCD, Transportation Planning ("TP")
Other development application with ≥ 100 Peak Hour Trips	DCD TP
Other development application with < 100 Peak Hour Trips	PWD, Engineering Services Division

The flow charts provided below show the process for commenting on the major types of development applications.

Flow Chart 1
PROCESS FOR TRANSPORTATION COMMENTS ON ALL GENERAL PLAN AMENDMENT APPLICATIONS [1]

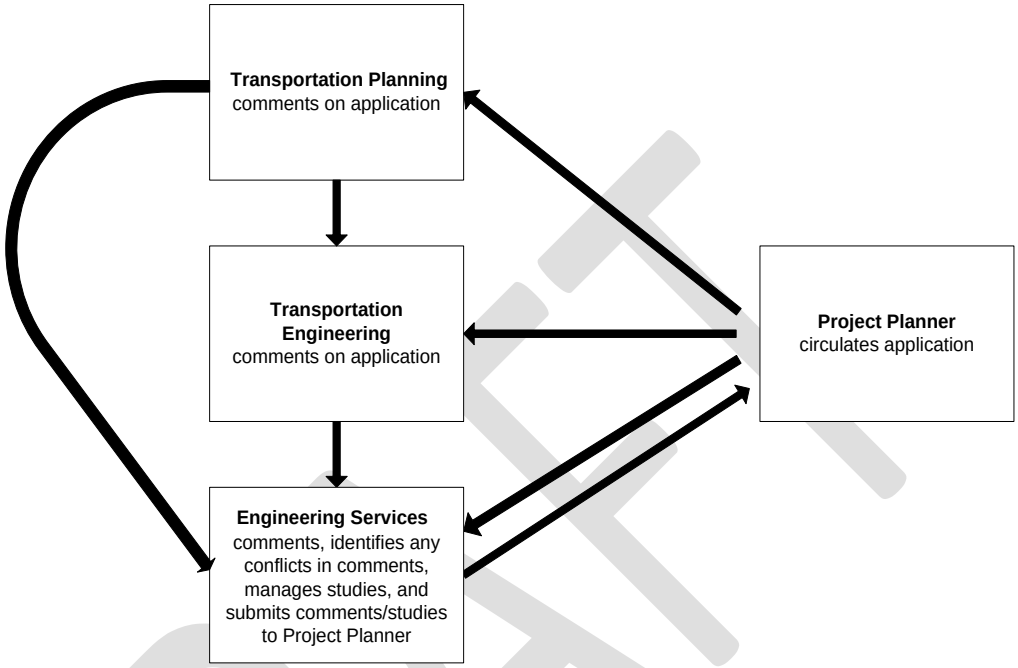


Flow Chart 2
PROCESS FOR TRANSPORTATION COMMENTS ON OTHER APPLICATIONS WITH ≥ 100 PEAK HOUR TRIPS[3]



Notes
1 No associated development application.
2 Indicates County staff with lead responsibility for coordinating transportation comments.
3 May include GPA application.

Flow Chart 3
PROCESS FOR TRANSPORTATION COMMENTS ON OTHER APPLICATIONS WITH < 100 PEAK HOUR TRIPS



4. TRANSPORTATION ANALYSIS GUIDELINES

The County General Plan establishes policies and standards to ensure the safe and efficient performance of the transportation system. Land development and transportation projects are evaluated against operational and efficiency standards like LOS and Vehicle Miles Traveled ("VMT") to ensure optimal system performance, and compliance with the California Environmental Quality Act ("CEQA") under project conditions. Using VMT as the CEQA analysis metric also assists in achieving the State's long-term climate goals for reducing greenhouse gas emissions ("GHG").

A. VEHICLE MILES TRAVELED ANALYSIS

Senate Bill 743 (Steinberg, 2013), which enacted Public Resources Code section 21099, required changes to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts. These County Transportation Analysis Guidelines provide technical guidance regarding assessment of VMT, thresholds of significance, and mitigation measures for land development and transportation projects in the unincorporated area.

1. VMT SCREENING CRITERIA

This section provides screening criteria in order to quickly determine if a proposed project should be expected to prepare a detailed VMT analysis. Absent substantial 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.

i. Projects that:

   a. Generate or attract fewer than 110 daily vehicle trips[1]; or,

   b. Projects of 10,000 square feet or less of non-residential space or 20 residential units or less, or otherwise generating less than 836 VMT per day.

ii. Residential, retail, office projects, or mixed-use projects proposed within ½ mile of an existing major transit stop[2] or an existing stop along a high quality transit corridor[3].

iii. Residential projects (home-based) at 15% or below the baseline County-wide home-based average VMT per capita, or employment projects (worker) at 15% or below the baseline Bay Area average commute VMT per employee in areas with low VMT that incorporate similar VMT reducing features (i.e., density, mix of uses, transit accessibility).

iv. Public facilities (e.g. emergency services, passive parks (low-intensity recreation, open space), libraries, community centers, public utilities) and government buildings.

2. VMT METRICS

Consistent with the OPR guidelines, the following specific VMT metrics are recommended to complete a VMT impact assessment:

Residential Projects: VMT per resident for all home-based trips.

Employment Projects: VMT per Employee for only the home-based-work trip purpose and would apply to office, industrial, and institutional projects.

Regional Retail (>50,000 square feet): Total VMT per service population for trips taken by both workers and visitors.

[1] CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. (CEQA Guidelines, § 15301, subd. (e)(2).). Typical project types for which trip generation increases relatively linearly with building footprint (i.e., general office building, single tenant office building, office park, and business park) generate or attract an additional 110-124 trips per 10,000 square feet. Therefore, absent substantial evidence otherwise, it is reasonable to conclude that the addition of 110 or fewer trips could be considered not to lead to a significant impact.

[2] 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 15 minutes or less during the morning and afternoon peak commute periods.").

[3] 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.").

Mixed-Use: Total VMT per service population. (Use the CCTA model and analyze the project in its entirety.)

Other: Total VMT per service population for trips taken by both workers and visitors.

3. VMT FORECASTING

For proposed projects that have not been screened out of analyzing VMT impacts under CEQA, a full VMT analysis will be required. VMT should be estimated using the CCTA model to generate estimates of both partial and total VMT for the project. It is recommended that average trip length information and estimated VMT for a proposed project be obtained for each trip purpose by either:

- Inserting the proposed project into the CCTA Countywide Model. Using the CCTA model to determine both trip generation and trip lengths allows consistent analysis methodology; or,

- Utilizing existing average trip length data of similar Traffic Analysis Zones ("TAZ") that contain similar mixes of land uses.

County staff must approve the use of VMT forecasting methodologies inconsistent with the guidance provide above.

Cumulative VMT Impacts

Cumulative impacts should be evaluated for consistency with the County General Plan (Envision 2040). For example, if a project is consistent with the County General Plan (Envision 2040) and the General Plan remains consistent with its VMT projections as originally analyzed, the project's cumulative impacts shall be less-than significant. However, if the project is inconsistent with the adopted County General Plan, then the analysis should evaluate the project's cumulative VMT impacts and determine if the Countywide VMT increases or decreases with the proposed project relative to the VMT generated by full General Plan buildout.

If the Cumulative Plus Project analysis indicates that total VMT remains at or below the VMT generated by full General Plan buildout and the project is aligned with the County General Plan's relevant goals and policies, then the project would be considered to have a less-than significant cumulative impact. Alternatively, a significant impact would occur if the proposed project increases total VMT compared to the County General Plan (Envision 2040) assumptions.

4. VMT THRESHOLDS

The CEQA thresholds of significance ("TOS") impact criteria provided below require the proposed project's transportation impact analysis to compare the VMT per person/employee to the VMT per person/employee for the County or Bay Area region. A proposed project should be considered to have a significant impact if the project VMT is greater than:

- **Residential Projects:** 15% below the County-wide average home-based VMT per capita.

- **Employment Projects (office, industrial and institutional projects):** 15% below the Bay Area average commute VMT per employee.

- **Regional Retail (>50,000 square feet):** 15% below Bay Area average total VMT per service population.

- **Mixed-Use Projects:** 15% below the County-wide average total VMT per service population.

5. VMT MITIGATION

The traffic impact analysis should develop and incorporate appropriate mitigation measures to offset traffic impacts that are found to have exceeded the identified threshold(s) of significance. Three options exist under CEQA when the transportation analysis identifies significant impacts:

- Modify the proposed project to eliminate or substantially lessen all significant effects on the environment where feasible;

- Determine that any remaining significant effects on the environment found to be unavoidable under CEQA Guidelines Section 15091 are acceptable due to overriding concerns as described in Section 15093; or

- Deny the project.

To mitigate VMT impacts the applicant shall consider, but not be limited to, the following:

- Modify project 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).

- Look for other measures to reduce trip lengths or the number of trips generated through the use of transportation demand management ("TDM") measures. Example TDM strategies are provided in Appendix B and in the County TDM Guidelines.

- A toolkit of urban design and land use strategies from other agencies (e.g. CCTA), with a presumed VMT reduction tied to each strategy.

- A fair share payment toward a regional program designed to reduce VMT, if available.

Proposed projects shall also utilize the latest version of the California Air Pollution Control Officers Association ("CAPCOA") Quantifying Greenhouse Gas Mitigation Measures[4] 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

[4] CAPCOA Quantifying Greenhouse Gas Mitigation Measures, http://www.capcoa.org/documents/

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, 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 of the aforementioned mitigation strategies infeasible or ineffective, County staff will consider other mitigations options.

6. TRANSPORTATION PROJECTS

Many transportation projects change travel patterns. A transportation project which leads to additional vehicle travel on the roadway network, commonly referred to as "induced vehicle travel," would need to quantify the amount of additional vehicle travel in order to assess air quality impacts, greenhouse gas emissions impacts, energy impacts, and noise impacts. Transportation projects also are required to examine induced growth impacts under CEQA[5].

If a transportation project would likely lead to a measurable and substantial increase in vehicle travel (i.e. increase total VMT), it is presumed to be a significant impact and an analysis assessing the amount of vehicle travel the project will induce shall be conducted.

Absent substantial evidence indicating that a project would generate a potentially significant level of VMT, transportation projects that can be presumed to lower VMT or have no effect on it, such as bike and pedestrian projects, transit improvements, and minor operational improvements, as defined in the State Office of Planning Research Technical Advisory (December 2018), should be expected to cause a less-than-significant impact under CEQA and would not require further VMT analysis.

B. LEVEL OF SERVICE ANALYSIS

When evaluating the effects of development projects on the performance of the unincorporated County's transportation facilities, the County applies operational standards to ensure the levels of growth and development provided in the County General Plan Land Use Element are sufficiently accommodated. Applicants may be required to prepare a LOS operational analysis if any of the following apply to a proposed project:

- Development project that generates 100 or more net new peak hour vehicle trips;
- Development project that adds 50 or more net new peak hour vehicle trips to an intersection;
- Project that creates safety or operational concerns[6].

Identifying improvements to address operational deficiencies would not be required under the following circumstances:

- Development projects where the addition of project traffic to an intersection(s) results in the degradation of intersection operations from acceptable LOS D or better to unacceptable

[5] State of California Office of Planning and Research, Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018)
[6] OPR, SB 743 Safety Technical Advisory: http://opr.ca.gov/docs/OPR_Appendix_B_final.pdf

operations (LOS E or LOS F), except for intersections within Priority Development Areas ("PDA") where the minimum acceptable operational standard is LOS E;

- Development projects where the addition of project traffic to an intersection(s) operating unacceptably before the addition of project trips results in the exacerbation of unacceptable operations, but only increases the average control delay (for signalized and all-way stop-controlled intersections) or worst movement/approach delay (for side-street stop-controlled intersections) at the intersection by 5.0 seconds or less;

County staff also reserves the right to require an applicant to prepare additional traffic analysis based on unanticipated project factors, site specific special concerns or other unanticipated issues, including after the transportation analysis scope is approved.

1. LEVEL OF SERVICE ANALYSIS SCOPE AND OPERATIONAL STANDARDS

The operations of transportation facilities are typically described with the term LOS, a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined from LOS A, as the best operating conditions, to LOS F, or the worst operating conditions. LOS E represents "at-capacity" operations. When traffic volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F.

The method used for evaluating LOS shall be the method defined in the latest version of the Transportation Research Board Highway Capacity Manual ("HCM"), unless directed otherwise by the County. This method bases intersection operations on the average vehicular control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and acceleration delay. The average control delay for intersections should be calculated using the latest version of Synchro analysis software, unless directed otherwise by the County. **Table 1** and **Table 2** below provide LOS grades and correlating qualitative descriptions for signalized and unsignalized intersection operations.

TABLE 1: SIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Delay in Seconds
A	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	≤ 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	> 55.0 to 80.0

F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: 2010 Highway Capacity Manual

TABLE 2: UNSIGNALIZED INTERSECTION LOS CRITERIA

Level of Service	Description	Delay in Seconds
A	Little or no delay.	≤ 10.0
B	Short traffic delays.	10.1 to 15.0
C	Average traffic delays.	15.1 to 25.0
D	Long traffic delays.	25.1 to 35.0
E	Very long traffic delays.	35.1 to 50.0
F	Extreme traffic delays with intersection capacity exceeded.	> 50.0

Source: 2010 Highway Capacity Manual

2. TRIP GENERATION ESTIMATES

Trip generation estimates shall be developed using the latest version of the Institute of Transportation Engineers ("ITE") Trip Generation Manual. County staff may approve the use of other trip generation rates due to unique characteristics of a proposed project. In cases where the published ITE trip generation rates are based on very limited data, rates shall be verified through alternative source documents or local peak-period field observation of similar uses.

3. ADJUSTMENTS TO TRIP GENERATION RATES

Trip generation rates represent an average rate for a number of observed projects. However, some projects may include specific characteristics that call for adjustments to the average rate to reflect its trip generation characteristics adequately. County staff will use professional judgment in applying any proposed adjustment. The reasons for the adjustment shall be documented in the traffic analysis. A summary of these adjustments and their potential effects on trip generation is outlined in **Table 3**.

Table 3: Summary of Trip Generation Adjustments

Adjustment	Expected Range of Adjustment (%)	Description
Transit Usage[1]	+3 to –3	Any transit usage adjustments to the project trip generation rates should be applied only to home-based work ("HBW") trips. Use the CCTA countywide travel demand model modal split results to verify mode choice information.
TDM[1]	+10 to –10	Should reflect local experience as indicated in annual survey results or other data for similar types and sizes of development, and apply only to the generation of HBW trips.

Pass-By[2]	0 to –60	Applies to shopping centers, fast food restaurants, and other retail uses.
Mixed-Use	0 to –6	Applies to mixes of residential and commercial uses.
Multi-Use[2]	0 to –25	Applies to multi-use commercial sites expected to attract multi-purpose trips
Surrounding Uses	0 to –5	Projects may have the ability to reduce VMT and encourage use of alternative transportation modes. For example, development in a suburban environment isolated from retail/commercial services might have higher trip rates than those within easier walking distance.

[1] The combined Transit and TDM reductions should not exceed 10%.

[2] If Pass-By or Multi-Use trip generation reductions are used, no other reductions are permitted.

4. TRIP DISTRIBUTION AND ASSIGNMENT

Project generated trips can be distributed and assigned manually using the model to predict background traffic. Existing directional split information, turning movement counts, and local knowledge may all contribute to predicting the distribution of project trips. For most projects, manual assignment techniques (e.g. TRAFFIX software) can adequately assess intersection impacts. A preliminary trip distribution pattern should be submitted in the proposed project scope for review and approval by County staff. Trip distribution may be further refined after consultation with County staff, even after a transportation analysis work scope is agreed upon.

5. SELECTION OF STUDY INTERSECTIONS

As a rule, in addition to the intersections adjacent to the proposed project site, the analysis should include any intersection to which at least 50 net new peak hour vehicle trips would be added by the project. Study intersections should be selected without consideration for jurisdictional boundaries. Additional study intersections may be selected after County staff has reviewed the trip generation, distribution and assignment of a proposed project.

Engineering judgment may be used to eliminate intersections from the analysis that are not controlling intersections or where critical movements are not affected as the project only adds through movements. The elimination of study intersections where 50 or more trips are projected to be added by the project must be done in consultation with the County Traffic Engineer, or with the staff of the jurisdiction that maintains the intersection. The traffic study must fully document the rationale for eliminating intersections from the analysis.

Study intersections should also include arterial and ramp intersections along defined Routes of Regional Significance, as appropriate. When the proposed project adds more than 50 net new peak hour vehicle trips to a freeway ramp, the project should be evaluated against the freeway multi-modal transportation service objectives (“MTSOs”) provided in the Action Plans adopted by the RTPC.

6. TRAFFIC COUNTING PROTOCOL

Traffic counts for traffic impact studies, level of service monitoring, and any other application intended to represent prevailing traffic conditions at a given location should be conducted in accordance with the following provisions:

a. During Fair Weather – Counts shall be conducted in fair weather, without rain, flooding, heavy winds, or other adverse weather conditions that could disrupt the flow of traffic;

b. On Tuesday, Wednesday, or Thursday of a non-holiday week when public schools are in session – which may include but not be limited to New Year's Day, Martin Luther King Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving, and Christmas. (Refer to school district calendar for official holidays.)

c. Typical School Day –Counts should be taken on typical school days avoiding half days, late start days and early-dismissal days whenever possible.

d. No major road closings – if temporary road closings have occurred that affect traffic flow at the count location, the count should be postponed until the road is re-opened. If the road closing is to be for an extended period, and a count needs to be conducted, the count results should be annotated to reflect the road closure conditions.

e. No construction activity – Counts should not be conducted in the presence of construction activity that could disrupt the arrival or departure of traffic at the count location.

f. No incidents or accidents – If an incident or accident has occurred in the vicinity of the count location, or if such an event occurs during the count, the count should be discarded, and repeated at a later date.

In the event that a traffic count is conducted specifically to observe conditions under provisions a-f above, the prevalence of such condition(s) shall be documented in the traffic analysis.

7. ANALYSIS

The traffic operations analysis shall include, as a minimum, consideration of the following scenarios:

Existing Conditions – This scenario evaluates transportation facilities based on volumes, lane geometry and traffic controls at the time of analysis.

Existing plus Project Conditions – Existing Conditions with the addition of traffic from the proposed project.

Near-term Conditions –Existing Conditions with the addition of trips added by the full buildout of entitled projects in the study area.

Near-term plus Project Conditions –Near-term Conditions with the addition of traffic from the proposed project.

Cumulative Conditions – This scenario evaluates horizon year conditions with the implementation of all approved land use changes and any development that is consistent with the General Plan and expected to

occur within the time frame of the project. It will also include transportation projects programmed for implementation prior to the horizon year and any programmed capital improvements.

Cumulative plus Project Conditions – Cumulative Conditions with the addition of traffic from the proposed project.

8. OPERATIONAL IMPROVEMENTS

The traffic analysis must recommend appropriate treatments for the transportation system to offset operational deficiencies that are found to have exceeded operational standards for the unincorporated County. Furthermore, as appropriate, the traffic analysis must disclose any secondary operational deficiencies that the proposed treatments could generate. For example, the secondary operational deficiency generated by adding approach lanes to an intersection could include an increase in pedestrian crossing time. In the event a treatment is programmed in the County CRIPP, each development will be required to provide fair-share funding for the programmed project(s). Proposed projects may also be required by Measure J to participate in the appropriate RTPC regional transportation improvement program.

5. APPENDICES

A. Electric Vehicle Charging Chart

B. TDM Strategies

C. California Environmental Quality Act Checklist (Transportation)

California Green Building Code/Contra Costa County Electric Vehicle Service Equipment ("EVSE") Requirements

<table>
<tr><th colspan="11">2013 Title 24, Part 11, California Green Building Code Summary Table</th></tr>
<tr><th></th><th colspan="2">MANDATORY MEASURES (effective July 1, 2015)</th><th colspan="2">VOLUNTARY MEASURES TIER 1</th><th colspan="2">VOLUNTARY MEASURES TIER 2</th><th colspan="2">CONTRA COSTA COUNTY MANDATORY MEASURES</th></tr>
<tr><td>One-and Two-Family w/attached private garages</td><td colspan="8">For each dwelling unit, install a listed raceway to accommodate a dedicated 208/240-volt branch circuit</td></tr>
<tr><td>Multi-family</td><td colspan="2">17+ multifamily units, 3 percent of total parking spaces (minimum 1 space) shall be capable of supporting future electric vehicle charging stations (EVCS)</td><td colspan="4">17+ multifamily units, 5 percent of total parking spaces (minimum 1 space) shall be capable of supporting future electric vehicle charging stations (EVCS)</td><td colspan="2">5 percent of total parking spaces (minimum 1 space) shall <u>install fully operational</u> (minimum Level 2 or higher[1]) electric vehicle charging stations (EVCS)</td></tr>
<tr><td rowspan="11">Non-Residential</td><td colspan="6">Construction shall facilitate future installation of electric vehicle supply equipment (EVSE)</td><td colspan="2"><u>Provide fully operational EVCS</u></td></tr>
<tr><td colspan="2">MANDATORY</td><td colspan="2">TIER 1</td><td colspan="2">TIER 2</td><td colspan="2">MANDATORY</td></tr>
<tr><td>TOTAL NUMBER OF PARKING SPACES</td><td>NUMBER OF REQUIRED EV CHARGING SPACES</td><td>TOTAL NUMBER OF PARKING SPACES</td><td>TIER 1 NUMBER OF REQUIRED EV CHARGING SPACES</td><td>TOTAL NUMBER OF PARKING SPACES</td><td>TIER 2 NUMBER OF REQUIRED EV CHARGING SPACES</td><td>TOTAL NUMBER OF PARKING SPACES</td><td>NUMBER OF REQUIRED EV CHARGING SPACES</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td><u>1-10</u></td><td><u>0</u></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td><u>11-25</u></td><td><u>2</u></td></tr>
<tr><td>0-50</td><td>0</td><td>0-50</td><td>1</td><td>0-50</td><td>2</td><td><u>26</u>-50</td><td><u>3</u></td></tr>
<tr><td>51-75</td><td>1</td><td>51-75</td><td>2</td><td>51-75</td><td>3</td><td>51-75</td><td><u>5</u></td></tr>
<tr><td>76-100</td><td>2</td><td>76-100</td><td>3</td><td>76-100</td><td>4</td><td>76-100</td><td><u>6</u></td></tr>
<tr><td>101-200</td><td>3</td><td>101-200</td><td>5</td><td>101-200</td><td>7</td><td>101-200</td><td><u>12</u></td></tr>
<tr><td>201+</td><td>3%*</td><td>201+</td><td>4%*</td><td>201+</td><td>6%*</td><td>201+</td><td><u>6%*</u></td></tr>
<tr><td colspan="8">*Calculation for spaces shall be rounded up to the nearest whole number.</td></tr>
</table>

[1] Dedicated 208/240-volt branch circuit; service panel and/or subpanel shall provide capacity to install a 40-ampere minimum dedicated branch circuit and space(s) reserved to permit installation of a branch circuit overcurrent protective device

B. TDM STRATEGIES

Potential measures[7] to reduce vehicle miles traveled include, but are not limited to:

- Improve or increase access to transit.
- Increase access to common goods and services, such as groceries, schools, and daycare.
- Incorporate affordable housing into the project.
- Incorporate neighborhood electric vehicle network.
- Orient the project toward transit, bicycle and pedestrian facilities.
- Improve pedestrian or bicycle networks, or transit service.
- Provide traffic calming.
- Provide bicycle parking.
- Limit or eliminate parking supply.
- Unbundle parking costs.
- Provide parking cash-out programs.
- Implement roadway pricing.
- Implement or provide access to a commute reduction program.
- Provide car-sharing, bike sharing, and ride-sharing programs.
- Provide transit passes.
- Shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services.
- Providing telework options.
- Providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle.
- Providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms.
- Providing employee transportation coordinators at employment sites.
- Providing a guaranteed ride home service to users of non-auto modes.

Example TDM strategies are provided in the County TDM Guidelines. A transportation impact analysis must quantifiably demonstrate, through the use of reliable calculation tools, proposed VMT mitigations will result in the estimated reductions when applied to the proposed project.

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

C. CALIFORNIA ENVIRONMENTAL QUALITY ACT CHECKLIST (TRANSPORTATION)

CEQA Guidelines (2020) APPENDIX G: Environmental Checklist Form

Section XVII. TRANSPORTATION. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation**	**Less Than Significant Impact**	**No Impact**
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☐	☐	☐
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☐
d) Result in inadequate emergency access?	☐	☐	☐	☐