TRANSPORTATION 2030 PLAN

DRAFT ENVIRONMENTAL IMPACT REPORT

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by

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Executive Summary

This Program Environmental Impact Report (EIR) has been prepared on behalf of the Metropolitan Transportation Commission (MTC) in accordance with the California Environmental Quality Act (CEQA). It analyzes a proposed 25-year regional transportation plan, known as the Transportation 2030 Plan, prepared by MTC. The proposed Transportation 2030 Plan represents the transportation policy and action statement of the MTC for how to approach the region's transportation needs over the next 25 years. The Transportation 2030 Plan proposes a set of future transportation projects and programs that can be implemented with available funding as well as identifying projects that could be considered if new funding is obtained. The Transportation 2030 Plan is intended to serve the region's mobility needs while addressing other important societal goals. The six main goals of the proposed Transportation 2030 Plan are:

- A Safe and Well Maintained System;
- A Reliable Commute;
- Access to Mobility;
- Livable Communities;
- Clean Air; and
- Efficient Freight Travel.

MTC recognizes that transportation decisions have a role in influencing the economic and community vitality of the Bay Area. The proposed Transportation 2030 Plan represents MTC's best effort to guide the region in the development of a transportation system that meets the Bay Area's mobility needs and achieves the Transportation 2030 goals. The proposed Transportation 2030 Plan addresses the Bay Area's ground transportation system. Development of regional airport and seaport plans occurs in separate processes.

INTRODUCTION

PURPOSE OF THE EIR

This environmental assessment of the proposed Transportation 2030 Plan—which may be referred to as the "Proposed Project," throughout this document—fulfills the requirements of CEQA and CEQA Guidelines and is designed to inform decision-makers, responsible and trustee agencies, and the general public of the proposed Transportation 2030 Plan and the range of potential environmental impacts that could result from its implementation. This EIR recommends a set of measures to mitigate any significant adverse regional impacts identified. It also analyzes a range of alternatives to the proposed Transportation 2030 Plan.

SCOPE OF THE EIR

This EIR on the proposed Transportation 2030 Plan is a *program EIR* as defined in the CEQA Guidelines. Program EIRs can be used as the basic, general environmental assessment for an overall program of projects, which will be implemented through a series or group of later actions. While these later actions are not evaluated in this program EIR, individual projects will be evaluated in compliance with CEQA prior to project approval.

TRANSPORTATION 2030 PLAN EIR ORGANIZATION

This EIR is organized into four parts, as outlined below. This Executive Summary outlines the Proposed Project and alternatives, summarizes potential impacts and mitigation measures in Table S-1, and identifies the environmentally superior alternative.

Part One: Introduction and Project Description

Part One includes two chapters. Chapter 1.1 describes the relationship between the proposed Transportation 2030 Plan and the EIR and describes the basic legal requirements of a program level EIR. It discusses the level of analysis and the alternatives considered as well as how this EIR is related to other environmental documents and its intended uses. Chapter 1.2 introduces the purpose and objectives of the proposed Transportation 2030 Plan and summarizes the components of the Plan and key growth projections and assumptions used in the EIR analysis. This includes a discussion of the existing project setting and an outline of the Bay Area's projected population and employment growth rates and development patterns through the planning horizon to the year 2030. In addition, State and Federal legislation that guides the development of the Transportation 2030 Plan process is reviewed.

Part Two: Setting, Impacts, and Mitigation Measures

Part Two describes the existing environmental setting for each of the environmental issue areas analyzed in the EIR, the potential impacts that the proposed Transportation 2030 Plan would have on these areas, and measures to mitigate the potential significant impacts identified. Each impact area is analyzed in a separate chapter, organized as follows:

- Environmental setting;
- Criteria of significance;
- Method of analysis;
- Summary of impacts; and
- Impacts and mitigation measures.

Part Three: Alternatives and CEQA Required Conclusions

Chapter 3.1 includes a description of five alternatives to the proposed Transportation 2030 Plan and an assessment of their potential to achieve the objectives of the Transportation 2030 Plan while reducing potentially significant adverse regional environmental impacts. Part Three also

includes a comparison and summary of any potentially significant adverse regional environmental impacts that implementation of the alternatives would have for each of the environmental impact areas. As required by CEQA, an environmentally superior alternative is identified among the alternatives analyzed. Chapter 3.2 includes an assessment of the impacts of the proposed Transportation 2030 Plan in several subjects areas required by CEQA, including:

- Significant unavoidable impacts;
- Significant irreversible environmental changes;
- Cumulative impacts; and
- Impacts found to be not significant.

Part Four: Bibliography

All references and persons and agencies consulted are included in the bibliography.

Appendices

Appendix A includes the Notice of Preparation (NOP) of this EIR and the Responses to the NOP (comment letters), and Appendix B includes the Scoping Meeting Notice and Scoping Meeting Summary. Appendix C includes detailed project lists for the proposed Transportation 2030 Plan and the five alternatives studied in the EIR. Appendix D explains the Transportation Solutions Defense and Education Fund (TRANSDEF) Smart Growth alternative and Key Assumptions. Appendix E compares the Association of Bay Area Government's (ABAG's) *Projections 2002*, the "trends" forecast, *and Projections 2003,* the "smart growth" forecast. Finally, Appendix F is a Biological Resources Summary, including species lists and a detailed regulatory setting.

PROJECT AND ALTERNATIVES DESCRIPTION

This EIR evaluates the impacts of the proposed Transportation 2030 Plan and five transportation alternatives. By varying the overall composition of the highway, roadway, transit, and other projects evaluated, the Proposed Project and each alternative offer a different approach to carrying out the goals of the Transportation 2030 Plan. The TRANSDEF Smart Growth Alternative goes further by making different assumptions about future land use patterns and implementing pricing strategies for the region. A summary of the Proposed Project and the alternatives is provided below.

PROPOSED PROJECT – TRANSPORTATION 2030 PLAN

A detailed description of the proposed Transportation 2030 Plan is included in Chapter 1.2. The Transportation 2030 Plan represents a strategic investment plan to improve system performance for Bay Area travelers over the next 25 years and includes a set of highway, transit, local roadway, bicycle, and pedestrian projects identified through regional and local transportation planning processes. Key investments would focus on adequate maintenance, system efficiency and operations, and strategic expansion.

Similar to past long-range plans, the Transportation 2030 Plan is made up of two separate elements. The "financially constrained" element includes those transportation projects that would be funded through revenues projected to be reasonably available over the 25-year horizon of the plan. The more comprehensive "vision" element would identify illustrative transportation projects that would be funded through revenue measures that may become available in the future through either legislative action or voter mandate. The projects included in the vision element are largely identified by local transportation agencies and transit districts and would be funded by revenues sources such as new or reauthorized county transportation sales taxes, a BART property tax, a AC Transit special district tax, a High Speed Rail Bond, a regional vehicle registration fee, a Sonoma Marin Area Rail Transit (SMART) district tax, or High-Occupancy/Toll (HOT) Network revenues.

The Transportation 2030 Plan includes the HOT network identified in the Financially Constrained Plus HOT alternative, as well as the proposed sales tax projects evaluated in the Financially Constrained Plus Sales Tax alternative (see below).

ALTERNATIVES

A full description of the five alternatives is in Chapter 3.1. The alternatives are as follows:

- **No Project Alternative** (**Alternative 1**) – The No Project alternative, required by CEQA, addresses the effects of <u>not</u> implementing the Transportation 2030 Plan. This alternative includes a set of highway, transit, local roadway, bicycle, and pedestrian projects that are in advanced planning stages and slated to go forward since they already have full funding commitments. These projects are: (1) included in the federally required Transportation Improvement Program (TIP), a funding program for the next three years of project and programs in the Bay Area; (2) not yet in the TIP but are fully funded county transportation sales projects authorized by voters in Alameda, Contra Costa, Santa Clara, San Mateo, and San Francisco counties; and (3) not yet in the TIP but fully funded through the Regional Measure 2 Toll Bridge Program that was approved by Bay Area voters in March 2003. These projects are collectively referred to as "Committed Projects."
- **Financially Constrained Transportation 2030 Plan Alternative** (**Alternative 2**) – This alternative consists of only the set of transportation projects and programs that would be funded through revenues projected to be reasonably available over the 25-year horizon of the Transportation 2030 Plan. This set of projects is known as the Financially Constrained element of the Plan. It does not include projects identified in the Vision Element of the proposed Transportation 2030 Plan. The key financial assumption governing the Financially Constrained element of the Plan is that existing sources of federal, state, or regional revenues are assumed to continue to 2030 with the exception of county transportation sales tax measures which, by law, must sunset. No new revenue sources that would require voter or legislative approval are assumed. Both "Committed" and "New Commitment" projects are included in this alternative.
- **Financially Constrained Transportation 2030 Plan <u>Plus</u> Sales Tax Plan Alternative** (**Alternative 3**) – This alternative includes the Financially Constrained element of the proposed Transportation 2030 Plan <u>plus</u> additional transportation projects and programs

identified in potential new or reauthorized county transportation sales tax measures proposed for San Mateo, Contra Costa, Marin, Solano and Sonoma counties (these projects are currently part of the Vision Element of the Proposed Project). These additional transportation projects have been defined through the respective county planning and public involvement processes, and the county sales tax measures have been placed on the November 2004 ballot for voter approval. Should these measures be approved, the transportation projects that become fully funded as a result of the new sales tax revenues will become part of the Financially Constrained element of the Transportation 2030 Plan when it is adopted in 2005.

- **Financially Constrained Transportation 2030 Plan Plus High-Occupancy/Toll (HOT) Network Alternative (Alternative 4)** – This alternative represents the Financially Constrained element plus the creation of a network of HOT lanes in the region (these projects are also currently part of the Vision Element of the Proposed Project). In this alternative, the Bay Area's existing High-Occupancy-Vehicle (HOV) lane system of 300 freeway lane miles, which saves time for vehicles with two or more occupants, would be converted to HOT lanes. Carpools, vanpools, and transit vehicles would continue to have free passage in the HOT lanes, but other motorists would pay a fee to use them. The HOT network would consist of 800 miles of HOT lanes on the Bay Area's freeways, an additional 500 freeway lane miles over existing conditions (2000).
- **TRANSDEF Smart Growth Alternative (Alternative 5)** – This alternative is supplied by TRANSDEF, a transportation advocacy organization, according to the Settlement Agreement and Release entered into by TRANSDEF, Citizens for Better Environment (CBE), Bay Area Air Quality Management District, and MTC in March 2004. Its purpose it to test the effectiveness of a planning strategy of accommodating regional growth by limiting roadway capacity and directing more potential growth into infill and transit-supportive areas, avoiding greenfield development, and implementing pricing strategies to make driving more expensive and transit more attractive. Therefore, this alternative includes a different mix of projects and programs, as well as a different set of land use distribution and pricing assumptions, relative to the Proposed Project and other alternatives.

EIR APPROACH

LEVEL OF ANALYSIS

This EIR focuses primarily on regional impacts, but also addresses transportation corridor impacts for a number of the environmental impact areas. This approach reflects the organization of the Transportation 2030 Plan which presents information and transportation investments in a corridor format. MTC has defined 14 multi-modal travel corridors in the Transportation 2030 Plan in recognition of their primacy as determiners of regional travel patterns. As a program level EIR, individual project impacts are not addressed unless they are found to be regionally significant.

KEY ASSUMPTIONS

The underlying land use assumptions for the Proposed Project and all the financially constrained alternatives are ABAG's *Projections 2003*, which represent the outcome of ABAG's recent regional smart growth planning project (called "Smart Growth Project") and assume the Bay Area will provide more housing opportunities near transit and also accommodate a larger share of future Bay Area workers within the nine Bay Area counties. In contrast, the TRANSDEF Smart Growth alternative uses it own set of land use assumptions patterned after the Network of Neighborhoods Alternative, one of three conceptual land use patterns initially considered in ABAG's Smart Growth Project. Additional details are provided about the TRANSDEF alternative in Chapter 3.1 and in Appendix D.

CUMULATIVE IMPACT ASSUMPTIONS

The term "cumulative impact", as defined in the CEQA Guidelines (§15355), "refers to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts." Where possible, this EIR distinguishes between the impacts of the Transportation 2030 Plan investment program as a whole and the independent impacts of forecast population and employment growth, which the projects and programs of the proposed Transportation 2030 Plan will serve. However, the air quality and transportation analyses evaluate the effects of the Proposed Project assuming projected population and employment growth. Thus, the impacts of these two issue areas are identical to the cumulative conditions. MTC assumes the regional growth estimates based upon the Association of Bay Area Governments' (ABAG) *Projections 2003.* Some impacts on the environment are not under the influence of MTC and occur for reasons unrelated to its Transportation 2030 Plan investment.

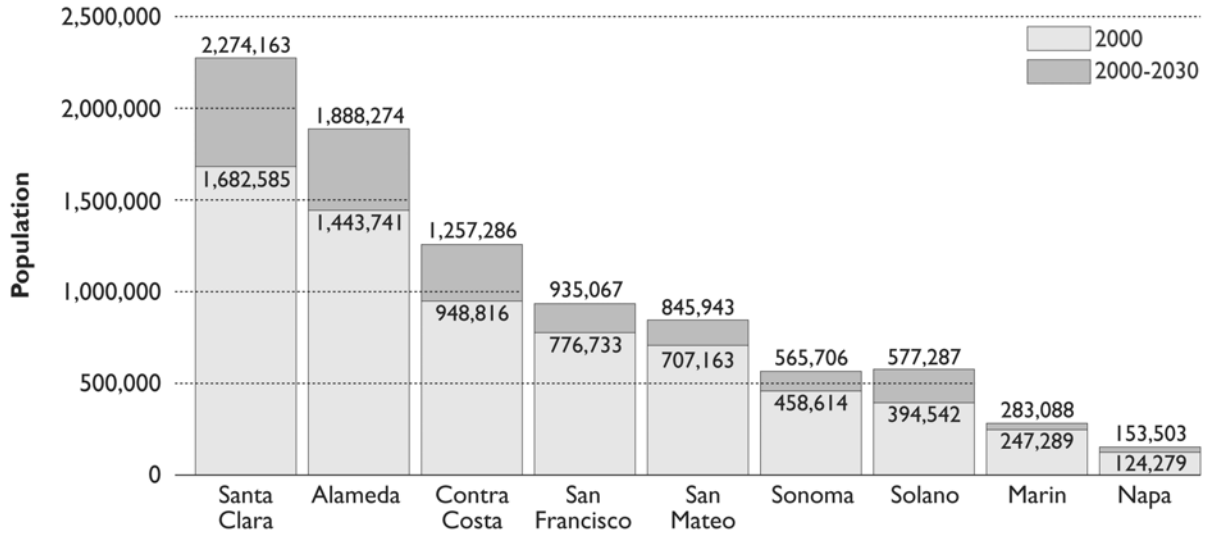
TRANSPORTATION 2030 PLAN BACKGROUND

With a population of approximately seven million in the year 2000, the San Francisco Bay Area is the fifth most populous metropolitan area in the United States behind New York, Los Angeles, Chicago, and Washington D.C. (U.S. Census 2000). The region consists of nine counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. According to ABAG's *Projections 2003*, only about 18 percent of the region's approximately 4,757,251 acres is developed. Seventy-two percent of this developed land is in residential use. The Bay Area transportation network includes interstate and state freeways, county expressways, local streets and roads, bike paths, sidewalks, and a wide assortment of transit technologies (heavy rail, light rail, intercity rail, buses, trolleys and ferries).

PROJECTED GROWTH

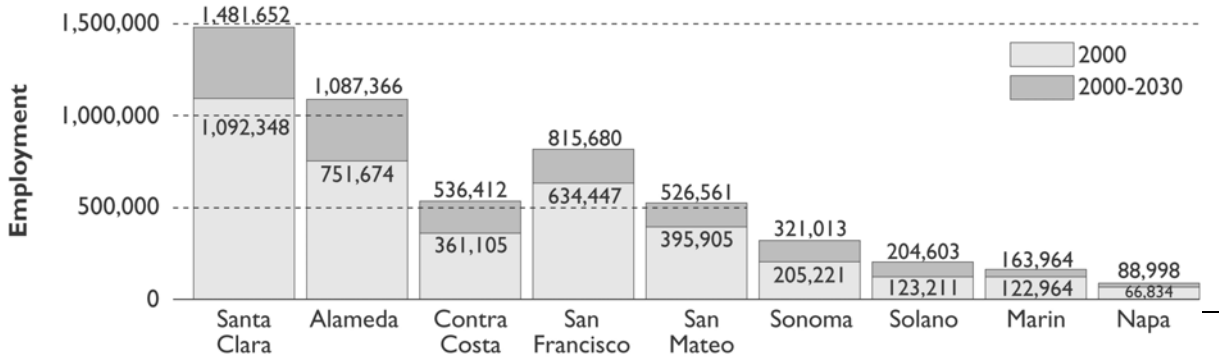
According to ABAG's *Projections 2003*, the five most populated counties in 2000 in descending order were Santa Clara, Alameda, Contra Costa, San Francisco, and San Mateo, accounting for 82 percent of the region's population. ABAG projects that the Bay Area will add nearly 2 million new residents between 2000 and 2030. The same five counties will still make up 82 percent of the region's residents in 2030. Figure S-1 illustrates this trend. Population continues to grow much more quickly in suburban areas than urban areas as development expands outwards. Moreover, as a result of the shortage of affordable housing in the Bay Area, growth from the Bay Area is spilling over to outlying counties, such as San Benito, San Joaquin, Stanislaus, and Merced.

Figure S-1: Population Growth by County (2000-2030)



With respect to employment, the top five counties were Santa Clara, Alameda, San Francisco, San Mateo, and Contra Costa, accounting for 80 percent of the Bay Area jobs (2000). ABAG estimates that approximately 1.5 million new jobs will be created in the region between 2000 and 2030. The five most populous counties will also account for 85 percent of the region's jobs at the end of this period. While the top three counties will rank the same, Contra Costa County will surpass San Mateo in 2030. Bay Area employment trends are shown in Figure S-2.

Figure S-2: Employment Growth by County (2000-2030)



The analysis emphasizes the impacts of the proposed Transportation 2030 Plan as a complete program, rather than as detailed analysis of the individual transportation improvements in the Plan. Individual improvements must still comply with the requirements of CEQA. Detailed analysis of the transportation improvements proposed in the Transportation 2030 Plan would be the responsibility of the agencies approving those projects.

As required by CEQA, this EIR identifies three types of impacts:

- Short-term impacts;
- Long-term impacts; and
- Cumulative impacts.

In some instances the cumulative impacts outlined in this EIR do not so much result from the transportation improvements in the Transportation 2030 Plan as from the growth these projects are intended to serve. Table S-1 summarizes the significant impacts and recommended mitigation measures identified in this EIR. The impacts are organized by environmental impact area in the order in which they appear in Part Two.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The CEQA Guidelines require each EIR to identify the environmentally superior alternative among the alternatives analyzed. If the No Project alternative is identified as the environmentally superior alternative, then the EIR must identify another alternative as environmentally superior among the alternatives analyzed.

There are tradeoffs among the various issue areas analyzed for the alternatives. The alternatives also would result in varying degrees of achieving the Proposed Project objectives.

Assuming equal importance for all issue areas, the No Project alternative is the environmentally superior alternative, mainly because it involves the least amount of new construction activity and hence fewer environmental effects, particularly in the resource areas of energy, water, biology, visual, cultural, land use and growth inducement. The No Project alternative, however, cannot be selected as the environmentally superior alternative according to CEQA and would not achieve the proposed project objectives. The No Project alternative is the least preferred alternative for the issue of transportation.

If the No Project alternative is excluded, the TRANSDEF Smart Growth alternative is the next environmentally superior alternative, if all impact areas are artificially given equal weight. The TRANSDEF Smart Growth Alternative offers advantages due to the fact that it would result in less new construction and associated potential impacts on energy, water, biological, visual and cultural resources. However, policy makers may value some issue areas as more important than others.

Despite the relatively favorable ratings for a number of the impact areas for the TRANSDEF Smart Growth alternative, there are several unanswered questions about the feasibility of this alternative and its ability to meet the project objectives. Choosing one of the alternatives over the other will require policy makers to determine project feasibility and to judge the relative importance and magnitude of individual impacts.

AREAS OF KNOWN CONTROVERSY

The proposed Transportation 2030 Plan include concerns raised about:

1. How to broaden the reach of the "Access to Mobility" goal to focus not only on the mobility needs of low-income populations but also the mobility need of the disabled and fast-growing seniors population in the Bay Area;
2. What specific recommendations and funding strategies should be implemented to address these challenging mobility needs; and
3. How drivers with low-incomes would not be able to afford to use the proposed high-occupancy/toll lanes.

Controversy also exists around specific transportation projects included in the Transportation 2030 Plan such as the BART extension to Santa Clara County, Caldecott Tunnel fourth bore, Transbay Terminal development, Jamieson Canyon widening, and Bay Bridge funding shortfalls. Additionally, the TRANSDEF Smart Growth alternative could generate controversy given the scope of the proposed changes in existing land use plans, transportation costs, and projects.

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
Transportation			
2.1-1	The Proposed Project provides a slight reduction in average travel time for work trips (2 percent), non-work trips (1 percent), personal trips (1 percent), and truck trips (1 percent) when compared to the No Project.	None. There are no significant adverse effects on average travel time per trip due to implementation of the proposed Transportation 2030 Plan.	*No Adverse Impact*
2.1-2	The Proposed Project provides improved accessibility to jobs by auto and transit modes for all time intervals of 15, 30 and 45 minutes when compared to the No Project.	None. There are no significant adverse effects on accessibility to jobs by auto or transit due to implementation of the proposed Transportation 2030 Plan.	*No Adverse Impact, Beneficial*
2.1-3	The Proposed Project reduces the average weekday vehicle trips for all nine counties when compared to the No Project.	None. There are no significant adverse effects on the number of daily vehicle trips due to implementation of the proposed Transportation 2030 Plan.	*No Adverse Impact*
2.1-4	The Proposed Project provides an overall reduction of 20 percent in vehicle miles traveled at Level of Service F for both freeways and expressways and arterial facilities when compared to the No Project.	None. There are no significant adverse effects on vehicle miles traveled at LOS F due to implementation of the proposed Transportation 2030 Plan.	*No Adverse Impact*
Air Quality			
2.2-1	The Proposed Project would result in reductions in ROG, NOx and CO emissions.	None required.	*Beneficial*
2.2-2	Emissions impacts of the Proposed Project for all criteria pollutants (ROG, NOx, CO, PM_{10} and $PM_{2.5}$) are lower than the No Project's emissions.	No mitigation measures are required as there is no significant impact from the implementation of the proposed Transportation 2030 Plan.	*Less than significant*
2.2-3	PM_{10} and $PM_{2.5}$ emissions are projected to increase substantially over existing conditions (2000) due to projected cumulative regional growth and the attendant increase in travel.	2.2(a) If attainment plans are required for PM_{10} and $PM_{2.5}$ in the future, the BAAQMD, MTC, and ABAG (co-lead agencies for air quality planning) will identify the magnitude of reduction required from motor vehicles as well as appropriate control measures to address PM from on road dust and other sources. The extent of the reduction potential is not presently known; therefore, it is not possible to determine whether the impact is partially or fully mitigable.	*Significant, potentially mitigable, but strategies not defined.*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
Land Use, Housing, and Social Environment			
2.3-1	Implementation of the proposed Transportation 2030 Plan could convert farmland, including prime agricultural land designated by the State of California, to transportation use.	2.3(a) Project sponsors shall commit to mitigation measures at the time of certification of their project environmental document that would minimize or eliminate conversion of farmland. Typical mitigation measures are listed in Chapter 2.3. The extent of this impact will depend on the final design of each transportation improvement and on the project-specific analysis require by CEQA to determine the importance of the farmland to be converted.	*Significant*
2.3-2	Implementation of the Proposed Transportation 2030 Plan could disrupt or displace existing land uses, neighborhoods, and communities in the short term.	2.3(b) Project sponsors shall commit to site-specific mitigation measures at the time of certification of their project environmental document that would minimize or eliminate short term (often construction-related) disruption or displacement of existing land uses, specifically residential, commercial, or urban open space. Typical mitigation measures are listed in Chapter 2.3. The extent of this impact will depend on the final design and the phasing of implementation.	*Significant*
2.3-3	Transportation improvements in the proposed Transportation 2030 Plan have the potential to cause permanent community disruption.	2.3(c) Project sponsors shall commit to site-specific mitigation measures at the time of certification of their project environmental document. Mitigation measures will be identified to the extent feasible to minimize impacts. Typical measures are listed in Chapter 2.3. 2.3(d) MTC should encourage project sponsors through EIR comments to consider design elements in their projects that would maintain or enhance neighborhood accessibility. 2.3(e) MTC shall continue to support locally sponsored traffic calming and alternative transportation initiatives such as paths, trails, overcrossings, and bicycle plans that foster improved neighborhoods and community connections.	*Less than significant*
2.3-4	Implementation of the proposed Transportation 2030 Plan may conflict with existing local General Plans.	None required.	*Less than significant*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
2.3-5	Concurrent implementation of the proposed Transportation 2030 Plan and forecast development of residential and employment land uses would result in expansion of urban areas and changes in land use and the character of neighborhoods and districts in the Bay Area.	2.3(f) MTC shall continue to participate in and promote the efforts of the Regional Agencies Smart Growth Initiative, which is intended to coordinate regional smart growth efforts to use land more efficiently, optimize transportation and other infrastructure investments, preserve open space, etc. In this way, MTC can pursue the enhanced coordination of local land use plans and investments in the proposed Transportation 2030 Plan.	*Significant*
Energy			
2.4-1	The implementation of the Proposed Project is likely to substantially increase the consumption of direct and indirect energy types.	Mitigation of these impacts is largely beyond the authority of MTC. 2.4(a) Project implementation agencies shall undertake project specific review of energy impacts as part of project specific environmental review. For any identified impacts, appropriate mitigation measures shall be identified. The project implementation agencies or local jurisdictions shall be responsible for ensuring adherence to the mitigation measures. MTC shall be provided with documentation of compliance with mitigation measures. 2.4(b) Project implementation agencies shall require projects, that are part of the proposed Transportation 2030 Plan, that require construction, to evaluate the energy demand so that suggestions could be made requiring the least energy-intensive methods of construction. To reduce energy expended, the construction contractor could implement the mitigation measures found in Chapter 2.4.	*Significant*
Noise			
2.5-1	Construction of the transportation improvements proposed in the Transportation 2030 Plan would have short-term noise impacts on surrounding areas.	2.5(a) Project sponsors shall commit to mitigation measures at the time of certification of each environmental document and at the time of project approval. Construction noise mitigation normally required by Caltrans' *Standard Specifications and Standard Special Provisions*, as well as local city and county ordinances shall be implemented for individual Transportation 2030 Plan projects that include physical construction activities. Construction mitigation measures generally limit construction activities to times when construction noise would have the least effect on adjacent land uses, and would require such measures as properly muffling equipment noise, locating equipment as far from sensitive receptors as possible, and turning off equipment when not in use. Some jurisdictions	*Less than significant*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
		may also have property line or other noise level limits that must be adhered to during construction.	
2.5-2	Transportation improvements proposed as part of the Transportation 2030 Plan could result in noise levels that approach or exceed the FHWA and FTA Noise Abatement Criteria or that could cause noise levels to increase by 3 dBA or more.	2.5(b) Construction of sound walls adjacent to new or improved roads or transit lines. It is likely that FHWA noise abatement criteria would be met if sound walls are included along the identified projects. Where the proposed Transportation 2030 Plan would improve existing roadways, sound walls would also result in a reduction of overall sound levels, even considering potential increases from road widenings and additional traffic. As a result, the implementation of this mitigation measure can avoid project noise impacts *and* reduce existing noise levels along a number of heavily-traveled corridors in the region. 2.5(c) Adjustments to proposed roadway or transit alignments to reduce noise levels in noise sensitive areas. For example, depressed roadway alignments can effectively reduce noise levels in nearby areas. 2.5(d) Insulation of buildings or construction of noise barriers around sensitive receptor properties. -Vibration isolation of track segments. -Use of local land use policies by local agencies to guide the location of noise sensitive uses to sites away from roadways and rail corridors. As noted, the implementation of noise mitigation will, in some cases, more than offset the noise impacts of a particular transportation improvement. As a result, the proposed Transportation 2030 Plan has the potential to bring noise abatement benefits to communities that currently experience noise problems resulting from existing traffic.	*Less than significant*
2.5-3	Forecast population and employment growth that would be served by transportation improvements in the Transportation 2030 Plan will result in increased traffic volumes in individual counties in the Bay Area and could, in turn, increase noise levels along some of the travel corridors in those counties.	Except where future transportation improvements create the need for noise mitigation, increased noise in other parts of the Bay Area would not necessarily be mitigated unless communities and local transportation authorities: 1) determine that a noise problem exists and that the problem is one of a perceptible nature, and 2) identify local or other transportation funds not currently included in the proposed T2030 Plan to provide the necessary mitigation. In many corridors, the projected traffic increases are unlikely to produce perceptible increases in noise since there may not be any sensitive receptors nearby and the increased volumes would not trigger a significant impact.	*Significant*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
Geology			
2.6-1	Seismic events could damage existing and proposed transportation infrastructure through surface rupture, ground shaking, liquefaction, landslides and tsunamis	2.6(a) Project implementation agencies shall undertake project specific review of seismic impacts as part of project specific environmental review. For any identified impacts, appropriate mitigation measures shall be identified to minimize or eliminate any significant impacts on water resources. The following mitigation measures shall be included in project-level analysis as appropriate for proposed new transportation improvements. The project proponent or local jurisdiction shall be responsible for ensuring adherence to the mitigation measures outlined in the bulleted list in Chapter 2.6 prior to construction. Although most new structures would be constructed to survive a strong earthquake without collapse, it is likely that some segments of roads and transit facilities would be damaged. The damage from a major seismic event could be significant.	*Significant*
2.6-2	Highway and rail construction, under the proposed Transportation 2030 Plan, could require significant earthwork and road cuts, which could increase short-term and long term soil erosion potential and slope failure.	2.6(b) Implementing agencies shall ensure that projects employ Best Management Practices to reduce soil erosion by water and wind. These could include temporary cover of exposed, engineered slopes, or silt fencing. All construction activities and design criteria shall comply with applicable codes and requirements of the 1997 Uniform Building Code with California additions (Title 22), and applicable Caltrans construction and grading ordinances. 2.6(c) Implementing agencies shall ensure that project designs provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion. Design features shall include measures to reduce erosion from stormwater. Road cuts shall be designed to maximize the potential for revegetation.	*Less than significant*
2.6-3	Projects built on highly compressible or expansive soils could become damaged and weakened over time.	2.6(d) Implementing agencies shall ensure that geotechnical investigations be conducted by qualified professionals (registered civil and geotechnical engineers, registered engineering geologists) to identify the potential for differential settlement and expansive soils. Recommended corrective measures, such as structural reinforcement and replacing soil with engineered fill, shall be incorporated into project designs.	*Less than significant*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
2.6-4	The projected population increase in the Bay Area will result in increased travel on all modes of transportation. This would result in an increased risk of exposure of people and property to the potentially damaging effects of strong seismic shaking, fault rupture, seismically-induced ground failure and slope instability.	Since the cumulative impacts from the Transportation 2030 Plan are essentially the same as the direct and short-term impacts (exposing travelers to geologic hazards), the mitigation measures for this impact would be the same as described in measure 2.6(a).	*Less than significant*
Water Resources			
2.7-1	Construction of the proposed transportation improvements in the Transportation 2030 Plan could adversely affect water quality and drainage patterns in the short term due to erosion and sedimentation.	2.7(a) Local permitting agencies shall require preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP), in accordance with the SWRCB's General Construction Permit. The SWPPP shall also be consistent with the Manual of Standards for Erosion and Sedimentation Control by the Association of Bay Area Governments, the California Stormwater Quality Association (CASQA), Stormwater Best Management Practice Handbook for Construction, policies and recommendations of the local urban runoff program (city and/or county), and the recommendations of the RWQCB. Implementation of the SWPPP shall be enforced by inspecting agencies during the construction period via appropriate options such as citations, fines, and stop-work orders. See bulleted list in Chapter 2.7 for typical components.	*Less than significant*
2.7-2	The transportation improvements in the Transportation 2030 Plan could adversely affect water resources in the long term by reducing permeable surfaces, which could result in additional runoff and erosion, degrade water quality in receiving waters, decrease groundwater recharge, or alter drainage patterns.	2.7(b) Local permitting agencies shall require projects to comply with design guidelines established in the Bay Area Stormwater Management Agencies Association's (BASMAA) *Start at the Source Design Guidance Manual for Stormwater Quality Protection* and the California Storm Water Best Management Practice Handbook for New Development and Redevelopment to minimize both increases in the volume and rate of stormwater runoff, and the amount of pollutants entering the storm drain system. Typical mitigation measures are listed in Chapter 2.7.	*Less than significant*
2.7-3	Forecast urban development served by the Transportation 2030 Plan, plus new public and private infrastructure improvements to accommodate future urban development, could degrade regional water quality, reduce groundwater recharge, or result in increased flooding.	As the cumulative impacts of the transportation improvements in the Transportation 2030 Plan are the same as the direct impacts listed above, the mitigation measures for this impact would be the same as Measures 2.7(a) and 2.7(b).	*Less than significant*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
Biological Resources			
2.8-1	Transportation improvements in the Transportation 2030 Plan could adversely affect wetlands and aquatic resources.	In accordance with guidelines of the U.S. Army Corps of Engineers (Corps), the U.S. Environmental Protection Agency (EPA), U.S. Fish and Wildlife Service (USFWS), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Game (CDFG), a goal of "no net loss" of wetland acreage and value will be implemented, wherever possible, through avoidance of the resource. 2.8(a) In keeping with the no net loss policy, project designs shall be reconfigured, whenever possible, to avoid sensitive wetlands and avoid disturbances to wetland and riparian corridors. Projects shall minimize ground disturbances and construction footprints near such areas to the extent practicable. Mitigation for wetland impacts due to the transportation projects would be based on project-specific wetland mitigation plans, subject to approval by the Corps, and possibly by the USFWS, RWQCB, and CDFG as well. Mitigation for placing fill in wetlands would be partially achieved by avoiding wetlands and by minimizing fill where avoidance is not feasible. Individual projects shall minimize the use of in-water construction methods to reduce impacts to wetlands, and only do so with express permit approval from the appropriate resources agencies. Avoidance, compensatory restoration, or creation of new wetland communities to offset the conversion of wetlands for proposed transportation improvements would achieve "no net loss" of wetland acreage and value.	*Less than significant*
2.8-2	Transportation improvements in the Transportation 2030 Plan could cause substantial disturbance of biologically unique or sensitive communities that are regulated by CDFG.	2.8(b) In accordance with CDFG guidelines, project sponsors shall make an effort to minimize impacts on sensitive plant communities, especially riparian habitats, when designing and permitting projects. Where applicable, projects shall conform to the provisions of special area management or restoration plans such as the Suisun Marsh Protection Plan, which outline specific measures to protect sensitive vegetation communities.	*Less than significant*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
2.8-3	Proposed transportation improvements in the Transportation 2030 Plan could have deleterious impacts on special-status plant and/or wildlife species identified as endangered, candidate, and/or special status by the CDFG or USFWS.	2.8(c) At the time of project certification, project sponsors shall agree to comply with mitigation measures to protect special-status plant and wildlife species. This requirement obligates project sponsors to implement measures that avoid, minimize, and compensate for significant impacts on special-status species and their habitat. Typical measures that may be included by project sponsors are listed in Chapter 2.8.	*Significant*
2.8-4	Proposed transportation improvements in the Transportation 2030 Plan could have deleterious impacts on proposed or designated critical habitats.	Specific projects that may be located within critical habitat areas will be subject to established protocols for surveys and protective measures. No further mitigation measures are required.	*Less than significant*
2.8-5	Construction activities could adversely affect nonlisted nesting raptor species.	2.8(d) At the time of project certification, project sponsors shall agree to comply with mitigation measures to avoid and minimize impacts to nesting raptors. Typical measures that may be included by project sponsors are listed in Chapter 2.8. Implementing the mitigation measures would allow early recognition of nesting raptors in and near work areas and avoid impacts to these species.	*Less than significant*
2.8-6	Construction activities could impact nonlisted nesting birds species protected under the federal Migratory Bird Treaty Act.	2.8(e)Concurrent with surveys described in Mitigation Measure 2.8(d), surveys shall be performed for migratory birds listed in the federal List of Migratory Birds (50 Code of Federal Regulations, Chapter 1, Part 10 §10.13). More than 500 native and migratory bird species are protected by this statute. If protected breeding birds are detected during surveys, a buffer zone, depending upon the species identified, shall be established around active nesting sites in coordination with CDFG.	*Less than significant*
2.8-7	Implementation of the Transportation 2030 Plan could impact adopted resource protection or conservation plans.	None required.	*No adverse impact*
2.8-8	Forecast urban development that would be served by transportation improvements in the Transportation 2030 Plan, combined with improved regional mobility provided by the Plan, could contribute to the conversion of	As the cumulative impacts of the transportation improvements in the Transportation 2030 Plan are the same as the direct impacts listed above, the mitigation measures for this impact would also be the same.	*Significant*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
	undeveloped land to urban uses, resulting in the removal or fragmentation of habitat area.		
Visual Resources			
2.9-1	Construction of new and expanded transportation projects could affect visual resources during the period of construction.	2.9(a) Typical mitigation measures used to minimize short term visual impacts include reducing the visibility of construction staging areas where possible and fencing and screening these areas with low contrast materials consistent with the surrounding environment. Graded slopes and exposed earth surfaces should be revegetated at the earliest opportunity.	*Less than significant*
2.9-2	Construction of certain improvements in the proposed Transportation 2030 Plan could affect visual resources by adding or expanding transportation facilities in rural or open space areas, blocking views from adjoining areas, blocking or intruding into important vistas along roadways, and changing the scale, character, and quality of designated or eligible Scenic Highways.	2.9(b) Project sponsors shall commit to mitigation measures at the time of certification of their project environmental document. These commitments obligate project sponsors to implement measures that would minimize or eliminate any significant visual impacts. Typical mitigation measures that could be considered by project sponsors are listed in Chapter 2.9.	*Significant*
2.9-3	The construction of soundwalls along freeways and arterials, where they are used to reduce noise levels in surrounding residential areas, could significantly alter views from the road reducing visual interest and sense of place while also limiting views and sunlight from adjoining areas.	2.9(c) Transportation project sponsors should consider mitigation measures listed in Chapter 2.9 to minimize significant visual impacts. This impact would likely remain significant, depending upon the extent, design, and specific location of the soundwalls.	*Significant*
2.9-4	Forecast urban development that would be served by transportation improvements in the proposed Transportation 2030 Plan could significantly change the visual character of many areas in the region, especially where development would occur on visually prominent hillsides or in existing rural or open space lands.	Local land use agencies are responsible for the approval of forecast urban development. These agencies should apply development standards and guidelines to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, site grading, etc., in visually sensitive sites areas. The cumulative effect of forecast development would be to alter the visual character of many parts of the Bay Area over the next 25 years.	*Significant*

Table S-1: Summary of Impacts and Mitigation

	Impact	*Mitigation Measures*	*Significance After Mitigation*
Cultural Resources			
2.10-1	Individual transportation improvements in the proposed Transportation 2030 Plan that involve ground disturbing activities have the potential to disturb, destroy, or significantly affect cultural resources.	2.10(a) Project sponsors shall commit to mitigation measures at the time of certification of their project environmental document. These commitments obligate project sponsors to implement measures that would minimize or eliminate any significant impacts on cultural resources. Typical mitigation measures that can be considered by project sponsors are listed in Chapter 2.10.	*Less than significant*
2.10-2	Forecast urban development that would be served by transportation improvements in the proposed Transportation 2030 Plan could have the potential to disturb, destroy, or significantly affect cultural resources.	2.10(a) see above.	*Less than significant*

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