

Draft Plan Bay Area

April 2013

Strategy for a
Sustainable
Region



Association of
Bay Area
Governments



Metropolitan
Transportation
Commission

Environmental Impact Report
Plan Bay Area
Draft
State Clearinghouse No. 2012062029

PLAN BAY AREA

DRAFT

ENVIRONMENTAL

IMPACT REPORT

STATE CLEARINGHOUSE NO. 2012062029

Prepared for

Metropolitan Transportation Commission and
Association of Bay Area Governments

by

DYETT & BHATIA

Urban and Regional Planners

In association with

Environmental Science Associates and AECOM

April 2013

Table of Contents

Glossary of Terms	G-1
--------------------------------	------------

Executive Summary	ES-1
--------------------------------	-------------

MTC, ABAG, and Plan Bay Area.....	ES-1
Introduction to the EIR.....	ES-2
EIR Organization.....	ES-3
Plan Bay Area Regional Setting.....	ES-5
Plan Bay Area Overview	ES-5
Alternatives	ES-7
Key EIR assumptions	ES-8
Plan Impacts.....	ES-9
Environmentally Superior Alternative.....	ES-9
Areas of Known Controversy	ES-11
Issues to be Resolved.....	ES-12
Summary Table of Impacts and Mitigation Measures	ES-12

Part One: Introduction and Study Approach

1.1 Introduction and Study Approach.....	1.1-1
---	--------------

MTC, ABAG, and Plan Bay Area.....	1.1-1
Purpose of the EIR.....	1.1-2
Notice of Preparation and Public Scoping.....	1.1-2
EIR Scope.....	1.1-4
EIR Organization.....	1.1-7
EIR Approach	1.1-9
Future Environmental Review.....	1.1-12

1.2	Overview of the Proposed Plan Bay Area.....	1.2-1
	Regional Setting	1.2-1
	Project Background.....	1.2-8
	Plan Development Process.....	1.2-15
	Description of Plan Bay Area: Regional Transportation Plan and Sustainable Community Strategy.....	1.2-21

Part Two: Settings, Impacts, and Mitigation Measures

2.0	Introduction and Study Approach.....	2.0-1
	Introduction.....	2.0-1
	General Methodology and Assumptions	2.0-1
	Types of Impacts	2.0-2
	Impact Significance.....	2.0-3
	Mitigation	2.0-3
2.1	Transportation	2.1-1
	Environmental Setting	2.1-1
	Impact Analysis.....	2.1-22
2.2	Air Quality.....	2.2-1
	Environmental Setting	2.2-1
	Impact Analysis.....	2.2-17
2.3	Land Use and Physical Development	2.3-1
	Environmental Setting	2.3-1
	Impact Analysis.....	2.3-31
2.4	Energy	2.4-1
	Environmental Setting	2.4-1
	Impact Analysis.....	2.4-16
2.5	Climate Change and Greenhouse Gases	2.5-1
	Environmental Setting	2.5-1
	Impact Analysis.....	2.5-41
	Adaptation Strategies	2.5-76

2.6	Noise	2.6-1
	Environmental Setting	2.6-1
	Impact Analysis	2.6-19
2.7	Geology and Seismicity	2.7-1
	Environmental Setting	2.7-1
	Impact Analysis	2.7-20
2.8	Water Resources	2.8-1
	Environmental Setting	2.8-1
	Impact Analysis	2.8-20
2.9	Biological Resources	2.9-1
	Environmental Setting	2.9-1
	Impact Analysis	2.9-52
2.10	Visual Resources	2.10-1
	Environmental Setting	2.10-2
	Impact Analysis	2.10-14
2.11	Cultural Resources	2.11-1
	Environmental Setting	2.11-1
	Impact Analysis	2.11-9
2.12	Public Utilities and Facilities	2.12-1
	Environmental Setting	2.12-1
	Impact Analysis	2.12-46
2.13	Hazards	2.13-1
	Environmental Setting	2.13-1
	Impact Analysis	2.13-26
2.14	Public Services and Recreation	2.14-1
	Environmental Setting	2.14-1
	Impact Analysis	11

Part Three: Alternative and CEQA-Required Conclusions

3.1	Alternatives to the Proposed Plan.....	3.1-1
	Alternatives Screening	3.1-2
	Approach to Assessing Alternatives.....	3.1-3
	Alternatives Analyzed in this EIR	3.1-4
	Comparative Impact Analysis of Alternatives.....	3.1-19
	Summary of All Alternatives.....	3.1-120
	Environmentally Superior Alternative	3.1-146
3.2	CEQA Required Conclusions.....	3.2-21
4.1	Bibliography.....	4.1-1
4.2	EIR Preparers	4.2-12

Appendices

Appendix A: Notice of Preparation
Appendix B: Scoping Comments Received
Appendix C: Transportation Projects in Each EIR Alternative
Appendix D: Scoping Comments on Alternatives
Appendix E: Air Quality Analysis Methodology
Appendix F: Geology
Appendix G: Water Resources
Appendix H: Biological Resources Special Status Species Table H-1
Appendix I: Hazards

List of Figures

Figure 1.2-1: Regional Location	1.2-3
Figure 1.2-2: Priority Development Areas and Priority Conservation Areas.....	1.2-27
Figure 1.2-3: Urbanized Land in 2010 and 2040	1.2-29
Figure 1.2-4: Regional Transit System Improvements	1.2-41
Figure 1.2-5: Local Transit Improvements.....	1.2-43
Figure 1.2-6: Road Pricing Improvements	1.2-45
Figure 1.2-7: Highway System Improvements	1.2-47
Figure 1.2-8: Major Transportation Projects in Alameda County.....	1.2-57
Figure 1.2-9: Major Transportation Projects in Contra Costa County.....	1.2-61
Figure 1.2-10: Major Transportation Projects in Mario and Sonoma Counties.....	1.2-65
Figure 1.2-11: Major Transportation Projects in Napa and Solano Counties.....	1.2-67
Figure 1.2-12: Major Transportation Projects in San Francisco and San Mateo Counties.....	1.2-73
Figure 1.2-13: Major Transportation Projects in Santa Clara County	1.2-75
Figure 1.2-14: Change in PDA Housing Density, 2010-2040, Alameda and Contra Costa	1.2-79
Figure 1.2-15: Change in PDA Housing Density, 2010-2040, Marin and Sonoma	1.2-81
Figure 1.2-16: Change in PDA Housing Density, 2010-2040, Solano and Napa	1.2-83
Figure 1.2-17: Change in PDA Housing Density, 2010-2040, San Francisco and San Mateo	1.2-85
Figure 1.2-18: Change in PDA Housing Density, 2010-2040, Santa Clara	1.2-87
Figure 1.2-19: Change in PDA Job Density, 2010-2040, Alameda and Contra Costa.....	1.2-89
Figure 1.2-20: Change in PDA Job Density, 2010-2040, Marin and Sonoma	1.2-91
Figure 1.2-21: Change in PDA Job Density, 2010-2040, Solano and Napa.....	1.2-93
Figure 1.2-22: Change in PDA Job Density, 2010-2040, San Francisco and San Mateo	1.2-95
Figure 1.2-23: Change in PDA Job Density, 2010-2040, Santa Clara	1.2-97
Figure 2.1-1: Major Road Facilities.....	2.1-3
Figure 2.1-2: Transit Lines & Areas Served by Transit.....	2.1-7
Figure 2.1-3: Bicycle Facilities.....	2.1-11
Figure 2.2-1: Air Basin Boundaries.....	2.2-15
Figure 2.2-2: Priority Development Areas and Transit Priority Projects Corridors	2.2-21
Figure 2.2-3: Communities of Concern and CARE.....	2.2-25
Figure 2.2-4: San Francisco Bay Area	2.2-43
Figure 2.2-5: Northern Alameda County	2.2-45
Figure 2.2-6: Eastern Alameda County.....	2.2-47
Figure 2.2-7: Southern Alameda County	2.2-49
Figure 2.2-8: Western Contra Costa County	2.2-51
Figure 2.2-9: Central Contra Costa County	2.2-53
Figure 2.2-10: Eastern Contra Costa County.....	2.2-55

Figure 2.2-11: Northern Marin County	2.2-57
Figure 2.2-12: Southern Marin County	2.2-59
Figure 2.2-13: Napa County.....	2.2-61
Figure 2.2-14: Northern Santa Clara County.....	2.2-63
Figure 2.2-15: Central Santa Clara County	2.2-65
Figure 2.2-16: Southern Santa Clara County	2.2-67
Figure 2.2-17: San Francisco County	2.2-69
Figure 2.2-18: Northern San Mateo County.....	2.2-71
Figure 2.2-19: Southern San Mateo County.....	2.2-73
Figure 2.2-20: Southern Solano County	2.2-75
Figure 2.2-21: Sonoma County.....	2.2-77
Figure 2.3-1: Urbanized Land and Open Space.....	2.3-3
Figure 2.3-2: Farmlands.....	2.3-9
Figure 2.3-3: Williamson Act Lands	2.3-13
Figure 2.3-4: Regional Parks and Open Space	2.3-17
Figure 2.3-5: Priority Development Areas.....	2.3-29
Figure 2.5-1: 2007 Bay Area Greenhouse Gas Emissions by Sector, as a Percent of Total Emissions	2.5-6
Figure 2.5-2: Bay Area Greenhouse Gas Emissions Trends by Major Source.....	2.5-6
Figure 2.5-3: 24-Inch Sea Level Rise at Mean Higher High Water	2.5-13
Figure 2.5-4: Levees and Non-Engineered Berms	2.5-17
Figure 2.5-5: Number of Days Exceeding the 8-Hour Ozone Standard and 99 Degree Weather.....	2.5-21
Figure 2.5-6: Comparative Inundation by Scenario.....	2.5-47
Figure 2.5-7: Per Capita Emissions Car and Light Duty Truck Emissions	2.5-58
Figure 2.5-8: Total Emissions by Sector and Linear Trajectory, Annual MTCO ₂ e	2.5-59
Figure 2.6-1: Decibel Scale and Common Noise Sources	2.6-3
Figure 2.6-2: Point Source Spreading with Distance	2.6-5
Figure 2.6-3: Line Source Spreading with Distance	2.6-6
Figure 2.6-4: Wind Effects on Noise Levels	2.6-7
Figure 2.6-5: Effects of Temperature Gradients on Noise.....	2.6-8
Figure 2.6-6: FTA Noise Impact Criteria.....	2.6-14
Figure 2.6-7: Typical Noise/Land Use Compatibility Criteria	2.6-18
Figure 2.7-1: Principal Active Faults in the San Francisco Bay Area	2.7-7
Figure 2.7-2: Liquefaction Hazards in San Francisco Bay Area.....	2.7-11
Figure 2.7-3: Landslide Hazards in the San Francisco Bay Area.....	2.7-15
Figure 2.8-1: Major Rivers, Creeks, and Other Water Bodies	2.8-5
Figure 2.8-2: Current TMDL Projects in San Francisco Bay Area	2.8-9
Figure 2.8-3: Flood Hazard Areas	2.8-11
Figure 2.9-1: CNDDB Documented Sensitive Biological Resources: North Bay.....	2.9-17
Figure 2.9-2: CNDDB Documented Sensitive Biological Resources: East Bay	2.9-19
Figure 2.9-3: CNDDB Documented Sensitive Biological Resources: Peninsula	2.9-21
Figure 2.9-4: CNDDB Documented Sensitive Biological Resources: South Bay	2.9-23
Figure 2.9-5: Critical Habitat: North Bay.....	2.9-27

Figure 2.9-6: Critical Habitat: East Bay	2.9-29
Figure 2.9-7: Critical Habitat: South Bay	2.9-31
Figure 2.9-8: Critical Habitat: Peninsula	2.9-33
Figure 2.9-9: Essential Connectivity Areas	2.9-37
Figure 2.10-1: Major Bay Area Scenic Resources	2.10-3
Figure 2.10-2: State Designated and Eligible Scenic Highways	2.10-11
Figure 2.10-3: Proposed Major Transportation Projects	2.10-19
Figure 2.12-1: Major Local Watersheds in the San Francisco Bay Hydrologic Region	2.10-3
Figure 2.12-2: Bay Area Water Use by Supply Source	2.12-9
Figure 2.12-3: Bay Area Groundwater Basins	2.12-11
Figure 2.12-4: Major Water Infrastructure Serving the Bay Area	2.12-17
Figure 2.12-5: Population and Water Demand Trends	2.12-21
Figure 2.12-6: Wastewater Treatment Plants in the Bay Area	2.12-31
Figure 2.13-1: Naturally Occurring Asbestos and Ultramafic Rocks	2.13-7
Figure 2.13-2: Airports	2.13-11
Figure 2.13-3: Fire Hazards	2.13-15
Figure 3.1-1: Change in Per Capita Car and Light Duty Truck CO ₂ Emissions, by Alternative	3.1-63
Figure 3.1-2: Total Annual Regional GHG Emissions (MTCO ₂ e), by Alternative	3.1-64

This page intentionally left blank.

List of Tables

Table ES-1:	Total Projected Growth for the Bay Area, 2010-2040	ES-6
Table ES-2:	Summary of Impacts and Mitigation.....	ES-13
Table 1.1-1:	Requirements for CEQA Streamlining Related to an SCS.....	1.1-14
Table 1.2-1:	Projected Regional Growth by 2040	1.2-6
Table 1.2-2:	Year 2040 Performance Targets for Plan Bay Area	1.2-22
Table 1.2-3:	Housing Growth by County	1.2-32
Table 1.2-4:	County Proportion of Regional Housing	1.2-32
Table 1.2-5:	Job Growth by County	1.2-33
Table 1.2-6:	Jobs-Household Ratios by County.....	1.2-34
Table 1.2-7:	Household Growth in PDAs.....	1.2-34
Table 1.2-8:	Job Growth in PDAs	1.2-36
Table 1.2-9:	Major Transportation Investments in the Bay Area.....	1.2-38
Table 1.2-10:	Transportation Investments of Plan Bay Area vs. RTP 2035	1.2-50
Table 1.2-11:	Major Transportation Investments for Alameda County	1.2-54
Table 1.2-12:	Major Transportation Investments for Contra Costa County.....	1.2-59
Table 1.2-13:	Major Transportation Investments for Marin and Sonoma Counties	1.2-63
Table 1.2-14:	Major Transportation Investments for Napa and Solano Counties	1.2-64
Table 1.2-15:	Major Transportation Investments for San Francisco and San Mateo Counties	1.2-69
Table 1.2-16:	Major Transportation Investments for Santa Clara County.....	1.2-70
Table 2.1-1:	Major Limited-Access Highways in the Bay Area	2.1-2
Table 2.1-2:	Major Public Transit Operators in the Bay Area.....	2.1-5
Table 2.1-3:	Bay Area Travel Behavior, 2010.....	2.1-10
Table 2.1-4:	Typical Weekday Daily Person Trips by Purpose, 2010.....	2.1-14
Table 2.1-5:	Average One-Way Commute Distance (in Miles) by County, 2010.....	2.1-14
Table 2.1-6:	Bay Area Resident Workers Categorized by Means of Transportation to Work, 1990-2010.....	2.1-15
Table 2.1-7:	Bay Area Resident Commute Mode Shares by County, 2010	2.1-16
Table 2.1-8:	Average Travel Time to Work, 1990 - 2010	2.1-16
Table 2.1-9:	Bay Area Resident Workers Commute Patterns by County, 1990 - 2007	2.1-18
Table 2.1-10:	Bay Area Demographic Forecasts (2010-2040)	2.1-25
Table 2.1-11:	Transportation System Capacity (2010-2040).....	2.1-27
Table 2.1-12:	Bay Area Travel Behavior, 2010-2040.....	2.1-28
Table 2.1-13:	Typical Weekday Daily Person Trips, by Mode.....	2.1-29
Table 2.1-14:	Per-Trip Commute Travel Time, by Mode.....	2.1-31
Table 2.1-15:	Per-Trip Non-Commute Travel Time, by Mode.....	2.1-32
Table 2.1-16:	Per-Capita Daily Vehicle Miles of Travel by Level of Service (2010-2040).....	2.1-33

Table 2.1-17:	Daily Vehicle Miles of Travel Per Capita (2010-2040).....	2.1-35
Table 2.1-18:	Utilization of Public Transit Systems, by Mode (2010-2040)	2.1-37
Table 2.2-1:	Bay Area Ambient Air Quality Standards and Attainment Status as of 2012	2.2-4
Table 2.2-2:	Ten-Year Bay Area Air Quality Summary (2002-2011)	2.2-6
Table 2.2-3:	Days Exceeding the California 1-Hour Ozone Standard (1998-2010)	2.2-7
Table 2.2-4:	Days Exceeding the National 8-Hour Ozone Standard (1998-2010)	2.2-8
Table 2.2-5:	Travel Data	2.2-18
Table 2.2-6:	Proposed Plan Investments and Policies that Support Implementation of 2010 CAP Control Measures	2.2-29
Table 2.2-7:	Emission Estimates for Criteria Pollutants using EMFAC2011 Emission Rates (tons per day)	2.2-36
Table 2.2-8:	Emission Estimates for Criteria Pollutants using EMFAC2011 Emission Rates (tons per day)	2.2-37
Table 2.2-9:	Emission Estimates for Toxic Air Contaminants Pollutants (kilograms per day)	2.2-38
Table 2.2-10:	Distance Recommendation from Sensitive Receptors.....	2.2-80
Table 2.2-11:	Percent Change in On-Road Mobile Source Exhaust Emissions, Years 2010 - 2040	2.2-84
Table 2.2-12:	Percent Change in On-Road Mobile Source Total PM Emissions, Years 2010–2040.....	2.2-85
Table 2.3-1:	2010 Employment, Housing, and Population, by County.....	2.3-2
Table 2.3-2:	Net Housing Supply and Demand by Building Type, 2010 – 2040	2.3-5
Table 2.3-3:	Bay Area Agricultural Lands, 2010	2.3-7
Table 2.3-4:	Bay Area Agricultural Lands, 1954 and 2007	2.3-8
Table 2.3-5:	Williamson Act Contracts in the Bay Area, 2006.....	2.3-12
Table 2.3-6:	Bay Area Parks and Open Space	2.3-15
Table 2.3-7:	Household Density by Priority Development ARea	2.3-36
Table 2.3-8:	Employment Density by Priority Development Area	2.3-37
Table 2.3-9:	Types of Projects Potentially Disrupting Existing Land Use	2.3-38
Table 2.3-10:	Priority Development Area and BCDC Priority Use Area Acres of Overlap	2.3-43
Table 2.3-11:	Farmland Acres Potentially Affected by Proposed Development, by County and Type.....	2.3-45
Table 2.3-12:	Williamson Act Acres Potentially Affected by Proposed Development, by County	2.3-46
Table 2.3-13:	Protected Open SPace Acres Potentially Affected by Proposed Development, by County	2.3-47
Table 2.3-14:	Bay Area Urban Growth Boundaries and County-wide Land Use Measures	2.3-48
Table 2.3-15:	Farmland Acres Potentially Affected by Proposed Transportation Projects, by County and Type.....	2.3-49
Table 2.3-16:	Williamson Act Acres Potentially Affected by Proposed Transportation Projects, by County	2.3-50
Table 2.3-17:	Protected Open SPace Acres Potentially Affected by Proposed Transportation Projects, by County	2.3-51
Table 2.3-18:	Forest and Timberland Acres Potentially Affected by Proposed Development, by County	2.3-54
Table 2.4-1:	Electricity and Natural Gas Consumption in the San Francisco Bay Area, 2010	2.4-5

Table 2.4-2:	Gasoline and Diesel Consumption in the San Francisco Bay Area, 2010 and 2011 (1,000 gallons)	2.4-7
Table 2.4-3:	Energy Factors of Transit Service.....	2.4-8
Table 2.4-4:	Direct Land Use Energy Consumption Factors.....	2.4-17
Table 2.4-5:	InDirect Land Use Energy Consumption Factors	2.4-18
Table 2.4-6:	InDirect Transportation Project Energy Consumption Factors	2.4-18
Table 2.4-7:	Annual Direct Land use Energy Use in the Bay Area.....	2.4-20
Table 2.4-8:	Estimated Indirect Land Use Energy Consumption (in BnBTUs).....	2.4-21
Table 2.4-9:	Daily Direct Transportation Energy Use in the Bay Area	2.4-22
Table 2.4-10:	Estimated Daily Indirect Transportation Energy Consumption (In Billion Btus).....	2.4-23
Table 2.4-11:	Daily Per Capita Energy Use (BTUS per PERSON)	2.4-23
Table 2.5-1:	2007 Bay Area CO ₂ e Emissions by Pollutant	2.5-5
Table 2.5-2:	CO-CAT (2010) Sea Level Rise Projections using 2000 as the Baseline	2.5-10
Table 2.5-3:	NRC (2012) Regional Sea Level Rise Projections near San Francisco, CA	2.5-10
Table 2.5-4:	Bay Area Cities with Completed GHG Emissions Inventories or CLimate Action Plans	2.5-38
Table 2.5-5:	Plan Bay Area Climate Policy Initiatives and Reductions.....	2.5-43
Table 2.5-6:	ARB Scoping Plan Reductions for Electricity and Natural Gas Sectors	2.5-45
Table 2.5-7:	Total and Per Capita Passenger Vehicle and Light Duty Truck CO ₂ Emissions.....	2.5-50
Table 2.5-8:	Existng and forecasted Annual Land Use GHG Emissions (MTCO ₂ e).....	2.5-53
Table 2.5-9:	Exisitng and forecasted Annual TransPortation GHG Emissions (MTCO ₂ e)	2.5-55
Table 2.5-10:	Total Regional Annual GHG Emissions	2.5-56
Table 2.5-11:	Proposed Transportation Projects Within Midcentury Sea Level Rise Inundation Zone	2.5-62
Table 2.5-12:	Proposed Transportation Projects Within Midcentury Low-Lying Hydraulically Disconnected Zone	2.5-65
Table 2.5-13:	Total Population Within PDA and Midcentury Sea Level Rise Inundation Zone.....	2.5-69
Table 2.5-14:	Total Population Within TPP and Midcentury Sea Level Rise Inundation Zone	2.5-70
Table 2.5-15:	Total Population Within County and Midcentury Sea Level Rise Inundation Zone	2.5-70
Table 2.5-16:	Total Employment Within PDA and Midcentury Sea Level Rise Inundation Zone	2.5-73
Table 2.5-17:	Total Employment Within TPP and Midcentury Sea Level Rise Inundation Zone	2.5-73
Table 2.5-18:	Total Employment Within County and Midcentury Sea Level Rise Inundation Zone ..	2.5-74
Table 2.5-19:	Total Households Within PDA and Midcentury Sea Level Rise Inundation Zone	2.5-74
Table 2.5-20:	Total Households Within TPP and Midcentury Sea Level Rise Inundation Zone	2.5-75
Table 2.5-21:	Total Households Within County and Midcentury Sea Level Rise Inundation Zone	2.5-75
Table 2.5-22:	Asset Types and Shoreline Types of Proposed Transportation Projects Within Sea Level Rise Inundation Zone	2.5-83
Table 2.5-23:	Asset Types and Shoreline Types of Proposed Transportation Projects Within Low-Lying Hydraulically Disconnected Zone	2.5-84
Table 2.6-1:	Approximate Relationship Between Increases in Environmental Noise Level and Human Perception.....	2.6-4
Table 2.6-2:	Typical Noise Levels From Demolition/ Construction Equipment Operations.....	2.6-11
Table 2.6-3:	Summary of FHWA Noise Abatement Criteria	2.6-13
Table 2.6-4:	FTA Ground-Borne Vibration (GVB) Impact Criteria for General Assessment	2.6-15

Table 2.6-5:	Summary of FTA Construction Noise Criteria (Guidelines)	2.6-16
Table 2.6-6:	Noise Levels By Roadway Type (Roadway Miles)	2.6-29
Table 2.7-1:	Active Faults in The Bay Area	2.7-5
Table 2.7-2:	Modified Mercalli Intensity Scale	2.7-9
Table 2.7-3:	Priority Development Areas (PDAs) Located in Fault Rupture Zones	2.7-23
Table 2.8-1:	Average Monthly Precipitation, Selected Bay Area Sites	2.8-2
Table 2.8-2:	Flood Hazard Zone Classification	2.8-13
Table 2.9-1:	Critical Habitat in the Bay Area	2.9-25
Table 2.10-1:	California State Scenic Highway System Officially Designated (OD) and Eligible (E) Routes in the Bay Area	2.10-9
Table 2.10-3:	Urbanized Land By County	2.10-17
Table 2.10-4:	Types of Projects Potentially Disrupting Visual Resources	2.10-21
Table 2.10-5:	Household Density by Priority Development Area	2.10-26
Table 2.11-1:	Recorded Archaeological and Historical Sites in the Bay Area	2.11-4
Table 2.11-2:	Urbanized Land By County	2.11-14
Table 2.12-1:	Watersheds of the San Francisco Bay Hydrologic Region	2.12-2
Table 2.12-2:	Projected Normal Year Supply and Demand (AF/Year)	2.12-20
Table 2.12-3:	Projected Service Area Population of Major Bay Area Water Agencies	2.12-22
Table 2.12-4:	Year of Projected Water Shortages (Single Dry Year)	2.12-23
Table 2.12-5:	Flow and Capacity of Wastewater Treatment Facilities in the Region	2.12-24
Table 2.12-6:	Active Bay Area Landfills	2.12-35
Table 2.12-7:	Active Bay Area Transfer/Processing Facilities	2.12-37
Table 2.12-8:	Projected Flow vs. Existing Capacity of Wastewater Treatment at a County Level (dry weather, mgD)	2.12-51
Table 2.13-1:	Description of regulatory agency Databases	2.13-4
Table 2.13-2:	List of Public Use Airports and Military Airfields in the San Francisco Bay Area	2.13-10
Table 2.14-1:	Bay Area Public Schools and Enrollment by County, 2010-2011	2.14-2
Table 2.14-2:	Bay Area Parks and Open Space	2.14-5
Table 2.14-3:	Bay Area Parks and Open Space and Acreage Per 1,000 Residents, by County	2.14-15
Table 3.1-1:	Policy Measure Comparison	3.1-8
Table 3.1-2:	Bay area Demographic Forecasts (2010-2040)	3.1-11
Table 3.1-3:	Year 2040 Households by County	3.1-14
Table 3.1-4:	Year 2040 Jobs by County	3.1-14
Table 3.1-5:	Total Households and Household Growth By Share in PDAs	3.1-15
Table 3.1-6:	Total Jobs And Job Growth By Share in PDAs	3.1-16
Table 3.1-7:	Transportation System Capacity (2010-2040)	3.1-18
Table 3.1-8:	Bay Area Travel Behavior, 2010-2040	3.1-24
Table 3.1-9:	Per-Trip Commute Travel Time, by Mode	3.1-26
Table 3.1-10:	Per-Trip Non-Commute Travel Time, by Mode	3.1-27
Table 3.1-11:	Per-Capita Daily Vehicle Miles Of Travel by Level Of Service (2010-2040)	3.1-28
Table 3.1-12:	Daily Vehicle Miles of Travel Per Capita (2010-2040)	3.1-29
Table 3.1-13:	Percent Utilization of Public Transit Systems, by Technology (2010-2040)	3.1-30
Table 3.1-14:	Travel Data	3.1-38

Table 3.1-15: Emission Estimates for Criteria Pollutants using EMFAC2011 Emission Rates (tons per day)	3.1-39
Table 3.1-16: Emission Estimates for Toxic Air Contaminants Pollutants (kilograms per day)	3.1-40
Table 3.1-17: Exhaust Only PM _{2.5} with Road-Dust Percent Change 2010 - 2040	3.1-41
Table 3.1-18: Total PM _{2.5} with Road Dust Percent Change 2010 - 2040.....	3.1-42
Table 3.1-19: Exhaust Diesel PM Percent Change 2010 - 2040.....	3.1-43
Table 3.1-20: Exhaust Benzene Percent Change 2010 - 2040	3.1-44
Table 3.1-21: Exhaust 1, 3 Butadiene Percent Change 2010 - 2040	3.1-45
Table 3.1-22: VMT Percent Change 2010 - 2040	3.1-46
Table 3.1-23: Potential Farmland Conversion in acres, by type and Alternative	3.1-50
Table 3.1-24: Williamson Act Acres Potentially Affected in acres, by Alternative	3.1-51
Table 3.1-25: Potential Open Space Conversion in acres, by Alternative	3.1-52
Table 3.1-26: Potential Forest and Timberland Conversion in Acres, by Alternative	3.1-53
Table 3.1-27: Total Energy Use Per Capita in the Bay Area by Alternative.....	3.1-56
Table 3.1-28: Total and Per Capita Passenger Vehicle and Light Duty Truck CO ₂ Emissions, by Alternative	3.1-59
Table 3.1-29: Comparative Annual Land Use GHG Emissions (MTCO ₂ e)	3.1-61
Table 3.1-30: Proposed Transportation Projects within Mid-Century Sea level Rise Inundation Zone	3.1-65
Table 3.1-31: Proposed Transportation Projects within Mid-Century Low-Lying zone	3.1-66
Table 3.1-33: Residents Within TPPs and Mid-Century Sea level Rise Inundation Zone.....	3.1-69
Table 3.1-34: Residents Within Counties and Mid-Century Sea Level Rise Inundation Zone	3.1-70
Table 3.1-35: Residents Within PDAs and Mid-Century Low-Lying Zone	3.1-71
Table 3.1-36: Residents Within TPPs and Mid-Century Low-Lying Zone	3.1-71
Table 3.1-37: Residents Within Counties and Mid-Century Low-Lying Zone	3.1-72
Table 3.1-38: Employment Within PDAs and Mid-Century Sea level Rise Inundation Zone	3.1-73
Table 3.1-39: Employment Within TPPs and Mid-Century Sea level Rise Inundation Zone	3.1-74
Table 3.1-40: Employment Within Counties and Mid-Century Sea level Rise Inundation Zone	3.1-75
Table 3.1-42: Employment Within TPPs and Mid-Century Low-Lying Zone.....	3.1-76
Table 3.1-43: Employment Within Counties and Mid-Century Low-Lying Zone.....	3.1-77
Table 3.1-44: Households Within PDAs and Mid-Century Sea level Rise Inundation Zone	3.1-78
Table 3.1-45: Households Within TPPs and Mid-Century Sea level Rise Inundation Zone	3.1-78
Table 3.1-46: Households Within counties and Mid-Century Sea level Rise Inundation Zone.....	3.1-79
Table 3.1-47: Households Within PDAs and Mid-Century Low-Lying Zone	3.1-80
Table 3.1-48: Households Within TPPs and Mid-Century Low-Lying Zone.....	3.1-80
Table 3.1-49: Households Within Counties and Mid-Century Low-Lying Zone.....	3.1-81
Table 3.1-50: Roadway Directional Miles > 66 dBA NAC Level, and Total Directional Miles, by Roadway Type and County.....	3.1-88
Table 3.1-51: Transportation Projects, by Alternative	3.1-101
Table 3.1-52: Alternative 1 Aggregate Projected Flow vs. Existing Capacity of Wastewater Treatment (dry weather, mgD)	3.1-108
Table 3.1-53: Alternative 3 Aggregate Projected Flow vs. Existing Capacity of Wastewater Treatment (dry weather, mgD)	3.1-110

Table 3.1-54: Alternative 4 Aggregate Projected Flow vs. Existing Capacity of Wastewater Treatment (dry weather, mgD)	3.1-112
Table 3.1-55: Alternative 5 Aggregate Projected Flow vs. Existing Capacity of Wastewater Treatment (dry weather, mgD)	3.1-114
Table 3.1-56: Summary of Alternatives Comparison to the Proposed Plan	3.1-121
Table 3.2-1: Total Projected Growth for the Bay Area, 1990-2040	3.2-5
Table 3.2-2: Forecasted Growth by Age Group as a Percent of the Total (2010-2040)	3.2-6
Table 3.2-3: 2010 Median Income in the Bay Area By County	3.2-6
Table 3.2-4: Auto Ownership Per Household in the Bay Area, 2000 and 2010	3.2-7
Table 3.2-5: 2010 Employment by County – Net Importers/Exporters of Workers and Jobs/Housing Balance	3.2-8
Table 3.2-6: 2010 & 2040 Employed Residents and Jobs by County and Net Importers/Exporters of Workers	3.2-12
Table 3.2-7: Urbanized Land By County	3.2-13
Table 3.2-8: 2010 & 2040 Job Growth in Counties and PDA's	3.2-15
Table 3.2-9: 2010 & 2040 Employed Resident Growth in Counties and PDA's	3.2-16

Glossary of Terms

AB 32	Assembly Bill 32 – Law that requires that the State’s global warming emissions be reduced to 1990 levels by 2020
ABAG	Association of Bay Area Governments – The regional agency responsible for assigning housing allocations and performing demographic analysis
BAAQMD	Bay Area Air Quality Management District
Bay Area	The nine-county region adjacent to the San Francisco Bay and the area covered by Plan Bay Area and this EIR
BCDC	Bay Conservation and Development Commission
BMP	Best Management Practice
BRT	Bus Rapid Transit
Caltrans	California Department of Transportation
CARB	California Air Resources Board – State agency responsible for attaining and maintaining healthy air quality through setting and enforcing emissions standards, conducting research, monitoring air quality, providing education and outreach, and overseeing/assisting local air quality districts
CCR	California Code of Regulations
CEQA	California Environmental Quality Act – State law requiring review of physical environmental impacts potentially caused by plans and projects
CFR	Code of Federal Regulations
CMAAs	Congestion Management Agencies - County-level transportation agencies tasked with managing and reducing traffic congestion on major regional roadways
GHG	Greenhouse Gases – Components of the atmosphere that contribute to the greenhouse effect. The principal greenhouse gases that enter the atmosphere because of human activities are carbon dioxide, methane, nitrous oxide, and fluorinated gases
GIS	Geographic Information System – Mapping software that links spatial information to quantitative and qualitative attributes
HOT	High Occupancy Toll – An HOV lane that single-occupant drivers can pay to drive in
HOV	High Occupancy Vehicle – A lane restricted to vehicles with a certain number of occupants to encourage carpooling
JHCS	Jobs-Housing Connection Strategy - The land use development strategy developed by ABAG that is the preferred approach employed in the proposed Plan
MTC	Metropolitan Transportation Commission, the transportation agency for the Bay Area
NOP	Notice of Preparation

NPDES	National Pollutant Discharge Elimination System - A federal program that regulates the amount and quality of discharge into bodies of water
OBAG	OneBayArea Grant – Program of grants distributed to local jurisdictions by MTC and ABAG to pay for planning and infrastructure investments in accordance with Plan Bay Area
Plan Bay Area	The name given to the SCS developed by MTC and ABAG. It also serves as the Bay Area’s Regional Transportation Plan through the year 2040.
PM	Particulate Matter – A mixture of solid particles and liquid droplets found in the air
Proposed Plan	The preferred alternative (#2) of Plan Bay Area evaluated in this EIR
RHNA	Regional Housing Needs Allocation – Quantifies the need for housing within each jurisdiction of a region based on population growth projections. ABAG assigns these targets within the Bay Area. Communities then address this need through the process of completing the housing elements of their general plans
PCA	Priority Conservation Area - Regionally significant open spaces for which there exists broad consensus for long-term protection
PDA	Priority Development Area - Existing neighborhood served by transit and nominated by its local jurisdiction as a location to focus future development
RTP	Regional Transportation Plan – Federally required 20-year plan prepared by metropolitan planning organizations and updated every four or five years. Includes projections of population growth and travel demand, along with a specific list of proposed projects to be funded.
RWQCB	Regional Water Quality Control Board
TAC	Toxic Air Contaminant – Air pollutants that may cause or contribute to an increase in mortality or in serious illness, or that may pose a present or potential hazard to human health
TIS	Transportation Investment Strategy – The transportation strategy developed by MTC that is the preferred approach employed in the proposed Plan
TPP	Transit Priority Project – A land use development that, based on its type and location, may be eligible for CEQA streamlining under SB 375
SB 375	Law that requires CARB to set regional targets for per-capita GHG emission reduction targets and mandates the SCS
SCS	Sustainable Communities Strategy - An integrated regional transportation and land use plan that must hit State mandated GHG emissions reductions targets while also accommodating anticipated population growth
SWRCB	State Water Resources Control Board
VMT	Vehicle Miles Traveled – A measurement of the total miles traveled by all vehicles in the area for a specified time period

Executive Summary

This program Environmental Impact Report (EIR) has been prepared on behalf of the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) in accordance with the California Environmental Quality Act (CEQA). This EIR analyzes the potential significant impacts of the adoption and implementation of the proposed Plan Bay Area (proposed Plan), which is the update to the 2009 Regional Transportation Plan (RTP) and the new Sustainable Communities Strategy (SCS) for the San Francisco Bay Area.

MTC, ABAG, and Plan Bay Area

MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area (which includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties). Created by the State Legislature in 1970, MTC functions as both the regional transportation planning agency (RTPA)—a state designation—and for federal purposes, as the region’s metropolitan planning organization (MPO).

As required by State legislation (Government Code Section 65080 et seq.) and by federal regulation (Title 23 USC Section 134), MTC is responsible for preparing the RTP for the San Francisco Bay Area Region. An RTP is a long-range plan that identifies the strategies and investments to maintain, manage, and improve the region’s ground transportation network. In 2009, MTC adopted its most recent RTP, known as the Transportation 2035 Plan for the San Francisco Bay Area. Development and environmental analysis of regional airport and seaport plans occur in separate processes.

ABAG is a joint powers agency formed in 1961 pursuant to California Government Code §§ 6500, et seq., and is the council of governments (COG) for the San Francisco Bay Area. ABAG conducts regional population and employment projections and the regional housing needs allocation (RHNA) processes (Government Code Section 65584 et seq.). Plan Bay Area is a joint effort led by MTC and ABAG and completed in partnership with the Bay Area’s other two regional government agencies, the Bay Area Air Quality Management District (BAAQMD), and the Bay Conservation and Development Commission (BCDC). It meets the requirements of the Sustainable Communities and Climate Protection Act of 2008, Senate Bill 375 (SB 375; Steinberg, 2008), which requires California’s 18 metropolitan planning organizations to develop an SCS as a new element of their federally mandated RTP. The SCS demonstrates how the region will meet its greenhouse gas (GHG) reduction targets established by the California Air Resources Board (ARB) through integrated land use, housing and transportation planning, a planning effort requiring the authority and powers vested in both MTC and ABAG.

Plan Bay Area, which covers the period through 2040, is the first Bay Area RTP that is subject to the requirements of SB 375. SB 375 requires that the SCS be integrated into the MPO’s RTP and once

adopted will be reviewed by ARB to determine whether it would, if implemented, achieve the GHG emission reduction target for its region. If the combination of measures in the SCS will not meet the region's target, the MPO must then prepare an alternative planning strategy (APS) that will do so.

Plan Bay Area is the region's first integrated long-range land use and transportation plan. Plan Bay Area calls for focused housing and job growth around high-quality transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas (PDAs). This land use strategy is intended to enhance mobility and economic growth by linking housing/jobs with transit, thus offering a more efficient land use pattern around transit and a greater return on existing and planned transit investments. The proposed Plan specifies the strategies and investments to maintain, manage, and improve the region's transportation network – which includes bicycle and pedestrian facilities, local streets and roads, public transit systems, and highways. The Plan proposes a set of transportation projects and programs that will be implemented with reasonably anticipated revenue available for the planning period. The proposed Plan must be updated every four years, ensuring a constantly evolving plan through regular updates throughout the planning period.

Introduction to the EIR

PURPOSE

This environmental assessment of the proposed Plan Bay Area—which may also be referred to as the “proposed Plan” throughout this document—has been prepared in compliance with CEQA and the CEQA Guidelines. It is designed to:

- Analyze the potential environmental effects of the adoption and implementation of the proposed Plan;
- Inform decision-makers, responsible and trustee agencies, and members of the public as to the range of the environmental impacts of the proposed Plan;
- Recommend a set of feasible measures to mitigate any significant adverse impacts; and
- Analyze a range of reasonable alternatives to the proposed Plan.

The EIR process also provides an opportunity to identify environmental benefits of the proposed Plan that might balance some potentially significant adverse environmental impacts. The final EIR will include a Mitigation Monitoring Program that identifies who will be responsible for implementing the measures.

As the joint lead agencies for preparing this EIR, MTC and ABAG will rely on the EIR analysis of potential environmental effects in their review of the proposed Plan prior to taking action on Plan Bay Area.

SCOPE

This is a program EIR, defined in Section 15168 of the CEQA Guidelines as: “[An EIR addressing a] series of actions that can be characterized as one large project and are related either: (1) Geographically; (2) As logical parts in the chain of contemplated actions; (3) In connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) As

individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways.”

Program EIRs can be used as the basic, general environmental assessment for an overall program of projects developed over a multi- year planning horizon. A program EIR has several advantages. For example, it provides a basic reference document to avoid unnecessary repetition of facts or analysis in subsequent project-specific assessments. It also allows the lead agency to consider the broad, regional impacts of a program of actions before its adoption and eliminates redundant or contradictory approaches to the consideration of regional and cumulative impacts.

As a programmatic document, this EIR presents a region-wide assessment of the potential impacts of the proposed Plan Bay Area. It focuses on the entire set of projects and programs contained in the proposed Plan. Individual transportation and development project impacts are not addressed in detail, although the impacts of some possible projects are discussed as appropriate; rather the focus of this EIR is to address the impacts of a program of projects, which, individually or in the aggregate, may be regionally significant. However, it does not evaluate subcomponents of the proposed Plan nor does it assess project-specific impacts of individual projects. For example, the general physical impacts of major regional transportation expansion projects are addressed, while potential impacts on specific wetlands or a specific species habitat by an individual interchange reconstruction project is not discussed, unless information currently exists or it can be surmised that the effect would be large or otherwise regionally significant. This approach does not relieve local jurisdictions of the responsibility for evaluating project-specific, locally significant impacts. All impacts of individual projects will be evaluated in future environmental review, as relevant, by the appropriate implementing agency as required under CEQA and/or NEPA prior to each project being considered for approval, as applicable.

This EIR evaluates potentially significant environmental impacts, and cumulative impacts, and includes mitigation measures to offset potentially significant effects. This EIR provides the basis for subsequent tiered CEQA documents for project-specific or site-specific environmental reviews that will be conducted by implementing agencies as land use and transportation projects in the proposed Plan are more clearly defined and more detailed studies prepared. Specific analysis of localized impacts in the vicinity of individual projects is not included in this program level EIR.

EIR Organization

The EIR is organized into four parts, outlined below. This Executive Summary outlines the proposed Plan and alternatives and includes a review of the potentially significant adverse regional environmental impacts of the proposed Plan Bay Area and the measures recommended to mitigate those impacts. The executive summary also indicates whether or not those measures mitigate the significant impacts to a less than significant level. The executive summary also identifies the environmentally superior alternative among the alternatives analyzed.

PART ONE: INTRODUCTION AND PROJECT DESCRIPTION

Part One includes two chapters. Chapter 1.1 describes the relationship between the proposed Plan Bay Area and the EIR, the organization of the EIR, and 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 the EIR's intended uses. Chapter 1.2 introduces the purpose and objectives of the proposed Plan Bay Area and summarizes specific information to describe the proposed Plan and complete the EIR analysis. This includes a description of the existing regional setting, an outline of the Bay Area's projected population and employment growth rates and proposed development patterns through the 2040 planning horizon year, and all proposed transportation projects and programs. State and federal planning regulations guiding the development of the RTP and SCS are also described.

PART TWO: SETTING, IMPACTS, AND MITIGATION MEASURES

Part Two describes the existing physical and regulatory settings for each of the environmental issue areas analyzed in the EIR, the potential impacts of the proposed Plan on these environmental issue areas, and measures to mitigate the potential impacts identified. Each issue area is analyzed in a separate chapter. Each chapter is organized as follows:

- Physical Setting;
- Regulatory Setting;
- Impact Significance Criteria;
- Method of Analysis;
- Summary of Impacts; and
- Impacts and Mitigation Measures.

PART THREE: ALTERNATIVES AND CEQA REQUIRED CONCLUSIONS

Part Three includes a description of the alternatives to the proposed Plan and an assessment of their potential to achieve the objectives of the proposed Plan while reducing potentially significant adverse regional environmental impacts. Part Three also includes a comparison summary table of regional environmental impacts associated with the alternatives. As required by CEQA, an environmentally superior alternative is identified. Finally, Part Three includes an assessment of the impacts of the proposed Plan and alternatives in several subject areas required by CEQA, including:

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

PART FOUR: BIBLIOGRAPHY AND APPENDICES

Part Four includes a bibliography and the EIR appendices. Appendix A includes the Notice of Preparation (NOP) of this EIR and Appendix B provides reference to the comments received on the NOP and at the scoping meetings (a full set of comments can be found on the project website, www.onebayarea.org). Appendix C includes detailed lists of the transportation projects included in the proposed Plan and the alternatives studied in the EIR. Appendix D summarizes scoping comments received on the alternatives. Appendix E outlines the Air Quality analysis methodology and mitigation

measure effectiveness. Appendices F through I include detailed supporting data on impact analyses for geology, water, biology and hazards, respectively.

Plan Bay Area Regional Setting

The Bay Area region consists of nine counties: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. In a ranking of Combined Statistical Areas (CSAs), the San José-San Francisco-Oakland CSA population was the sixth largest in the nation in 2010, behind New York-Newark-Bridgeport, Los Angeles-Long Beach-Riverside, Chicago-Naperville-Michigan City, Washington-Baltimore-Northern Virginia, and Boston-Worcester-Manchester CSAs.¹ In 2010, the San Francisco Bay Area population was nearly 7.2 million according to the 2010 Census. According MTC, as of 2010 only about 18 percent of the region's approximately 4.4 million acres of land has been developed. 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).

Plan Bay Area Overview

The proposed Plan Bay Area meets the requirements of SB 375 by developing an integrated transportation and land use plan and attains the per-capita GHG emission reduction targets of -7 percent by year 2020 and -15 percent by year 2035 from 2005 levels. Under the proposed Plan, emission reductions continue on a downward trajectory through 2050. The proposed Plan reinforces land use and transportation integration per SB 375 and presents a vision of what the Bay Area's land use patterns and transportation networks might look like in 2040. The adopted goals of the proposed Plan are:

- Climate Protection
- Adequate Housing
- Healthy and Safe Communities
- Open Space and Agricultural Preservation
- Equitable Access
- Economic Vitality
- Transportation System Effectiveness

The Plan objectives are reflected in the following performance targets that measure the region's progress towards meeting these goals and are consistent with the requirements of SB 375:

- Reduce per-capita CO₂ emissions from cars and light-duty trucks by 15 percent.

¹ Census 2010. A Combined Statistical Area is a census defined metropolitan region that consists of two or more adjacent Core Based Statistical Areas (CBSAs) that have substantial employment interchange. The CBSAs that combine to create a CSA retain separate identities within the larger CSA.

- House 100 percent of the region's projected 25-year growth by income level without displacing current low-income residents.

These goals and performance targets are more fully explored in Chapter 1.2. An alternative that performs substantially worse than the proposed Plan with respect to meeting the plan goals and these performance targets would not achieve even the basic objectives of the proposed Plan.

FORECASTED GROWTH

Looking ahead to 2040, the horizon year for the proposed Plan, it is forecast by ABAG that the Bay Area's population will grow another 30 percent from the 2010 level (over 2.1 million more residents) and employment will increase by 33 percent (over 1.1 million additional jobs). To house the future population, it is estimated that 660,000 new housing units would be built in the same timeframe. Forecasted growth from 2010 through 2040 is shown in **Table ES-1**.

TABLE ES-1: TOTAL PROJECTED GROWTH FOR THE BAY AREA, 2010-2040

	<i>2010</i>	<i>2040</i>	<i>Growth 2010 - 2040</i>	<i>% Change</i>	<i>Annual Growth Rate</i>
Population	7,151,000	9,299,000	2,148,000	30%	0.9%
Households	2,608,000	3,308,000	700,000	27%	0.8%
Housing Units	2,786,000	3,446,000	660,000	24%	0.7%
Jobs	3,385,000	4,505,000	1,120,000	33%	1.0%

Source: Association of Bay Area Governments, Plan Bay Area Jobs-Housing Connection Strategy, revised May 16, 2012.

LAND USE STRATEGY

To plan for this future growth, the proposed Plan calls for focused housing and job growth around high-quality transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas (PDAs). Opportunities for focused growth development in Transit Priority Project (TPP)-eligible areas, as defined by SB 375 in Public Resources Code section 21155, which often overlap with PDAs, are also encouraged and facilitated by the proposed Plan. This land use strategy enhances mobility and economic growth by linking housing/jobs with transit and existing transportation infrastructure, thus offering a more efficient land use pattern around transit and a greater return on existing and planned transit investments. Beyond the emphasis on transit-oriented development, the proposed Plan's land use strategy broadly calls for new housing and jobs in locations that expand existing communities and build off of all existing transportation investments.

TRANSPORTATION

The proposed Plan includes a financially constrained transportation investment plan as required by State and federal planning regulations. It includes transportation projects and programs that would be funded through existing and future revenues that are projected to be reasonably available to the region over the timeframe covered by the proposed Plan. A total of \$289 billion in revenues is available for the financially constrained Plan Bay Area. That is, the proposed Plan and alternatives evaluated in the EIR are financially constrained to be within the \$289 billion envelope.

A more detailed description of the proposed Plan is included in *Chapter 1.2: Overview of the Proposed Plan Bay Area*.

Alternatives

A full description of the alternatives analyzed in this EIR and the alternative selection process is provided in Part 3. The alternatives are as follows:

ALTERNATIVE 1: NO PROJECT

The No Project alternative consists of two elements: (a) the existing 2010 land uses plus continuation of existing land use policy as defined in adopted general plans, zoning ordinances, etc. from all jurisdictions in the region and (b) the existing 2010 transportation network plus highway, transit, local roadway, bicycle and pedestrian projects that have either already received full funding or are scheduled for full funding and received environmental clearance by May 1, 2011.

ALTERNATIVE 2: PROPOSED PLAN

Alternative 2 is the proposed Plan analyzed in this EIR. This alternative assumes a land use development pattern that concentrates future household and job growth into Priority Development Areas (PDAs) identified by local jurisdictions. It pairs this land development pattern with MTC's Preferred Transportation Investment Strategy, which dedicates nearly 90 percent of future revenues to operating and maintaining the existing road and transit system. A more detailed overview of the proposed Plan is in Chapter 1.2.

ALTERNATIVE 3: TRANSIT PRIORITY FOCUS

This alternative includes the potential for more efficient land uses in Transit Priority Project (TPP) areas, as defined by Senate Bill 375 (PRC section 21155), and would be developed at higher densities than existing conditions to support high quality transit. The transportation investment strategy in this alternative tests a slightly reduced express lane network that focuses on HOV lane conversions and gap closures, as well as increased funding for the implementation of recommendations from the Comprehensive Operations Analysis of BART and AC Transit above what is included in the Preferred Transportation Investment Strategy. This alternative also includes a Regional Development Fee based on development in areas that generate high levels of vehicle miles travelled, and a higher peak period toll on the San Francisco-Oakland Bay Bridge.

ALTERNATIVE 4: ENHANCED NETWORK OF COMMUNITIES

This alternative seeks to provide sufficient housing for all people employed in the Bay Area with no in-commuters from other regions and allows for more dispersed growth patterns than the proposed Plan, although development is still generally focused around PDAs. The transportation investment strategy is consistent with the Preferred Transportation Investment Strategy, also used in the proposed Plan, and includes a higher peak period toll on the San Francisco-Oakland Bay Bridge.

ALTERNATIVE 5: ENVIRONMENT, EQUITY AND JOBS

This alternative seeks to maximize affordable housing in opportunity areas in both urban and suburban areas through incentives and housing subsidies. The suburban growth is supported by increased transit service to historically disadvantaged communities and a reduced roadway network. This alternative includes imposing a Vehicle Miles Traveled (VMT) tax and a higher peak period toll on the San Francisco-Oakland Bay Bridge to fund transit operations.

Key EIR assumptions

The following key assumptions were used in the impact analysis:

- The base year or existing conditions for the land use and transportation impact analysis is 2010, as this year provides the most recent best data available for land use, transportation, and demographics. The only exception appears in *Chapter 2.5: Greenhouse Gases and Climate Change*, which uses a 2005 baseline per the CARB target setting process to determine impacts under Criterion 1 related to achieving the requirements of SB 375.
- The total amount of growth projected for the Bay Area through 2040 is based on ABAG's Plan Bay Area Forecast of Jobs, Population and Housing (the forecasts used to develop the Jobs-Housing Connection) that is available for review on the project website (<http://www.onebayarea.org>); this amount of growth is assumed in the proposed Plan, which identifies a land use pattern to accommodate the projected growth.
- This analysis does not consider phasing of improvements or interim stages of the proposed Plan Bay Area between 2010 and 2040, as the purpose of the analysis is to evaluate the Plan as a whole. The one exception to this approach appears in *Chapter 2.5: Greenhouse Gases and Climate Change*, which includes an examination of impacts in 2020 and 2035 as compared to a 2005 baseline per the ARB target setting process to determine impacts relating to achieving the statutory requirements of Senate Bill 375.
- As a program-level EIR, individual project impacts are not addressed; rather, this analysis focuses on the aggregate impacts of the proposed Plan that may be regionally significant.

CUMULATIVE IMPACT ASSUMPTIONS

Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that are individually limited but cumulatively significant. CEQA defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts” (CEQA Guidelines § 15355). “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects” (CEQA Guidelines § 15065(a)(3)). This means that cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

Plan Bay Area, which includes region-wide transportation improvements and land use development patterns in the Bay Area to accommodate projected regional growth through 2040, is a cumulative plan by definition. As such, the environmental analysis included in this EIR throughout Part Two is a

cumulative analysis compliant with the requirements of CEQA and the CEQA Guidelines. Furthermore, this EIR contains analysis of cumulative regional impacts, as differentiated from more generalized localized impacts for every identified impact area.

Plan Impacts

The analysis emphasizes the impacts of the proposed Plan Bay Area as a complete program, rather than as detailed analysis of the individual transportation improvements and land use strategy included in the proposed Plan. Individual improvements and development projects must still independently comply with the requirements of CEQA. As required by CEQA, this EIR identifies three types of impacts:

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

The EIR addresses regional impacts as well as generalized localized impacts. It also, to the extent feasible, distinguishes between impacts caused by transportation improvements and impacts related to proposed land use patterns.

Table ES-2 summarizes the impact conclusions and recommended mitigation measures identified in this EIR. The impacts are organized by environmental impact issue area in the order in which they appear in Part Two.

Environmentally Superior Alternative

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 from among the alternatives analyzed. According to the analysis in Chapter 3.1, Alternative 5 would result in the lowest level of environmental impacts, but only marginally lower, as compared to all alternatives (including the proposed Plan), and therefore is identified as the environmentally superior alternative. Alternative 3 results in similar impacts to the proposed Plan, and Alternative 4 and the No Project alternative have mixed environmental outcomes. Overall, variations in environmental impacts among alternatives are minor. This determination does not factor in other benefits of the proposed Plan outside of environmental effects. More specifically:

- In **Transportation**, Alternative 3 has the least environmental impact as it features shorter commute travel times (three percent shorter than the proposed Plan) and a lesser amount of congested VMT (14 percent fewer VMT at LOS F as compared to the proposed Plan) and the least potential for transit vehicle crowding (30 percent utilization of public transit systems, the same as the No Project alternative, and three percent less than the proposed Plan). These results are due to shifting regional growth to the Transit Priority Project eligible areas, with the greatest emphasis on growth in the urban core close to high-frequency transit.

- In **Air Quality**, Alternative 5 has the least environmental impact as it results in the lowest criteria pollutant emissions (1.7 percent fewer criteria pollutant emissions as compared to the proposed Plan) as well as lowest TAC emissions of all of the alternatives (1.9 percent fewer TAC emissions as compared to the proposed Plan). This is a result of placing a greater emphasis than the other alternatives on aligning compact land use development with transit service and increasing transit capacity.
- In **Energy**, Alternative 4 would result in the lowest per capita energy use (3.3 percent less than the proposed Plan and 2.7 percent less than Alternative 5), and would therefore have the least environmental impact.
- In **Greenhouse Gas Emissions**, the proposed Plan and Alternative 5 perform equally in regard to meeting SB 375 emission reduction targets in 2035 (both achieving a 16.4 percent reduction, one percent better than Alternative 3, 1.6 percent better than Alternative 4, and 9.6 percent better than the No Project alternative). Alternative 5 performs slightly better in terms of total emissions reductions (achieving a 17 percent reduction from 2010 to 2040, one percent better than Alternative 3 and two percent better than the proposed Plan).
- In **Sea Level Rise**, the No Project alternative includes the fewest transportation projects exposed to midcentury sea level rise inundation (the No Project alternative includes 15 projects, Alternative 5 includes 21 projects, and the proposed Plan, Alternative 3, and Alternative 4 include 32 projects exposed to midcentury sea level rise inundation). Alternative 5 includes the fewest residents (12 percent less than the proposed Plan), and new residential development (10 percent less than under the proposed Plan) exposed to midcentury sea level rise inundation because it distributes growth to areas farther from the Bay.
- In **Land Use (conversion of agricultural and forest land)**, Alternative 4 results in the fewest acres of important agricultural and open space land converted to urbanized use, as well as the fewest acres of forest and timberland converted to urbanized use.
- In **Noise** the No Project alternative has the fewest environmental impacts since it results in the lowest number of roadway miles exposed to noise levels at or above 66 dBA. It also includes the fewest transit extension projects, resulting in the smallest increase in transit noise and vibration compared to other alternatives.
- In **Biological Resources, Water Resources, Cultural Resources, and Visual Resources**, Alternative 5 combines compact development with low transportation infrastructure development, resulting in fewer physical impacts tied to these resources. It is noted that in terms of land use development-related impacts alone (excluding transportation projects), the proposed Plan is the most compact and would have the least impact on these resources.
- In **Geology, Public Utilities, Public Services, and Hazardous Materials**, Alternatives 1, 2 (proposed Plan), 3 and 5 are comparable and have fewer impacts than Alternative 4. Alternative 4 includes the most growth, thereby inherently exposing the most people to geologic and hazards risks, and resulting in the greatest impacts on existing public service, recreation, and utility systems. One exception to this is in regard to wastewater treatment, where Alternative 4 has the least impact because of limited growth in San Francisco, which has likely inadequate wastewater treatment capacity under all other alternatives.
- For **Historic Resources and Land Use (community disruption or displacement, alteration and separation)**, all alternatives perform similarly. Since all alternatives include growth in

urbanized areas where historic resources are likely to exist, impacts on historic resources would be similar. For land use, impacts related to community disruption or displacement and alteration and separation would be highly localized and similar across the alternatives.

While Alternative 5 is the environmentally preferred alternative due to its overall GHG emissions reductions and estimated reduction in criteria and TAC emissions, the proposed Plan does include some benefits over Alternative 5. For instance, the proposed Plan results in the lowest VMT per capita (the same as Alternative 4), with one percent fewer daily VMT per capita than Alternative 5. Alternative 5 also exhibits congested VMT levels 18 percent higher in the AM peak, seven percent higher in the PM peak, and 11 percent higher over the course of a typical weekday as compared to the proposed Plan. Finally, the proposed Plan results in fewer acres of agricultural and open space conversion as compared to Alternative 5 (though more than Alternative 4), and the fewest acres of important farmland (excluding grazing land) of all alternatives.

Another important consideration is that the proposed Plan was developed through extensive coordination with local jurisdictions. Alternative 5 assumes residential growth at levels that some local jurisdictions may be unlikely to implement, since it includes growth in areas that local jurisdictions have not planned for or do not currently anticipate.

In addition, there are some important unanswered questions about the feasibility of Alternative 5 that the ABAG Board and the MTC Commissioners will address during deliberations on this EIR. Specifically, implementation of the VMT tax, which is a key component of Alternative 5, may prove to be infeasible because it would require legislative approval and, in light of Proposition 26 (the “Stop Hidden Taxes” initiative), may require approval by a two-thirds supermajority vote of the Legislature. While there is currently a large majority of Democrats in the Legislature, and authorizing legislation may therefore be easier to achieve at this time, the difficulty of predicting whether new legislation will actually be enacted may make Alternative 5 infeasible.

Policy makers will be required to judge the relative importance of the various issue areas in making their final decision.

Areas of Known Controversy

Section 15123 of the CEQA Guidelines requires that an EIR identify areas of controversy which are known to the Lead Agency, including issues raised by other agencies and the public. Areas of controversy associated with the proposed Plan are made known through comments received during the Notice of Preparation (NOP) process, as well as input solicited during public scoping meetings and an understanding of the community issues in the study area. Some areas of known controversy, including issues raised by some members of the community, related to the proposed Plan Bay Area and EIR include:

- Whether the proposed Plan’s assumptions of future land use development patterns are feasible given that MTC and ABAG cannot regulate land uses at a regional or local level.
- Concerns about whether the degree and scale of growth proposed within existing communities would alter their appearance, quality of life, and affordability, and whether it would conflict with the existing plans and regulations of the local jurisdiction.

- Determining whether the proposed Plan’s emphasis on maintaining and sustaining the existing regional transportation system will be adequate to serve the Bay Area’s anticipated population and employment growth.
- Assessing whether the proposed transportation investment strategy can reduce GHG emissions and exposure to air pollutants even as the region’s population and economic base continue to grow.
- Determining whether and where sea level rise impacts will occur and how best to minimize those impacts.
- Concerns that increased concentrations of population in focused areas would overwhelm existing public services and utilities, such as parks, police and fire services, water supply, etc.

This EIR acknowledges these known controversies as reported during the NOP scoping period and ongoing agency consultation. To the extent these areas of controversy relate to environmental impacts, they are analyzed at the regional level in Part Two of this EIR.

Issues to be Resolved

CEQA Guidelines section 15123(b)(3) requires that an EIR contain a discussion of issues to be resolved and whether or how to mitigate significant effects. Issues to be resolved include:

- How to address potential impacts from the proposed land development pattern that must be mitigated by the local land use authority, since neither MTC nor ABAG have jurisdiction over land use regulations.
- The degree to which MTC and ABAG can provide adequate incentives for implementation of changes to land use policy.
- How best to require mitigations that can be enacted by project sponsors and/or implementing agencies in a manner to ensure CEQA streamlining for qualifying projects, per SB 375, can occur.

When adopting the proposed Plan Bay Area, the MTC Commission and ABAG Board must decide whether specific overriding economic, legal, social, technological or other benefits of the project outweigh the significant environmental impacts that cannot be feasibly avoided or substantially reduced through implementation of feasible mitigation or alternatives. If so, they would adopt a Statement of Overriding Considerations.

Summary Table of Impacts and Mitigation Measures

Table ES-2 summarizes impacts, mitigation measures, and significance conclusions after mitigation (far right column), by issue area. Note that implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified in the table below. For more details, please see *Part Two: Settings, Impacts, and Mitigation Measures*.

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
Transportation			
2.1-1	Implementation of the proposed Plan could result in a substantial increase in per-trip travel time for commute travel by any mode over existing conditions. A substantial increase in per-trip travel time is defined as greater than 5 percent.	None required.	<i>Less than Significant</i>
2.1-2	Implementation of the proposed Plan could result in a substantial increase in per-trip travel time for non-commute travel by any mode over existing conditions. A substantial increase in per-trip travel time is defined as greater than 5 percent.	None required.	<i>Less than Significant</i>
2.1-3	Implementation of the proposed Plan could result in a substantial increase in per capita VMT on facilities experiencing level of service (LOS) F compared to existing conditions during AM peak periods, PM peak periods, or during the day as a whole (LOS F defines a condition on roads where traffic substantially exceeds capacity, resulting in stop-and-go conditions for extended periods of time). A substantial increase in LOS F-impacted per capita VMT is defined as greater than 5 percent.	<p>2.1(a) MTC, in its role as the Bay Area Toll Authority (BATA), shall pursue an additional peak period bridge toll on the San Francisco Oakland Bay Bridge to discourage vehicle travel during weekday peak periods, shifting travelers to other times of day or other modes.</p> <p>2.1(b) MTC and the BAAQMD shall proceed with implementation of the region's commute benefit ordinance authorized by Senate Bill 1339, which affects all major employers (with more than 50 employees), and discourages auto-based commute travel.</p> <p>2.1(c) MTC shall pursue a policy that requires the implementation of ramp metering throughout the region's highway network as a condition of discretionary funding.</p>	<i>Significant and Unavoidable</i>
2.1-4	Implementation of the proposed Plan could result in a substantial increase in per capita VMT compared to existing conditions. A substantial increase in per capita VMT is defined as greater than 5 percent.	None required.	<i>No Adverse Impact</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
2.1-5	Implementation of the proposed Plan could result in increased percent utilization of regional transit supply resulting in an exceedance of transit capacity at AM peak hours, at PM peak hours, or for the day. An exceedance is defined as passenger seat-mile demand for any transit technology being greater than 80 percent of passenger seat-miles supplied by transit operators.	None required.	No Adverse Impact
Air Quality			
2.2-1(a)	Implementation of the proposed Plan could conflict with or obstruct implementation of the primary goals of an applicable air quality plan.	None required.	Less than Significant
2.2-1(b)	Implementation of the proposed Plan could conflict with or obstruct implementation of applicable control measures of an applicable air quality plan.	None required.	Less than Significant
2.2-1(c)	Implementation of the proposed Plan could conflict with or obstruct implementation of any control measures in an applicable air quality plan.	None required.	Less than Significant
2.2-2	Implementation of the proposed Plan could result in a substantial net increase in construction-related emissions.	2.2(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to best management practices (BMPs), such as the following: ²	Significant and Unavoidable *CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation

² Adapted from BAAQMD, CEQA Air Quality Guidelines (May 2011)

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>Construction Best Practices for Exhaust</p> <ul style="list-style-type: none"> The applicant/general contractor for the project shall submit a list of all off-road equipment greater than 25 hp that will be operating for more than 20 hours over the entire duration of the construction activities at the site, including equipment from subcontractors, to BAAQMD for review and certification. The list shall include all of the information necessary to ensure the equipment meets the following requirement: <ul style="list-style-type: none"> All off-road equipment shall have: 1) engines that meet or exceed either USEPA or ARB Tier 2 off-road emission standards; and 2) engines are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), if one is available for the equipment being used.³ Idling time of diesel powered construction equipment and trucks shall be limited to no more than two minutes. Clear signage shall be provided for construction workers at all access points. All construction equipment shall be maintained and properly tuned in accordance with the manufacturers' specifications. Portable diesel generators shall be prohibited. Grid power electricity should be used to provide power at construction sites; or propane and natural gas generators may be used when grid power electricity is not feasible. <p>Construction Best Practices for Dust</p> <ul style="list-style-type: none"> All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. For projects over 5 acres of size, soil moisture 	<p>Measures: Less than Significant with Mitigation</p>

³ Equipment with engines meeting Tier 4 Interim or Tier 4 Final emission standards automatically meet this requirement, therefore a VDECS would not be required.

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>should be maintained at 12 percent. Moisture content can be verified by lab samples or moisture probe.</p> <ul style="list-style-type: none"> • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping should be done in conjunction with thorough watering of the subject roads. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadway, driveway, and sidewalk paving shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading. • All construction sites shall provide a posted sign visible to the public with the telephone number and person to contact at the Lead Agency regarding dust complaints. The recommended response time for corrective action shall be within 48 hours. BAAQMD's Complaint Line (1-800 334- 6367) shall also be included on posted signs to ensure compliance with applicable regulations. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. • Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity. • Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. All trucks and equipment, including their tires, shall be washed off prior to leaving the site. Site accesses to a distance of 100 feet from the paved road shall be treated with a six- to 12-inch compacted layer of wood chips, mulch, or gravel. Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than 1 percent. 	
2.2-3(a)	Implementation of the proposed Plan could cause a net increase in emissions of criteria pollutants ROG, NO _x , CO, and PM _{2.5} from on-road mobile sources compared to existing conditions.	None required.	No Adverse Impact
2.2-3(b)	Implementation of the proposed Plan could cause a net increase in emissions of PM ₁₀ from on-road mobile sources compared to existing conditions.	<p>2.2(b) MTC and ABAG, in partnership with BAAQMD, and other partners who would like to participate, shall work to leverage existing air quality and transportation funds and seek additional funds to continue to implement BAAQMD and ARB programs aimed at retrofits and replacements of trucks and locomotives.</p> <p>2.2(c) MTC and ABAG, in partnership with BAAQMD and the Port of Oakland, and other partners who would like to participate, shall work together to secure incentive funding that may be available through the Carl Moyer Memorial Air Quality Standards Attainment Program to reduce port-related emissions.</p> <p>Mitigation Measures 2.1 (a), 2.1(b), and 2.1 (c) (included in Chapter 2.1, Transportation) as well as 2.2 (d) and 2.2 (e) (included below</p>	Significant and Unavoidable

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		under Impacts 2.2-5(b) and 2.2-6) could help reduce the increase in PM ₁₀ .	
2.2-4	Implementation of the proposed Plan could cause a cumulative net increase in emissions of diesel PM, 1,3-butadiene, and benzene (toxic air contaminants) from on-road mobile sources compared to existing conditions.	None required.	No Adverse Impact
2.2-5(a)	Implementation of the proposed Plan could cause a localized net increase in sensitive receptors located in Transit Priority Project (TPP) corridors where TACs or fine particulate matter (PM _{2.5}) concentrations result in a cancer risk greater than 100/million or a concentration of PM _{2.5} greater than 0.8 µg/m. ³	Implement Mitigation Measure 2.2(d) under Impact 2.2-5(b).	Significant and Unavoidable
2.2.5(b)	Implementation of the proposed Plan could cause a localized net increase in sensitive receptors located in Transit Priority Project (TPP) corridors within set distances (Table 2.2-10) to mobile or stationary sources of TAC or PM _{2.5} emissions.	<p>2.2(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to best management practices (BMPs), such as the following:</p> <ul style="list-style-type: none"> • Installation of air filtration to reduce cancer risks and PM exposure for residents, and other sensitive populations, in buildings that are in close proximity to freeways, major roadways, diesel generators, distribution centers, railyards, railroads or rail stations, and ferry terminals. Air filter devices shall be rated MERV-13 or higher. As part of implementing this measure, an ongoing maintenance plan for the building's HVAC air filtration system shall be required. • Phasing of residential developments when proposed within 500 feet of freeways such that homes nearest the freeway are built last, if feasible. 	Significant and Unavoidable

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • Sites shall be designed to locate sensitive receptors as far as possible from any freeways, roadways, diesel generators, distribution centers, and railyards. Operable windows, balconies, and building air intakes shall be located as far away from these sources as feasible. If near a distribution center, residents shall not be located immediately adjacent to a loading dock or where trucks concentrate to deliver goods. • Limiting ground floor uses in residential or mixed-use buildings that are located within the set distance of 500 feet to a non-elevated highway or roadway. Sensitive land uses, such as residential units or day cares, shall be prohibited on the ground floor. • Planting trees and/or vegetation between sensitive receptors and pollution source, if feasible. Trees that are best suited to trapping PM shall be planted, including one or more of the following: Pine (<i>Pinus nigra</i> var. <i>maritima</i>), Cypress (<i>X Cupressocyparis leylandii</i>), Hybrid popular (<i>Populus deltoids</i> X <i>trichocarpa</i>), and Redwoods (<i>Sequoia sempervirens</i>). • Within developments, sensitive receptors shall be separated as far away from truck activity areas, such as loading docks and delivery areas, as feasible. Loading dock shall be required electrification and all idling of heavy duty diesel trucks at these locations shall be prohibited. • If within the project site, diesel generators that are not equipped to meet ARB's Tier 4 emission standards shall be replaced or retrofitted. • If within the project site, emissions from diesel trucks shall be reduced through the following measures: 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> – Installing electrical hook-ups for diesel trucks at loading docks. – Requiring trucks to use Transportation Refrigeration Units (TRU) that meet Tier 4 emission standards. – Requiring truck-intensive projects to use advanced exhaust technology (e.g. hybrid) or alternative fuels. – Prohibiting trucks from idling for more than two minutes as feasible. • Establishing truck routes to avoid residential neighborhoods or other land uses serving sensitive populations. A truck route program, along with truck calming, parking and delivery restrictions, shall be implemented to direct traffic activity at non permitted sources and large construction projects. 	
2.2-5(c)	Implementation of the proposed Plan could cause a localized net increase in sensitive receptors located in Transit Priority Project (TPP) corridors where TACs or fine particulate matter (PM _{2.5}) concentrations result in noncompliance with an adopted Community Risk Reduction Plan.	None required.	<i>Less than Significant</i>
2.2-6	Implementation of the proposed Plan could result in a localized larger increase or smaller decrease of TACs and or PM _{2.5} emissions in disproportionately impacted communities compared to the remainder of the Bay Area communities.	<p>2.2(e) MTC/ABAG shall partner with BAAQMD to develop a program to install air filtration devices in existing residential buildings, and other buildings with sensitive receptors, located near freeways or sources of TACs and PM_{2.5}.</p> <p>2.2(f) MTC/ABAG shall partner with BAAQMD to develop a program to provide incentives to replace older locomotives and trucks in the region to reduce TACs and PM_{2.5}.</p> <p>In addition, Mitigation Measures 2.1 (a), 2.1(b), and 2.1 (c) (included in <i>Chapter 2.1, Transportation</i>) and 2.2 (d) (included under Impact</p>	<i>Significant and Unavoidable</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		2.2-5(b)) could help reduce TAC and PM _{2.5} emissions.	
Land Use and Physical Development			
2.3-1	Implementation of the proposed Plan could result in residential or business disruption or displacement of substantial numbers of existing population and housing.	<p>2.3(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Regulating construction operations on existing facilities to minimize traffic disruptions and detours, and to maintain safe traffic operations. • Ensuring construction operations are limited to regular business hours where feasible. • Controlling construction dust and noise. See “Construction Best Practices for Dust” under Mitigation Measure 2.2(a) in <i>Chapter 2.2: Air Quality</i>. • Controlling erosion and sediment transport in stormwater runoff from construction sites. See “Construction Best Practices for Dust” under Mitigation Measure 2.2(a) in <i>Chapter 2.2: Air Quality</i>. • Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce short-term disruption and displacement. <p>Mitigation Measure 2.2(a) in <i>Chapter 2.2: Air Quality</i> includes additional applicable measures related to this impact, and is included here by reference.</p> <p>2.3(b) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p>	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Developing pedestrian and bike connectors across widened sections of roadway; Using sidewalk, signal, and signage treatments to improve the pedestrian connectivity across widened sections of roadway; Using site redesign or corridor realignment, where feasible, to avoid land use disruption; and Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce long-term disruption and displacement. <p>2.3(c) Through regional programs, such as MTC/ABAG's Priority Development Area (PDA) Planning Program, MTC/ABAG shall continue to support the adoption of local zoning and design guidelines that encourage pedestrian and transit access, infill development, and vibrant neighborhoods.</p>	
2.3-2	Implementation of the proposed Plan could result in permanent alterations to an existing neighborhood or community by separating residences from community facilities and services, restricting access to commercial or residential areas, or eliminating community amenities.	<p>2.3(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. All new transportation projects shall be required to incorporate design features such as sidewalks, bike lanes, and bike/pedestrian bridges or tunnels that maintain or improve access and connections within existing communities and to public transit. Implementing agencies shall require project sponsors to comply with existing local regulations and policies that exceed or reasonably replace measures that reduce community separation.</p> <p>2.3(e) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. New development projects shall be required to provide connectivity for all modes such that new development does not separate existing uses, and improves access</p>	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>where needed and/or feasible, by incorporating 'complete streets' design features such as pedestrian-oriented streets and sidewalks, improved access to transit, and bike routes where appropriate. Implementing agencies shall require project sponsors to comply with existing local regulations and policies that exceed or reasonably replace measures that reduce community separation.</p> <p>2.3(f) Through regional programs such as the OneBayArea Grants (OBAG), MTC/ABAG shall continue to support planning efforts for locally sponsored traffic calming and alternative transportation initiatives, such as paths, trails, overcrossings, bicycle plans, and the like that foster improved neighborhoods and community connections.</p> <p>Mitigation Measures 2.3(a), 2.3(b), and 2.3(c) outlined for Impact 2.3-1 would also reduce community separation impacts.</p>	
2.3-3	Implementation of the proposed Plan could conflict substantially with the land use portion of adopted local general plans or other applicable land use plans, including specific plans, existing zoning, or regional plans such as coastal plans or the Bay Plan.	None required.	<i>Less than Significant</i>
2.3-4	Implementation of the proposed Plan could convert substantial amounts of important agricultural lands and open space or lands under Williamson Act contract to non-agricultural use.	<p>2.3(g) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Requiring project relocation or corridor realignment, where feasible, to avoid farmland, especially Prime Farmland; • Acquiring conservation easements on land at least equal in quality and size as partial compensation for the direct loss of agricultural land; 	<i>Significant and Unavoidable</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • Maintain and expand agricultural land protections such as urban growth boundaries; • If a Williamson Act contract is terminated, a ratio greater than 1:1 of land equal in quality shall be set aside in a conservation easement, as recommended by the Department of Conservation; • Instituting new protection of farmland in the project area or elsewhere in the County through the use of less than permanent long-term restrictions on use, such as 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.) or 10-year Williamson Act contracts (Government Code Section 51200 et seq.); • Assessing mitigation fees that support the commercial viability of the remaining agricultural land in the project area, County, or region through a mitigation bank that invests in agricultural infrastructure, water supplies, marketing, etc.; • Minimizing severance and fragmentation of agricultural land by constructing underpasses and overpasses at reasonable intervals to provide property access; • Requiring agricultural enhancement investments such as supporting farmer education on organic and sustainable practices, assisting with organic soil amendments for improved production, and upgrading irrigation systems for water conservation; • Requiring berms, buffer zones, setbacks, and fencing to reduce use conflicts between new development and farming uses and to protect the functions of farmland; and • Requiring other conservation tools available from the California Department of Conservation's Division of Land Resource Protection. 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Requiring compliance with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce farmland conversion. <p>2.3(h) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Requiring project relocation or corridor realignment, where feasible, to avoid protected open space. Requiring conservation easements on land at least equal in quality and size as partial compensation for the direct loss of protected open space. Maintain and expand open space protections such as urban growth boundaries. Requiring compliance with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce open space conversion. 	
2.3-5	Implementation of the proposed Plan could result in the loss of forest land, conversion of forest land to non-forest use, or conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production.	<p>2.3(i) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Requiring project relocation or corridor realignment, where feasible, to avoid timberland or forest land. Requiring conservation easements on land at least equal in quality and size as partial compensation for the direct loss of timberland or forest land. Requiring compliance with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce forest land conversion. 	<i>Significant and Unavoidable</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
Energy			
2.4-1	Implementation of the proposed Plan could result in an increase in per-capita direct and indirect energy consumption compared to existing conditions.	None required.	<i>Less than Significant</i>
2.4-2	Implementation of the proposed Plan could be inconsistent with adopted plans or policies related to energy conservation.	None required.	<i>No Adverse Impact</i>
Climate Change and Greenhouse Gases			
2.5-1	Implementation of the proposed Plan could fail to reduce per capita passenger vehicle and light duty truck CO ₂ emissions by 7 percent by 2020 and by 15 percent by 2035 as compared to 2005 baseline, per SB 375.	None required.	<i>No Adverse Impact</i>
2.5-2	Implementation of the proposed Plan could result in a net increase in direct and indirect GHG emissions in 2040 when compared to existing conditions.	None required.	<i>No Adverse Impact</i>
2.5-3	Implementation of the proposed Plan could substantially impede attainment of goals set forth in Executive Order S-3-05 and Executive Order B-16-2012.	None required.	<i>Less than Significant</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
2.5-4	Implementation of the proposed Plan could substantially conflict with any other applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.	None required.	No Adverse Impact
2.5-5	Implementation of the proposed Plan may result in a net increase in transportation investments within areas regularly inundated by sea level rise by midcentury.	<p>2.5(a) MTC and ABAG shall continue coordinating with BCDC, in partnership with the Joint Policy Committee and regional agencies and other partners who would like to participate, to conduct vulnerability and risk assessments for the region's transportation infrastructure. These assessments will build upon MTC and BCDC's Adapting to Rising Tides Transportation Vulnerability and Risk Assessment Pilot Project focused in Alameda County. Evaluation of regional and project-level vulnerability and risk assessments will assist in the identification of the appropriate adaptation strategies to protect transportation infrastructure and resources, as well as land use development projects, that are likely to be impacted and that are a priority for the region to protect. The Adaptation Strategy subsection found at the end of this section includes a list of potential adaptation strategies that can mitigate the impacts of sea level rise. In most cases, more than one adaptation strategy will be required to protect a given transportation project or land use development project, and the implementation of the adaptation strategy will require coordination with other agencies and stakeholders. As MTC and ABAG conduct vulnerability and risk assessments for the region's transportation infrastructure, the Adaptation Strategy subsection should serve as a guide for selecting adaptation strategies, but the list should not be considered all inclusive of all potential adaptation strategies as additional strategies not included in this list may also have the potential to reduce significant impacts.</p> <p>2.5(b) MTC and ABAG shall work with the Joint Policy Committee to create a regional sea level rise adaptation strategy for the Bay Area.</p>	<p>Significant and Unavoidable</p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>Implementing agencies and/or project sponsors shall consider implementation of mitigations measures including but not limited to those identified below.</p> <p>2.5(c) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. The project sponsors and implementing agencies shall coordinate with BCDC, Caltrans, local jurisdictions (cities and counties), and other transportation agencies to develop Transportation Asset Management Plans (TAMPs) that consider the potential impacts of sea level rise over the asset's life cycle.</p> <p>2.5(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. Executive Order S-13-08 requires all state agencies, including Caltrans, to incorporate sea level rise into planning for all new construction and routine maintenance projects; however, no such requirement exists for local transportation assets and development projects. Implementing agencies shall require project sponsors to incorporate the appropriate adaptation strategy or strategies to reduce the impacts of sea level rise on specific transportation and land use development projects where feasible based on project- and site-specific considerations. Potential adaptation strategies are included in the Adaptation Strategy subsection found at the end of this section.</p>	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
2.5-6	Implementation of the proposed Plan may result in a net increase in the number of people residing within areas regularly inundated by sea level rise by midcentury.	Implement Mitigation Measures 2.5(b) and 2.5(d).	Significant and Unavoidable
2.5-7	Implementation of the proposed Plan may result in an increase in land use development within areas regularly inundated by sea level rise by midcentury.	Implement Mitigation Measures 2.5(b) and 2.5(d).	Significant and Unavoidable
Noise			
2.6-1	Implementation of the proposed Plan could result in exposure of persons to or generation of temporary construction noise levels and/or groundborne vibration levels in excess of standards established by local jurisdictions or transportation agencies.	<p>2.6(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to the following. Implementing agencies shall require one or more of the following set of noise attenuation measures under the supervision of a qualified acoustical consultant:</p> <ul style="list-style-type: none"> Restricting construction activities to permitted hours as defined under local jurisdiction regulations;(e.g.; Alameda County Code restricts construction noise to between 7:00 am and 7:00 pm on weekdays and between 8:00 am and 5:00 pm on weekends) Properly maintaining construction equipment and outfitting construction equipment with the best available noise suppression devices (e.g. mufflers, silencers, wraps); Prohibiting idling of construction equipment for extended periods of time in the vicinity of sensitive receptors; Locating stationary equipment such as generators, compressors, rock crushers, and cement mixers as far from sensitive receptors as possible; 	<p>Significant and Unavoidable</p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Erecting temporary plywood noise barriers around the construction site when adjacent occupied sensitive land uses are present within 75 feet; Implementing “quiet” pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; Using noise control blankets on building structures as buildings are erected to reduce noise emission from the site; and Using cushion blocks to dampen impact noise from pile driving. <p>2.6(b) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following vibration attenuation measures under the supervision of a qualified acoustical consultant if pile-driving and/or other potential vibration-generating construction activities are to occur within 60 feet of a historic structure.</p> <ul style="list-style-type: none"> The project sponsors shall engage a qualified geotechnical engineer and qualified historic preservation professional and/or structural engineer to conduct a pre-construction assessment of existing subsurface conditions and the structural integrity of nearby (within 60 feet) historic structures subject to pile-driving activity. If recommended by the pre-construction assessment, for structures or facilities within 60 feet of pile-driving activities, the project sponsors shall require groundborne vibration monitoring of nearby historic structures. Such methods and technologies shall be based on the specific conditions at the construction site such as, but not limited to, the pre-construction surveying of 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>potentially affected historic structures and underpinning of foundations of potentially affected structures, as necessary.</p> <ul style="list-style-type: none"> The pre-construction assessment shall include a monitoring program to detect ground settlement or lateral movement of structures in the vicinity of pile-driving activities and identify corrective measures to be taken should monitored vibration levels indicate the potential for building damage. In the event of unacceptable ground movement with the potential to cause structural damage, all impact work shall cease and corrective measures shall be implemented to minimize the risk to the subject, or adjacent, historic structure. <p>2.6(c) To mitigate pile-driving vibration impacts related to human annoyance, the implementing agency shall require project sponsors to implement Mitigation Measure 2.6(a) above where feasible based on project- and site-specific considerations.</p>	
2.6-2	Implementation of the proposed Plan could result in increased traffic volumes that could result in roadside noise levels that approach or exceed the FHWA Noise Abatement Criteria.	<p>2.6(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Adjustments to proposed roadway or transit alignments to reduce noise levels in noise sensitive areas. For example, below-grade roadway alignments can effectively reduce noise levels in nearby areas. Techniques such as landscaped berms, dense plantings, reduced-noise paving materials, and traffic calming measures in the design of their transportation improvements. Contributing to the insulation of buildings or construction of noise barriers around sensitive receptor properties adjacent to the transportation improvement; 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> • Use land use planning measures, such as zoning, restrictions on development, site design, and buffers to ensure that future development is noise compatible with adjacent transportation facilities and land uses; • Construct roadways so that they are depressed below-grade of the existing sensitive land uses to create an effective barrier between new roadway lanes, roadways, rail lines, transit centers, park-n-ride lots, and other new noise generating facilities; and • Maximize the distance between noise-sensitive land uses and new noise-generating facilities and transportation systems. 	
2.6-3	Implementation of the proposed Plan could result in increased noise exposure from transit sources that exceed FTA exposure thresholds.	<p>2.6(e) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. When finalizing a development project's site plan, the implementing agency shall require that project sponsors locate noise-sensitive outdoor use areas away from adjacent noise sources and shield noise-sensitive spaces with buildings or noise barriers whenever possible to reduce the potential significant impacts with regard to exterior noise exposure for new sensitive receptors.</p> <p>2.6(f) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. When finalizing a land use development's site plan or a transportation project's design, the implementing agency shall ensure that sufficient setback between occupied structures and the railroad tracks is provided.</p> <p>2.6(g) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are</p>	<i>Significant and Unavoidable</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>not limited to the following. Prior to project approval, the implementing agency for a transportation project shall ensure that the transportation project sponsor applies the following mitigation measures to achieve a site-specific exterior noise performance standard as indicated in Figure 2.6-6 at sensitive land uses, as applicable for rail extension projects:</p> <ul style="list-style-type: none"> • Using sound reduction barriers such as landscaped berms and dense plantings; • Locating rail extension below grade; • Using methods to resilient damped wheels; • Using vehicle skirts; • Using under car acoustically absorptive material; and • Installing sound insulation treatments for impacted structures. 	
2.6-4	Implementation of the proposed Plan could result in increased vibration exposure from transit sources that exceed FTA exposure thresholds.	<p>2.6(h) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. When finalizing a development or transportation project's site plan, the implementing agency shall ensure that sufficient setback between occupied structures and the railroad tracks is provided. To meet the 72 VdB limit for the maximum measured train vibration level, residential buildings should be setback a minimum of 65 feet from the center of the nearest track. Alternatively, a reduced setback may be attainable if the project sponsor can demonstrate a project-specific vibration exposure meeting a performance standard of 72 VdB. Depending on specific project conditions, this standard may be attainable without additional mitigation measures or may require applied mitigation such as use of elastomeric pads in the building foundation.</p>	<i>Significant and Unavoidable</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>2.6(i) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to the following. Prior to project approval the implementing shall ensure that project sponsors apply the following mitigation measures to achieve a vibration performance standard of 72 VdB at residential land uses, as feasible, for rail extension projects:</p> <ul style="list-style-type: none"> • Using high resilience (soft) direct fixation fasteners for embedded track; • Installing Ballast mat for ballast and tie track. 	
2.6-5	Implementation of the proposed Plan could result in increased noise exposure from aircraft or airports.	None required.	<i>Less than Significant</i>
Geology and Seismicity			
2.7-1	Implementation of the proposed Plan may expose people or structures to substantial risk of property loss, injury or death related to fault rupture.	<p>2.7(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to the following. To reduce impacts related to fault rupture, implementing agencies shall require project sponsors to comply with provisions of the Alquist-Priolo Act (Act) for project sites located within or across an Alquist-Priolo Hazard Zone. Project sponsors shall prepare site-specific fault identification investigations conducted by licensed geotechnical professionals in accordance with the requirements of the Act as well as any existing local or Caltrans regulations and policies that exceed or reasonably replace any of the Act requirements. Structures intended for human occupancy (defined as a structure that might be occupied a minimum of 2,000 hours per year) shall be located a minimum distance of 50 feet from any identified active fault traces. For the purposes of this mitigation, less than significant means consistent</p>	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		with federal, state, and local regulations and laws related to development in an Alquist-Priolo Hazard Zone.	
2.7-2	Implementation of the proposed Plan may expose people or structures to substantial risk related to ground shaking.	2.7(b) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce impacts related to ground shaking, implementing agencies shall require project sponsors to comply with the most recent version of the California Building Code (CBC). Proposed improvements shall comply with Chapter 16, Section 1613 of the CBC which provides earthquake loading specifications for every structure and associated attachments that must also meet the seismic criteria of Associated Society of Civil Engineers (ASCE) Standard 07-05. In order to determine seismic criteria for proposed improvements, geotechnical investigations shall be prepared by state licensed engineers and engineering geologists to provide recommendations for site preparation and foundation design as required by Chapter 18, Section 1803 of the CBC. Geotechnical investigations shall also evaluate hazards such as liquefaction, lateral spreading, landslides, and expansive soils in accordance with CBC requirements and Special Publication 117A, where applicable. Recommended corrective measures, such as structural reinforcement and replacing native soils with engineered fill, shall be incorporated into project designs. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to building construction.	<i>Less than Significant with Mitigation</i>
2.7-3	Implementation of the proposed Plan may expose people or structures to substantial risk from seismic-related ground failure, including liquefaction.	Implement Mitigation Measure 2.7(b).	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
2.7-4	Implementation of the proposed Plan may expose people or structures to substantial risk related to landslides.	Implement Mitigation Measure 2.7(b).	<i>Less than Significant with Mitigation</i>
2.7-5	Implementation of the proposed Plan may result in substantial soil erosion or the loss of topsoil.	2.7(c) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the risk of soil erosion, implementing agencies shall require project sponsors to comply with National Pollution Discharge Elimination System (NPDES) General Construction Permit requirements. Implementing agencies shall require project sponsors, as part of contract specifications with contractors, to prepare and implement best management practices (BMPs) as part of a Storm Water Pollution Prevention Plan that include erosion control BMPs consistent with California Stormwater Quality Association Handbook for Construction. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to construction practices.	<i>Less than Significant with Mitigation</i>
2.7-6	Implementation of the proposed Plan may locate a subsequent development project on a geologic unit or soil that is unstable, contains expansive properties, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	Implement Mitigation Measure 2.7(b).	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
Water Resources			
2.8-1	Implementation of the proposed Plan may violate water quality standards or waste or stormwater discharge requirements.	<p>2.8(a) To reduce the impact associated with potential water quality standards violations or waste or stormwater discharge requirement violations, implementing agencies shall require project sponsors to comply with the State, and federal water quality regulations for all projects that would alter existing drainage patterns in accordance with the relevant regulatory criteria including but not limited to the National Pollution Discharge Elimination System (NPDES) program, Provision C.3, and any applicable Stormwater Management Plans. Erosion control measures shall be consistent with NPDES General Construction Permit requirements including preparation and implementation of a Stormwater Pollution Prevention Plan, and final drainage plans shall be consistent with the San Francisco Regional MS4 NPDES permit or any applicable local drainage control requirements that exceed or reasonably replace any of these measures to project receiving waters from pollutants.</p> <p>Implementing agencies shall require project sponsors to commit to best management practices (BMPs) that would minimize or eliminate existing sources of polluted runoff during both construction and operational phases of the project. Implementing agencies shall require projects to comply with design guidelines established in the Bay Area Stormwater Management Agencies Association’s Using Start at the Source to Comply with Design Development Standards and the California Stormwater Quality Association’s California Stormwater 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. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to water quality or stormwater management.</p>	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <p>Construction</p> <ul style="list-style-type: none"> • Limiting excavation and grading activities to the dry season (April 15 to October 15) to the extent possible in order to reduce the chance of severe erosion from intense rainfall and surface runoff, as well as the potential for soil saturation in swale areas. • Regulating stormwater runoff from the construction area through a stormwater management/erosion control plan that may include temporary on-site silt traps and/or basins with multiple discharge points to natural drainages and energy dissipaters if excavation occurs during the rainy season. This control plan should include requirements to cover stockpiles of loose material, divert runoff away from exposed soil material, locate and operate sediment basin/traps to minimize the amount of offsite sediment transport, and removing any trapped sediment from the basin/ trap for placement at a suitable location on-site, away from concentrated flows, or removal to an approved disposal site. • Providing temporary erosion control measures until perennial revegetation or landscaping is established and can minimize discharge of sediment into receiving waterways. • Providing erosion protection on all exposed soils either by revegetation or placement of impervious surfaces after completion of grading. Revegetation shall be facilitated by mulching, hydroseeding, or other methods and initiated as soon as possible after completion of grading and prior to the onset of the rainy season (by October 15). 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Using permanent revegetation/landscaping, emphasizing drought-tolerant perennial ground coverings, shrubs, and trees. Ensuring BMPs are in place and operational prior to the onset of major earthwork on the site. The construction phase facilities shall be maintained regularly and cleared of accumulated sediment as necessary. Storing hazardous materials such as fuels and solvents used on the construction sites in covered containers and protected from rainfall, runoff, and vandalism. A stockpile of spill cleanup materials shall be readily available at all construction sites. Employees shall be trained in spill prevention and cleanup, and individuals should be designated as responsible for prevention and cleanup activities. 	
		<p>Operation</p> <ul style="list-style-type: none"> Designing drainage of roadway and parking lot runoff, wherever possible to run through grass median strips which are contoured to provide adequate storage capacity and to provide overland flow, detention, and infiltration before runoff reaches culverts, or into detention basins. Facilities such as oil and sediment separators or absorbent filter systems should be designed and installed within the storm drainage system to provide filtration of stormwater prior to discharge and reduce water quality impacts whenever feasible. Implementing an erosion control and revegetation program designed to allow re-establishment of native vegetation on slopes in undeveloped areas as part of the long-term sediment control plan. Using alternate discharge options to protect sensitive fish and wildlife populations in areas where habitat for fish and other wildlife would be threatened by transportation facility discharge. 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>Maintenance activities over the life of the project shall include use of heavy-duty sweepers, with disposal of collected debris in sanitary landfills to effectively reduce annual pollutant loads where appropriate. Catch basins and storm drains shall be cleaned and maintained on a regular basis.</p> <ul style="list-style-type: none"> Using Integrated Pest Management techniques (methods that minimize the use of potentially hazardous chemicals for landscape pest control and vineyard operations) in landscaped areas. The handling, storage, and application of potentially hazardous chemicals shall take place in accordance with all applicable laws and regulations. 	
2.8-2	Implementation of the proposed Plan may substantially interfere with or reduce rates of groundwater recharge due to the increased amount of impervious surfaces, such that there would be a net deficit in aquifer volume or a lowering of the groundwater table.	None required.	<i>Less than Significant</i>
2.8-3	Implementation of the proposed Plan may increase erosion by altering the existing drainage patterns of a site, contributing to sediment loads of streams and drainage facilities, and thereby affecting water quality.	Implement Mitigation Measure 2.8(a)	<i>Less than Significant with Mitigation</i>
2.8-4	Implementation of the proposed Plan may increase non-point pollution of stormwater runoff due to litter, fallout from airborne particulate emissions, or discharges of vehicle residues, including petroleum hydrocarbons and metals that would impact the quality of receiving waters.	Implement Mitigation Measure 2.8(a)	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
2.8-5	Implementation of the proposed Plan may increase non-point-source pollution of stormwater runoff from construction sites due to discharges of sediment, chemicals, and wastes to nearby storm drains and creeks.	Implement Mitigation Measure 2.8(a)	<i>Less than Significant with Mitigation</i>
2.8-6	Implementation of the proposed Plan may increase rates and amounts of runoff due to additional impervious surfaces, higher runoff values for cut-and-fill slopes, or alterations to drainage systems that could cause potential flood hazards and effects on water quality.	Implement Mitigation Measure 2.8(a)	<i>Less than Significant with Mitigation</i>
2.8-7	Implementation of the proposed Plan may place within a 100-year flood hazard area structures which would impede or redirect flows.	2.8(b) To reduce the impact of flood hazards, implementing agencies shall conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with Executive Order 11988, the National Flood Insurance Program, National Flood Insurance Act, Caltrans Highway Design Manual, Cobey-Alquist Floodplain Management Act, as well as any further Federal Emergency Management Agency (FEMA) or State requirements that are adopted at the local level. These studies shall identify project design features or mitigation measures that reduce impacts to either floodplains or flood flows to a less than significant level such as requiring minimum elevations for finished first floors, typically at least one foot above the 100-year base flood elevation, where feasible based on project- and site-specific considerations. For the purposes of this mitigation, less than significant means consistent with these federal, State, and local regulations and laws related to development in the floodplain. Local jurisdictions shall, to the extent feasible, appropriate, and consistent with local policies, prevent development in flood hazard areas that do not have demonstrable protections.	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
2.8-8	Implementation of the proposed Plan may expose people to a significant risk of loss, injury, or death involving flooding (including flooding as a result of the failure of a levee or dam), seiche, tsunami, or mudflow.	None required.	Less than Significant
Biological Resources			
2.9-1a	Implementation of the proposed Plan could have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.	<p>2.9(a) Implementing agencies shall require project sponsors to prepare biological resources assessments for specific projects proposed in areas containing, or likely to contain, habitat for special-status plants and wildlife. The assessment shall be conducted by qualified professionals pursuant to adopted protocols and agency guidelines. Where the biological resources assessment establishes that mitigation is required to avoid direct and indirect adverse effects on special-status plant and wildlife species, mitigation shall be developed consistent with the requirements of CEQA, USFWS, and CDFW regulations and guidelines, in addition to requirements of any applicable and adopted HCP/NCCP or other applicable plans developed to protect species or habitat. Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • In support of CEQA, NEPA, CDFW and USFWS permitting processes for individual Plan Bay Area projects, biological surveys shall be conducted as part of the environmental review process to determine the presence and extent of sensitive habitats and/or species in the project vicinity. Surveys shall follow established methods and shall be undertaken at times when the subject species is most likely to be identified. In cases where impacts to State- or federal-listed plant or wildlife species are possible, formal protocol-level surveys may be required on a species-by-species basis to determine the local distribution of these species. Consultation with the USFWS and/or CDFW shall 	Significant and Unavoidable

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>be conducted early in the planning process at an informal level for projects that could adversely affect federal or State candidate, threatened, or endangered species to determine the need for further consultation or permitting actions. Projects shall obtain incidental take authorization from the permitting agencies as required prior to project implementation.</p> <ul style="list-style-type: none">• Project designs shall be reconfigured, whenever practicable, to avoid special-status species and sensitive habitats. Projects shall minimize ground disturbances and construction footprints near sensitive areas to the extent practicable.• Where habitat avoidance is infeasible, compensatory mitigation shall be implemented through preservation, restoration, or creation of special-status wildlife habitat. Loss of habitat shall be mitigated at an agency approved mitigation bank or through individual mitigation sites as approved by USFWS and/or CDFW. Compensatory mitigation ratios shall be negotiated with the permitting agencies. Mitigation sites shall be monitored for a minimum of five consecutive years after mitigation implementation or until the mitigation is considered to be successful. All mitigation areas shall be preserved in perpetuity through either fee ownership or a conservation easement held by a qualified conservation organization or agency, establishment of a preserve management plan, and guaranteed long-term funding for site preservation through the establishment of a management endowment.• Project activities in the vicinity of sensitive resources shall be completed during the period that best avoids disturbance to plant and wildlife species present (e.g., May 15 to October 15 near salmonid habitat and vernal pools) to the extent feasible.	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Individual projects shall minimize the use of in-water construction methods in areas that support sensitive aquatic species, especially when listed species could be present. In the event that equipment needs to operate in any watercourse with flowing or standing water, a qualified biological resource monitor shall be present at all times to alert construction crews to the possible presence of California red-legged frog, nesting birds, salmonids, or other aquatic species at risk during construction operations. If project activities involve pile driving or vibratory hammering in or near water, interim hydroacoustic threshold criteria for fish shall be adopted as set forth by the Interagency Fisheries Hydroacoustic Working Group, as well as other avoidance methods to reduce the adverse effects of construction to sensitive fish, piscivorous birds, and marine mammal species. Construction shall not occur during the breeding season near riparian habitat, freshwater marshlands, and salt marsh habitats that support nesting bird species protected under the Endangered Species Act, Migratory Bird Treaty Act, or California Fish and Game Code (e.g., yellow warbler, tricolored blackbird, California clapper rail, etc.). A qualified biologist shall locate and fence off sensitive resources before construction activities begin and, where required, shall inspect areas to ensure that barrier fencing, stakes, and setback buffers are maintained during construction. For work sites located adjacent to special-status plant or wildlife populations, a biological resource education program shall be provided for construction crews and contractors (primarily crew and construction foremen) before construction activities begin. 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Biological monitoring shall be particularly targeted for areas near identified habitat for federal- and state-listed species, and a “no take” approach shall be taken whenever feasible during construction near special-status plant and wildlife species. Efforts shall be made to minimize the negative effects of light and noise on listed and sensitive wildlife. Compliance with existing local regulations and policies, including applicable HCP/NCCPs, that exceed or reasonably replace any of the above measures protective of special-status species. 	
2.9-1b	Implementation of the proposed Plan could have substantial adverse impacts on designated critical habitat for federally listed plant and wildlife species.	<p>2.9(b) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Informal consultation with the USFWS and/or NMFS shall be conducted early in the environmental review process to determine the need for further mitigation, consultation, or permitting actions. Formal consultation is required for any project with a federal nexus. Project designs shall be reconfigured to avoid or minimize adverse effects on the primary constituent elements of designated critical habitats when they are present in a project vicinity. Compliance with existing local regulations and policies, including applicable HCP/NCCPs. that exceed or reasonably replace any of the above measures protective of critical habitat. <p>Additionally, implementation of Mitigation Measure 2.9(a), above, which includes an initial biological resource assessment and, if</p>	<i>Significant and Unavoidable</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		necessary, compensatory mitigation for loss of habitat, is expected to reduce impacts on critical habitat.	
2.9-1c	Implementation of the proposed Plan could result in construction activities that could adversely affect non-listed nesting raptor species considered special-status by CDFW under CDFW Code 3503.5 and non-listed nesting bird species considered special-status by the USFWS under the federal Migratory Bird Treaty Act, and by CDFW under CDFW Code 3503 and 3513.	<p>2.9(c) Implementing agencies shall require project sponsors to conduct a pre-construction breeding bird surveys for specific projects proposed in areas containing, or likely to contain, habitat for nesting birds. The survey shall be conducted by appropriately trained professionals pursuant to adopted protocols agency guidelines. Where a breeding bird survey establishes that mitigation is required to avoid direct and indirect adverse effects on nesting raptors and other protected birds, mitigation will be developed consistent with the requirements of CEQA, USFWS, and CDFW regulations and guidelines, in addition to requirements of any applicable and adopted HCP/NCCP or other applicable plans developed to protect species or habitat. Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Perform preconstruction surveys not more than two weeks prior to initiating vegetation removal and/or construction activities during the breeding season (i.e., February 1 through August 31). • Establish a no-disturbance buffer zone around active nests during the breeding season until the young have fledged and are self-sufficient, when no further mitigation would be required. Typically, the size of individual buffers ranges from a minimum of 250 feet for raptors to a minimum of 50 feet for other birds but can be adjusted based on an evaluation of the site by a qualified biologist in cooperation with the USFWS and/or CDFW. • Provide buffers around nests that are established by birds after construction starts. These birds are assumed to be habituated to and tolerant of construction disturbance. However, direct take of nests, eggs, and nestlings is still prohibited and a buffer must be 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>established to avoid nest destruction. If construction ceases for a period of more than two weeks, or vegetation removal is required after a period of more than two weeks has elapsed from the preconstruction surveys, then new nesting bird surveys must be conducted.</p> <ul style="list-style-type: none"> Comply with existing local regulations and policies, including applicable HCP/NCCPs, that exceed or reasonably replace any of the above measures protective of nesting birds. 	
2.9-2	Implementation of the proposed Plan could have a substantial adverse effect on riparian habitat, federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.), or other sensitive natural communities identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service, through direct removal, filling, hydrological interruption, or other means.	<p>2.9(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Implementing agencies shall require project sponsors to prepare biological resource assessments for specific projects proposed in areas containing, or likely to contain, jurisdictional waters and/or other sensitive or special-status communities. The assessment shall be conducted by qualified professionals in accordance with agency guidelines and standards. The assessment shall identify specific mitigation measures for any impact that exceeds significant impact thresholds and said measures shall be implemented. Mitigation measures shall be consistent with the requirements of CEQA and wetland permitting agencies, and/or follow an adopted HCP/NCCP or other applicable plans promulgated to protect jurisdictional waters or other sensitive habitats. In keeping with the “no net loss” policy for wetlands and other waters, project designs shall be configured, whenever possible, to avoid wetlands and other waters and avoid disturbances to wetlands and riparian corridors in order to preserve both the habitat and the overall ecological functions of these areas. 	<i>Significant and Unavoidable</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>Projects shall minimize ground disturbances and construction footprints near such areas to the extent practicable.</p> <ul style="list-style-type: none"> Where avoidance of jurisdictional waters is not feasible, project sponsors shall minimize fill and the use of in-water construction methods, and only place fill with express permit approval from the appropriate resources agencies (e.g., Corps, RWQCB, CDFW, BCDC, and CCC) and in accordance with applicable existing regulations, such as the Clean Water Act or local stream protection ordinances. Project sponsors shall arrange for compensatory mitigation in the form of mitigation bank credits, on-site or off-site enhancement of existing waters or wetland creation in accordance with applicable existing regulations and subject to approval by the Corps, RWQCB, CDFW, BCDC, and CCC. If compensatory mitigation is required by the implementing agency, the project sponsor shall develop a restoration and monitoring plan that describes how compensatory mitigation will be achieved, implemented, maintained, and monitored. At a minimum, the restoration and monitoring plan shall include clear goals and objectives, success criteria, specifics on restoration/creation/enhancement (plant palette, soils, irrigation, etc.), specific monitoring periods and reporting guidelines, and a maintenance plan. The following minimum performance standards (or other standards as required by the permitting agencies) shall apply to any wetland compensatory mitigation: <ul style="list-style-type: none"> Compensation shall be provided at a <i>minimum</i> 1:1 ratio for restoration and preservation, but shall in all cases be consistent with mitigation ratios set forth in locally applicable plans (e.g., general plans, HCP/NCCPs, etc.), or in project-specific permitting documentation. Compensatory mitigation may be a combination of onsite restoration/creation/enhancement, offsite restoration, 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>preservation and/or enhancement, or purchase of mitigation credits. Compensatory mitigation may also be achieved through Regional Advance Mitigation Planning (RAMP) banking, as deemed appropriate by the permitting agencies.</p> <ul style="list-style-type: none">– In general, any compensatory mitigation shall be monitored for a minimum of five years and will be considered successful when at least 75 percent cover (or other percent cover considered appropriate for the vegetation type) of installed vegetation has become successfully established.• In accordance with CDFW guidelines and other instruments protective of sensitive or special-status natural communities, project sponsors shall avoid and minimize impacts on sensitive natural communities 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 or the East Contra Costa County HCP, which outline specific measures to protect sensitive vegetation communities.• If any portion of a special-status natural community is permanently removed or temporarily disturbed, the project sponsor shall compensate for the loss. If such mitigation is required by the implementing agency, the project sponsor shall develop a restoration and monitoring plan that describes how compensatory mitigation will be achieved, implemented, maintained, and monitored. At a minimum, the restoration and monitoring plan shall include clear goals and objectives, success criteria, specifics on restoration/creation/enhancement (plant palette, soils, irrigation, etc.), specific monitoring periods and reporting guidelines, and a maintenance plan. The following minimum performance standards (or other standards as required by the permitting agencies) shall apply to any compensatory mitigation for special-status natural communities:	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> – Compensation shall be provided at a <i>minimum</i> 1:1 ratio for restoration and preservation, but shall in all cases be consistent with mitigation ratios set forth in locally applicable plans (e.g., general plans, HCP/NCCPs, etc.) or in project-specific permitting documentation. Compensatory mitigation may be a combination of onsite restoration/creation/enhancement, offsite restoration, preservation and/or enhancement, or purchase of mitigation credits. Compensatory mitigation may also be achieved through Regional Advance Mitigation Planning (RAMP) banking, as deemed appropriate by the permitting agencies. – In general, any compensatory mitigation shall be monitored for a minimum of five years and will be considered successful when at least 75 percent cover (or other percent cover considered appropriate for the vegetation type) of installed vegetation has become successfully established. • Compliance with existing local regulations and policies, including applicable HCP/NCCPs, that exceed or reasonably replace any of the above measures protective of jurisdictional wetlands or special-status natural communities. 	
2.9-3	Implementation of the proposed Plan could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridor, or impede the use of native wildlife nursery sites.	2.9(e) Mitigation measures to reduce impacts on wildlife corridors that shall be required by implementing agencies where feasible based on project- and site- specific considerations include, but are not limited to the following. Implementing agencies shall require project sponsors to prepare detailed analyses for specific projects affecting ECA lands within their sphere of influence to determine what wildlife species may use these areas and what habitats those species require. Projects that would not affect ECA lands but that are located within or adjacent to open lands, including wildlands and agricultural lands, shall also assess whether or not significant wildlife corridors are present, what wildlife species may use them, and what	<i>Significant and Unavoidable</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>habitat those species require. The assessment shall be conducted by qualified professionals and according to any applicable agency standards. Mitigation shall be consistent with the requirements of CEQA and/or follow an adopted HCP/NCCP or other relevant plans developed to protect species and their habitat, including migratory linkages.</p> <p>Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Constructing wildlife friendly overpasses and culverts; • Fencing major transportation corridors in the vicinity of identified wildlife corridors; • Using wildlife friendly fences that allow larger wildlife such as deer to get over, and smaller wildlife to go under; • Limiting wildland conversions in identified wildlife corridors; and • Retaining wildlife friendly vegetation in and around developments. • Compliance with existing local regulations and policies, including applicable HCP/NCCPs. that exceed or reasonably replace any of the above measures protective of jurisdictional wetlands or special-status natural communities. 	
2.9-4	Implementation of the proposed Plan could conflict with adopted local conservation policies, such as a tree protection ordinance, or resource protection and conservation plans, such as a Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other adopted local, regional, or state habitat	2.9(f) Implementing agencies shall require project sponsors to prepare biological resources assessments for specific projects proposed in areas containing, or likely to contain, protected trees or other locally protected biological resources. The assessment shall be conducted by qualified professionals in accordance with adopted protocols, and standards in the industry. Mitigation shall be consistent with the requirements of CEQA and/or follow applicable ordinances or plans developed to protect trees or other locally	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
	conservation plan.	<p>significant biological resources. Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Mitigation shall be implemented when significance thresholds are exceeded. Mitigation shall be consistent with the requirements of CEQA and/or follow applicable ordinances or plans developed to protect trees or other locally significant biological resources. • Implementing agencies shall design projects such that they avoid and minimize direct and indirect impacts to protected trees and other locally protected resources where feasible. • At a minimum, qualifying protected trees (or other resources) shall be replaced at 1:1, or as otherwise required by the local ordinance or plan, in locally approved mitigation sites. • As part of project-level environmental review, implementing agencies shall ensure that projects comply with the most recent general plans, policies, and ordinances, and conservation plans. Review of these documents and compliance with their requirements shall be demonstrated in project-level environmental documentation. <p>2.9(g) During the design and CEQA review of individual projects under Plan Bay Area, implementing agencies and project sponsors shall modify project designs to ensure the maximum feasible level of consistency with the policies in adopted HCPs, NCCPs, or other approved local, regional, or state conservation plans, in areas where such plans are applicable. These measures apply to projects covered by the plans in question (i.e., projects assessed during plan environmental review), as well as non-covered projects within the Plan area. Mitigation measures that shall be considered by</p>	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none">• If the project results in impacts on covered species habitat, or other habitat protected under the plan, the project sponsor shall coordinate with USFWS, CDFW, and the appropriate local agency to provide full compensation of acreage and preserve function. Projects shall follow adopted procedures to process an amendment to the conservation plan(s) if necessary. In addition, all habitat based mitigation required by the conservation plans shall be provided at ratios or quantities specified in the plans.• Project design and implementation shall minimize impacts on covered species through implementation of Mitigation Measures 2.9(a), 2.9(b), 2.9(c), 2.9(d), and 2.9(e).• Avoidance, minimization, and mitigation measures for covered species, consistent with adopted HCP and/or NCCPs, shall also be implemented as specified during project-specific environmental review and permitting. Avoidance and minimization measures to covered species and their habitats shall include adherence to land use adjacency guidelines as outlined in adopted HCP and/or NCCPs. <p>2.9(h) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. Implementing agencies and project sponsors whose projects are located within the Coastal Zone or within BCDC jurisdiction shall carefully review the applicable local coastal program or San Francisco Bay Plan for potential conflicts, and involve the California Coastal Commission or BCDC as early as possible in the project-level EIR process.</p>	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
Visual Resources			
2.10-1	Implementation of the proposed Plan could affect visual resources by blocking panoramic views or views of significant landscape features or landforms (mountains, oceans, rivers, or significant man-made structures) as seen from a transportation facility or from public viewing areas.	<p>2.10(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Reduce the visibility of construction staging areas by fencing and screening these areas with low contrast materials consistent with the surrounding environment, and by revegetating graded slopes and exposed earth surfaces at the earliest opportunity. • Site or design projects to minimize their intrusion into important viewsheds. • Use see-through safety barrier designs (e.g. railings rather than walls) when feasible. • Develop interchanges and transit lines at the grade of the surrounding land to limit view blockage wherever possible. • Design landscaping along highway corridors in rural and open space areas to add significant natural elements and visual interest to soften the hard edged, linear travel experience that would otherwise occur. • Identify, preserve, and enhance scenic vistas to and from hillside areas and other visual resources. • Comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect visual resources. 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>
2.10-2	Implementation of the proposed Plan could affect visual resources by substantially damaging scenic resources (such as trees, rock outcroppings, and historic buildings) that would	<p>2.10(b) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p>	<p><i>Significant and Unavoidable</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
	alter the appearance of or from state- or county-designated or eligible scenic highways.	<ul style="list-style-type: none"> • Project sponsors and implementing agencies shall complete design studies for projects in designated or eligible State Scenic Highway corridors. Implementing agencies shall consider the “complete” highway system and design projects to minimize impacts on the quality of the views or visual experience that originally qualified the highway for scenic designation. • Contouring the edges of major cut and fill slopes to provide a more natural looking finished profile that is appropriate to the surrounding context, using natural shapes, textures, colors, and scale to minimize contrasts between the project and surrounding areas. • Complying with existing local regulations and policies that exceed or reasonably replace measures that protect visual resources where feasible based on project- and site-specific considerations • Implementation of Mitigation Measure 2.10(a) shall also be considered to reduce impacts on scenic highways. 	
2.10-3	Implementation of the proposed Plan could affect visual resources by creating significant contrasts with the scale, form, line, color, and/or overall visual character of the existing community.	<p>2.10(c) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Designing projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. • Requiring that the scale, massing, and design of new development provide appropriate transitions in building height, bulk, and architectural style that are sensitive to the physical and visual character of surrounding areas. 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Contouring the edges of major cut and fill slopes to provide a finished profile that is appropriate to the surrounding context, using shapes, textures, colors, and scale to minimize contrasts between the project and surrounding areas. Ensuring that new development in or adjacent to existing communities is compatible in scale and character with the surrounding area by: <ul style="list-style-type: none"> Promoting a transition in scale and architecture character between new buildings and established neighborhoods; and Requiring pedestrian circulation and vehicular routes to be well integrated. Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce visual contrasts. <p>Implementation of Mitigation Measure 2.10(a) shall also be considered to reduce impacts on visual resources created by significant contrasts in community visual character.</p>	
2.10-4	Implementation of the proposed Plan could affect visual resources by adding a visual element of urban character to an existing rural or open space area or adding a modern element to a historic area.	<p>2.10(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Ensuring that new development in or adjacent to rural or historic areas is compatible in scale and character with the surrounding area by: <ul style="list-style-type: none"> Promoting a transition in scale and architecture character between new buildings and established neighborhoods; and Requiring pedestrian circulation and vehicular routes to be well integrated. 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Using soundwall construction and design methods that account for visual impacts as follows: <ul style="list-style-type: none"> Use transparent panels to preserve views where soundwalls would block views from residences. Use landscaped earth berm or a combination wall and berm to minimize the apparent soundwall height. Construct soundwalls of materials whose color and texture complements the surrounding landscape and development. Design soundwalls to increase visual interest, reduce apparent height, and be visually compatible with the surrounding area. Landscape the soundwalls with plants that screen the soundwall, preferably with either native vegetation or landscaping that complements the dominant landscaping of surrounding areas. Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce visual impacts on rural and historic areas. 	
2.10-5	Implementation of the proposed Plan could adversely affect visual resources by creating new substantial sources of light and glare.	<p>2.10(e) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Designing projects to minimize light and glare from lights, buildings, and roadways facilities. Minimizing and controlling glare from transportation projects through the adoption of project design features that reduce glare. These features include: <ul style="list-style-type: none"> Planting trees along transportation corridors to reduce glare from the sun; 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> – Landscaping off-street parking areas, loading areas, and service areas; and – Shielding transportation lighting fixtures to minimize off-site light trespass. • Minimizing and controlling glare from land use and transportation projects through the adoption of project design features that reduce glare. These features include: <ul style="list-style-type: none"> – Limiting the use of reflective materials, such as metal; – Using non-reflective material, such as paint, vegetative screening, matte finish coatings, and masonry; – Screening parking areas by using vegetation or trees; and – Using low-reflective glass. • Imposing lighting standards that ensure that minimum safety and security needs are addressed and minimize light trespass and glare associated with land use development. These standards include the following: <ul style="list-style-type: none"> – Minimizing incidental spillover of light onto adjacent private properties and undeveloped open space; – Directing luminaries away from habitat and open space areas adjacent to the project site; – Installing luminaries that provide good color rendering and natural light qualities; and – Minimizing the potential for back scatter into the nighttime sky and for incidental spillover of light onto adjacent private properties and undeveloped open space. 	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce light and glare impacts. 	
2.10-6	Implementation of the proposed Plan could cast a substantial shadow in such a way as to cause a public hazard or substantially degrade the existing visual/aesthetic character or quality of a public place for a sustained period of time.	<p>2.10(f) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. Implementing agencies shall require project sponsors to conduct shadow studies for buildings and roadway facilities to identify and implement development strategies for reducing the impact of shadows on public open space. Study considerations shall include, but are not limited to, the placement, massing, and height of structures, surrounding land uses, time of day and seasonal variation, and reflectivity of materials. Study recommendations for reducing shadow impacts shall be incorporated into the project design as feasible based on project-and site-specific considerations. Further, implementing agencies shall require project sponsors to comply with existing local regulations and policies that exceed or reasonably replace the above measure that reduces shadow impacts where feasible based on project- and site-specific considerations.</p>	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>
Cultural Resources			
2.11-1	The proposed Plan could have the potential to cause a substantial adverse change in the significance of a historic resource such that the significance of the resource would be materially impaired.	<p>2.11(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Realign or redesign projects to avoid impacts on known historic resources where possible. Requiring an assessment by a qualified professional of structures greater than 45 years in age within the area of potential effect to 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>determine their eligibility for recognition under State, federal, or local historic preservation criteria.</p> <ul style="list-style-type: none"> When a project has been identified as potentially affecting a historic resource, a historical resources inventory should be conducted by a qualified architectural historian. The study should comply with CEQA Guidelines section 15064.5(b), and, if federal funding or permits are required, with section 106 of the National Historic Preservation Act (NHPA) of 1966 (16 U.S.C. § 470 et seq.). Study recommendations shall be implemented. If avoidance of a significant architectural/built environment resource is not feasible, additional mitigation options include, but are not limited to, specific design plans for historic districts, or plans for alteration or adaptive re-use of a historical resource that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings. Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect historic resources. 	
2.11-2	The proposed Plan could have the potential to cause a substantial adverse change in the significance of a unique archaeological resource.	<p>2.11(b) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Pursuant to Government Code Sections 65351 and 65352, in-person consultation shall be conducted with Native American tribes and individuals with cultural affiliations where the project is proposed to determine the potential for, or existence of, cultural resources, including cemeteries and sacred places, prior to project design and implementation stages. 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none">• Prior to construction activities, project sponsors shall retain a qualified archaeologist to conduct a record search at the appropriate Information Center of the California Archaeological Inventory to determine whether the project area has been previously surveyed and whether resources were identified. When recommended by the Information Center, project sponsors shall retain a qualified archaeologist to conduct archaeological surveys prior to construction activities.• Preparation of a research design and testing plan should be developed in advance of implementation of the construction project, in order to efficiently facilitate the avoidance of cultural sites throughout the development process.• If record searches and field surveys indicate that the project is located in an area rich with archaeological resources, project sponsors should retain a qualified archaeologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property.• Written assessments should be prepared by a qualified tribal representative of sites or corridors with no identified cultural resources but which still have a moderate to high potential for containing tribal cultural resources.• Upon “late discovery” of prehistoric archaeological resources during construction, project sponsors shall consult with the Native American tribe as well as with the “Most-Likely-Descendant” as designated by the Native American Heritage Commission pursuant to PRC 5097.• Preservation in place is the preferred manner of mitigating impacts on archeological sites because it maintains the relationship between artifacts and the archeological context, and	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>it may also avoid conflict with religious or cultural values of groups associated with the site. This may be achieved through incorporation within parks, green-space, or other open space by re-designing project using open space or undeveloped lands. This may also be achieved by following procedures for capping the site underneath a paved area. When avoiding and preserving in place are infeasible based on project- and site-specific considerations, a data recovery plan may be prepared according to CEQA Section 15126.4. A data recovery plan consists of: the documentation and removal of the archeological deposit from a project site in a manner consistent with professional (and regulatory) standards; the subsequent inventorying, cataloguing, analysis, identification, dating, and interpretation of the artifacts; and the production of a report of findings.</p> <ul style="list-style-type: none"> Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect archaeological resources. 	
2.11-3	The proposed Plan could have the potential to destroy, directly or indirectly, a unique paleontological resource or site or unique geologic feature.	<p>2.11(c) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Prior to construction activities, project sponsors should retain a qualified paleontologist to conduct a record search using an appropriate database, such as the UC Berkeley Museum of Paleontology to determine whether the project area has been previously surveyed and whether resources were identified. As warranted, project sponsors should retain a qualified paleontologist to conduct paleontological surveys prior to construction activities. Preparation of a research design and testing plan should be developed in advance of implementation of the construction 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>project, in order to efficiently facilitate the avoidance of cultural sites throughout the development process.</p> <ul style="list-style-type: none"> • If record searches and field surveys indicate that the project is located in an area rich with paleontological, and/or geological resources, project sponsors should retain a qualified paleontologist to monitor any subsurface operations, including but not limited to grading, excavation, trenching, or removal of existing features of the subject property. • Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect paleontological or geologic resources. 	
2.11-4	The proposed Plan could have the potential to disturb human remains, including those interred outside formal cemeteries.	<p>2.11(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Under Section 7050.5 of the California Health and Safety Code, as part of project oversight of individual projects, project sponsors can and should, in the event of discovery or recognition of any human remains during construction or excavation activities associated with the project, in any location other than a dedicated cemetery, cease further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until the coroner of the county in which the remains are discovered has been informed and has determined that no investigation of the cause of death is required. • Under California Public Resources Code 5097.98, if any discovered remains are of Native American origin: <ul style="list-style-type: none"> – The coroner shall contact the Native American Heritage Commission in order to ascertain the proper descendants 	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>from the deceased individual. The coroner should make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods. This may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains; or</p> <ul style="list-style-type: none"> – If the Native American Heritage Commission is unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified by the commission, the landowner or their authorized representative shall obtain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and reburial the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance where the following conditions occur: <ul style="list-style-type: none"> – The Native American Heritage Commission is unable to identify a descendant; – The descendant identified fails to make a recommendation; or – The landowner or their authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. <p>For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to human remains.</p>	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
Public Utilities and Facilities			
2.12-1	The proposed Plan could result in insufficient water supplies from existing entitlements and resources to serve expected development.	<p>2.12(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none">• Implementing water conservation measures which result in reduced demand for potable water. This could include reducing the use of potable water for landscape irrigation (such as through drought-tolerant plantings, water-efficient irrigation systems, the capture and use of rainwater) and the use of water-conserving fixtures (such as dual-flush toilets, waterless urinals, reduced flow faucets).• Coordinating with the water provider to identify an appropriate water consumption budget for the size and type of project, and designing and operating the project accordingly.• Using reclaimed water for non-potable uses, especially landscape irrigation. This strategy may require a project to be located in an area with existing reclaimed water conveyance infrastructure and excess reclaimed water capacity. If a location is planned for future reclaimed water service, projects should install dual plumbing systems in anticipation of future use. Large developments could treat wastewater onsite to tertiary standards and use it for non-potable uses onsite.• Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures that reduce demand for potable water. <p>2.12(b) MTC shall require the construction phase of transportation projects to connect to reclaimed water distribution systems for non-potable water needs, when feasible based on project- and site-specific considerations.</p>	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		2.12(c) MTC shall require transportation projects with landscaping to use drought-resistant plantings or connect to reclaimed water distribution systems for irrigation and other non-potable water needs when available and feasible based on project- and site-specific considerations.	
2.12-2	The proposed Plan could result in inadequate wastewater treatment capacity to serve new development.	<p>2.12(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project- and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Undertaking environmental assessments of land use plans and developments to determine whether sufficient wastewater treatment capacity exists for a proposed project. These environmental assessments must ensure that the proposed development can be served by its existing or planned treatment capacity, and that the applicable NPDES permit does not include a Cease and Desist Order or any limitations on existing or future treatment capacity. If adequate capacity does not exist, the implementing agency must either adopt mitigation measures or consider not proceeding with the project as proposed. • Complying with existing local regulations and policies that exceed or reasonably replace the above measure in a manner that reduces impacts on wastewater treatment capacity. <p>Implementing agencies shall also require compliance with Mitigation Measure 2.12(a), and MTC shall require implementation of Mitigation Measures 2.12(b), and/or 2.12(c) listed under Impact 2.12-1, as feasible based on project- and site-specific considerations, which will help reduce water usage and, subsequently, wastewater flows.</p> <p>Transportation projects could only cause impacts on wastewater treatment capacity in the case of excess stormwater runoff into a</p>	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		combined wastewater/stormwater conveyance system. Therefore, mitigation of stormwater drainage system capacity impacts will also mitigate wastewater treatment capacity impacts. Mitigation for stormwater runoff into wastewater systems from transportation projects is discussed under Impact 2.12-3; mitigation measures 2.12(f) and 2.12(g) will mitigate these impacts.	
2.12-3	Development under the proposed Plan could require and result in the construction of new or expanded stormwater drainage facilities, which could cause significant environmental impacts.	<p>2.12(e) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Complying with all existing applicable federal and State regulations, including Provision C.3 of the EPA's Interpretive Policy Memorandum on Reapplication Requirements for Municipal Separate Storm Sewer Systems, NPDES permit requirements, the submission of and adherence to a Storm Water Pollution Prevention Plan, Water Quality Control Policy for Siting, Design, Operation, and Maintenance of onsite Wastewater Treatment Systems, and/or other relevant current State Water Resource Control Board policy adopted for the purpose of reducing stormwater drainage impacts. • For projects less than one acre in size, reducing stormwater runoff caused by construction by implementing stormwater control best practices, based on those required for a Storm Water Pollution Prevention Plan. • To the extent possible, siting or orienting the project to use existing stormwater drainage capacity. • Constructing permeable surfaces, such as stormwater detention facilities, playing fields, landscaping, or alternative surfaces (vegetated roofs, pervious paving). 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Modeling and implementing a stormwater management plan or site design that prevents the post-development peak discharge rate and quantity from exceeding pre-development rates. Capturing rainwater for on-site re-use, such as for landscape irrigation or inside non-potable uses such as toilet flushing. Capturing and infiltrating stormwater runoff on site with rain gardens, vegetated swales, constructed wetlands, etc. Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures in reducing impacts on stormwater drainage facilities. <p>2.12(f) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. Transportation projects shall incorporate stormwater control, retention, and infiltration features, such as detention basins, bioswales, vegetated median strips, and permeable paving, early into the design process to ensure that adequate acreage and elevation contours are planned. Implementing agencies shall require project sponsors to comply with existing local regulations and policies that exceed or reasonably replace measures that reduce stormwater drainage impacts.</p> <p>2.12(g) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. All transportation projects constructed, operated, or funded by MTC shall adhere to Caltrans' Stormwater Management Plan, which includes best practices to reduce the volume of stormwater runoff and pollutants in the design, construction and maintenance of highway facilities.</p>	

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
2.12-4	Development under the proposed Plan could require and result in the construction of new or expanded water and wastewater treatment facilities, which could cause significant environmental impacts.	<p>2.12(h) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. For projects that could increase demand on water and wastewater treatment facilities, project sponsors shall coordinate with the relevant service provider to ensure that the existing public services and utilities could be able to handle the increase in demand. If the current infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility shall be identified in each project's CEQA documentation. The relevant public service provider or utility shall be responsible for undertaking project-level review as necessary to provide CEQA clearance for new facilities.</p> <p>All of the mitigation measures listed under Impact 2.12-1 and Impact 2.12-2 will help reduce water demand and wastewater generation, and subsequently help reduce the need for new or expanded water and wastewater treatment facilities. The mitigation measures listed under Impact 2.12-3 will also help mitigate the impact of additional stormwater runoff from land use and transportation projects on existing wastewater treatment facilities.</p>	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>
2.12-5	Development under the proposed Plan could exceed wastewater treatment requirements of the RWQCBs.	None required.	<i>Less than Significant</i>
2.12-6	The proposed Plan could result in insufficient landfill capacity to serve new development while complying with applicable regulations.	<p>2.12(i) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. Countywide Integrated Waste Management Plans and Source Reduction and Recycling Elements shall take the growth patterns projected by the proposed Plan into account in their evaluation of landfill disposal capacity and determination of strategies to implement to enhance capacity.</p>	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than</i></p>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>2.12(j) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> • Providing an easily accessible area that is dedicated to the collection and storage of non-hazardous recycling materials, where feasible. • Maintaining or re-using existing building structures and materials during building renovations and redevelopment, where feasible. • Using salvaged, refurbished or reused materials, to help divert such items from landfills, where feasible. • Diverting construction waste from landfills, where feasible, through means such as: <ul style="list-style-type: none"> – The submission and implementation of a construction waste management plan that identifies materials to be diverted from disposal. – Establishing diversion targets, possibly with different targets for different types and scales of development. – Helping developments share information on available materials with one another, to aid in the transfer and use of salvaged materials. • Applying the specifications developed by the Construction Materials Recycling Association (CMRA) to assist contractors and developers in diverting materials from construction and demolition projects, where feasible.⁴ 	Significant with Mitigation

⁴ The CMRA specifications are available on the CalRecycle website at: www.calrecycle.ca.gov/conDemo/specs/CMRA.htm

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<ul style="list-style-type: none"> Complying with existing local regulations and policies that exceed or reasonably replace any of the above measures in reducing impacts on landfills. 	
Hazards			
2.13-1	Implementation of the proposed Plan could create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.	2.13(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the impacts associated with the routine transit, use, or disposal of hazardous materials, implementing agencies shall require project sponsors to comply with the Resource Conservation and Recovery Act, Title 22 of the California Code of Regulations, California Hazardous Waste Control Law, Cal/EPA requirements, HAZMAT training requirements, and any local regulations such as city or county Hazardous Materials Management Plans regulating the generation, transportation, treatment, storage, and disposal of hazardous materials and waste. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to the transport, use, or disposal of hazardous materials.	<i>Less than Significant with Mitigation</i>
2.13-2	Implementation of the proposed Plan may create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	2.13(b) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the impacts associated with the release of hazardous materials into the environment, implementing agencies shall require project sponsors to comply with Senate Bill 1889, Accidental Release Prevention Law/California Accidental Release Prevention Program (CalARP) regulating the generation, transportation, treatment, storage, and disposal of hazardous materials and waste. In addition, project sponsors shall comply with United States Department of Transportation regulations regarding the transport of hazardous materials and	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		wastes such that accidental upset conditions are minimized. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to upset and accident conditions involving the release of hazardous materials into the environment.	
2.13-3	Implementation of the proposed Plan could result in hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	2.13(c) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the impacts associated with handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed schools, implementing agencies shall require project sponsors to comply with DTSC School Property Evaluation and Cleanup Division regulations regarding the cleanup of existing contamination at school sites and requirements for the location of new schools that would minimize potential exposure of hazardous emissions to students, staff, and visitors to existing and planned school sites. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to hazardous materials near schools.	<i>Less than Significant with Mitigation</i>
2.13-4	Implementation of the proposed Plan could result in projects located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.	2.13(d) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to: <ul style="list-style-type: none"> Determining whether specific land use and transportation project sites are listed as a hazardous materials and/or waste site pursuant to Government Code Section 65962.5. Requiring preparation of a Phase I ESA in accordance with the American Society for Testing and Materials' ASTM E-1527-05 standards for any listed sites or sites with the potential of residual hazardous materials and/or waste as a result of location and/or prior uses. For work requiring any demolition or renovation, the 	<i>Significant and Unavoidable</i> <i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		<p>Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done.</p> <ul style="list-style-type: none"> Implementing recommendations included in a Phase I ESA prepared for a site. If a Phase I ESA indicates the presence or likely presence of contamination, the implementing agency shall require a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented. For work requiring any demolition or renovation, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done. Requiring construction contractors to prepare and implement soil management contingency plans which provide procedural guidance on the handling, notification, and protective measures to be taken in the event of encountering suspected contamination or naturally occurring asbestos. 	
2.13-5	Implementation of the proposed Plan could result in a safety hazard for people residing or working in the planning area for projects located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.	2.13(e) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce the impacts associated with people residing or working in the planning area for projects located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, implementing agencies shall require project sponsors to comply with any applicable Airport Land Use Compatibility Plan requirements as well as any Federal Aviation Administration (14 CFR Part 77) requirements. Projects shall not be approved by local agencies until project design plans have been reviewed and approved by the Airport Land Use Commission such that proposed projects would not adversely affect subject airport operations. For	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to development near a public airport.	
2.13-6	Implementation of the proposed Plan could result in a safety hazard for people residing or working in the planning area for projects within the vicinity of a private airstrip.	2.13(f) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce impacts associated with people residing or working in the planning area for projects within the vicinity of a private airstrip implementing agencies shall require project sponsors to comply with any applicable local land use regulations and federal aviation guidelines as well as any Federal Aviation Administration (14 CFR Part 77) requirements applicable to projects located within two miles of a private airstrip. Projects shall not be approved by local agencies until project design plans can demonstrate compliance with subject airstrip, local and federal aviation requirements. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to development near a private airstrip.	<i>Less than Significant with Mitigation</i>
2.13-7	Implementation of the proposed Plan could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required.	<i>Less than Significant</i>
2.13-8	Implementation of the proposed Plan could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	2.13(g) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to the following. To reduce wildland fire impacts, implementing agencies shall require project sponsors to comply with safety measures that minimize the threat of fire as stated in the California Fire Code as well as compliance with Title 14 of the California Code of Regulations, Division 1.5 to minimize exposing people and structures to loss, injury, or death and damage. Projects	<i>Less than Significant with Mitigation</i>

TABLE ES-2: SUMMARY OF IMPACTS AND MITIGATION

#	Impact	Mitigation Measures	Significance After Mitigation
		shall not be approved by local agencies until project design plans can demonstrate compliance with fire safety requirements. For the purposes of this mitigation, less than significant means consistent with federal, state, and local regulations and laws related to wildfire hazards.	
Public Services and Recreation			
2.14-1	Implementation of the proposed Plan could result in the need for expanded facilities, the construction of which causes significant environmental impacts, in order to maintain adequate schools, emergency services, police, fire, and park and recreation services.	<p>2.14(a) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Ensuring that adequate public services, and related infrastructure and utilities, will be available to meet or satisfy levels identified in the applicable local general plan or service master plan prior to approval of new development projects. Complying with existing local regulations and policies that exceed or reasonably replace measures that reduce public service impacts. 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>
2.14-2	Implementation of the proposed Plan could result in increased use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	<p>2.14(b) Mitigation measures that shall be considered by implementing agencies and/or project sponsors where feasible based on project-and site-specific considerations include, but are not limited to:</p> <ul style="list-style-type: none"> Ensuring that adequate parks and recreational facilities will be available to meet or satisfy levels identified in the applicable local general plan or service master plan prior to approval of new development. Complying with existing local regulations and policies that exceed or reasonably replace measures that reduce impacts on recreational facilities. 	<p><i>Significant and Unavoidable</i></p> <p><i>*CEQA Streamlining Projects Under SB 375 That Implement All Feasible Mitigation Measures: Less than Significant with Mitigation</i></p>

This page intentionally left blank.