



2040 Metropolitan Transportation Plan/ Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

Final Environmental Impact Report

SCH#2015121080

prepared by

Association of Monterey Bay Area Governments

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June 2018

Executive Summary

Project Summary

The 2040 Association of Monterey Bay Area Governments (AMBAG) ~~Draft~~ Metropolitan Transportation Plan and Sustainable Communities Strategy (MTP/SCS) is a long-range planning document required by both State and Federal law that is an update of the 2035 AMBAG MTP/SCS. Reference to the 2040 MTP/SCS throughout this ~~Draft EIR~~ Environmental Impact Report (EIR) refers to the ~~Draft~~ 2040 MTP/SCS. It contains a compilation of the projects proposed in the ~~Draft~~ Regional Transportation Plans (RTPs) prepared by the Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG) and the Santa Cruz County Regional Transportation Commission (SCCRTC) as the state-designated Regional Transportation Planning Agencies (RTPAs) for Monterey, San Benito and Santa Cruz Counties, respectively. Transportation system improvement projects identified in the 2040 MTP/SCS include: active transportation projects, highway and local roadway projects, transportation demand management (TDM) projects, transit projects and other projects, such as airport operations, wildlife corridor crossing and administration and planning. A full list of transportation projects is provided in Appendix B. A copy of the ~~Draft~~ 2040 MTP/SCS is available for review at AMBAG offices (24580 Silver Cloud Court, Monterey, California, 93940), the TAMC offices (55 Plaza Circle B, Salinas, California 93901), the SBtCOG offices (330 Tres Pinos Road, Suite C7, Hollister, California 95023), the SCCRTC offices (1523 Pacific Avenue, Santa Cruz, California 95060), and on the AMBAG website: <http://www.ambag.org/>.

AMBAG is also responsible for preparing a Sustainable Communities Strategy (SCS) as part of the MTP, pursuant to the requirements of California Senate Bill 375 as adopted in 2008 (discussed further below). The SCS, included in the 2040 MTP/SCS, sets forth a forecasted development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, is intended to reduce greenhouse gas (GHG) emissions from passenger vehicles and light duty trucks to achieve the regional GHG reduction targets set by the California Air Resources Board (CARB).

Alternatives

This Environmental Impact Report (EIR) examines three alternatives to the proposed 2040 MTP/SCS:

- **Alternative 1: No Project Alternative.** The No Project Alternative is comprised of a land use pattern that reflects existing land use trends and a transportation network comprised of transportation projects that are currently in construction or are funded in the short range Metropolitan Transportation Improvement Program (MTIP).
- **Alternative 2: Livable Communities Alternative.** The Livable Communities Alternative includes a land use pattern that further concentrates forecasted population and employment growth in urban areas with a focus on infill, mixed use and transit oriented development (TOD) in and around commercial corridors. The transportation network under this alternative includes transit investments in addition to other alternative modes of transportation to serve a more concentrated growth pattern. Specifically, active transportation investments such as bicycle

facilities, sidewalks, traffic calming measures and intersection safety improvements would be prioritized in this alternative. A greater level of investment would be focused on closing transit gaps by expanding local transit, rather than interregional or long distance services.

- **Alternative 3: Maintained Mobility Alternative.** The Maintained Mobility Alternative includes a land use pattern comprised of existing land use plans and a transportation network that includes more transportation projects focused on mobility, rehabilitation and safety. A greater level of investment is focused on local street and road projects combined with investment in long distance transit service such as rail to increase mobility within the region. Operations and maintenance projects are included to improve safety on the region's local streets and roads and transit system also are given a higher priority.

Each alternative is described in greater detail and analyzed in Section 7.0, *Alternatives*, to determine whether environmental impacts would be similar to, less than, or greater than those of the preferred scenario in the 2040 MTP/SCS (i.e., EIR proposed project).

Areas of 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. Public comments received during the NOP scoping period are summarized in Table 1.

Issues to Resolve

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

- How to address impacts from the SCS land use scenario that must be mitigated by the local land use authority, given that AMBAG and the RTPAs do not have jurisdiction over land use regulations.
- How best to require mitigation measures that can be enacted by implementing agencies in a manner to ensure CEQA streamlining for qualifying projects, per SB 375 and other laws, can occur.
- Whether to approve the ~~Draft~~ 2040 MTP/SCS or an alternative.

Table 1 NOP Comments and EIR Response

Commenter	Comment/Request	How and Where it was Addressed
Agency Comments		
Ohlone/Costanoan-Esselen Nation (OCEN)	Objects to all excavation in known cultural lands, even when they are described as previously disturbed and of no significant archaeological value. Requests that all sacred burial items be left on burial site or where they are discovered. Requests that all cultural items be returned to OCEN. Requests to be provided with archaeological reports and surveys, including subsurface testing and presence/absence testing. Requests to be included in mitigation and recovery programs, reburial of any ancestral remains, placement of all cultural items, and that a Native American Monitor of OCEN, approved by the OCEN Tribal Council, be used within OCEN aboriginal territory. Requests consultation on projects affecting OCEN aboriginal homelands.	Refer to Sections 4.5, Cultural and Historic Resources and 4.13, Tribal Cultural Resources.
Monterey Bay Unified Air Pollution Control District (MBUAPCD, now the Monterey Bay Air Resources Board [MBARD])	Encourages construction of roundabouts to reduce congestion as well as criteria and GHG emissions whenever feasible. Funding is available through the District's AB 2766 program. Encourages signal coordination systems that respond to real-time traffic conditions and thereby reduce congestion as well as criteria pollutants and GHGs. Funding is available through the District's AB 2766 program. Encourages the replacement of fossil fueled vehicles with either plug-in electric (PEV) or fuel cell vehicles to support the Governor's Executive Order B-16-2012 to put 1.5 million zero-emission vehicles in the fleet by 2025. Encourages municipalities and project developers to support the implementation of electric vehicle charging infrastructure. The Monterey Bay PEV Readiness Plan should be consulted as a guide to the installation and permitting processes for EV charging infrastructure. Encourages cities and counties to adopt Climate Action Plans (CAP) that help achieve the 2035 (5 percent) regional target established for our area under SB 375. Also, develop a model CAP for jurisdictions. Consistency with the applicable CAP alleviates the need for lead agencies to adopt quantitative GHG thresholds for their areas of jurisdiction. Supports land use policies that improve jobs/housing balance so people work in the community where they live rather than traveling great distances. Requests prioritization of reducing congestion and toxic emissions along congested highway corridors which are bordered by high density residential	The comments primarily pertain to the project list included in the 2040 MTP/SCS and not the program-level analysis of environmental effects of the 2040 MTP/SCS. Many of these suggestions, including electric vehicle infrastructure, are accounted for in the analysis (see Modeling Methodology and Off-Model Adjustments in Appendix F). Refer to Section 4.2, <i>Air Quality and Health Impacts/Risks</i> and 4.8, <i>Greenhouse Gas Emissions/Climate Change</i>, for an analysis of air quality and GHG related impacts of the proposed 2040 MTP/SCS. A discussion of regional and local Climate Action Plans, and consistency or conflicts of the 2040 MTP/SCS with these plans is provided in Section 4.8, <i>Greenhouse Gas Emissions/Climate Change</i>. The 2040 MTP/SCS is designed to maintain and foster the balance between jobs and housing within the AMBAG region and provides a strategy to allocate growth in such a way as to achieve a more balanced jobs/housing ratio and to optimize transportation investments that support those land uses. Section 4.14, <i>Transportation and Circulation</i>, provides an analysis of traffic impacts based on the strategy of a more

Commenter	Comment/Request	How and Where it was Addressed
	developments and discourages development adjacent to congested highways. Highlights AMBAG's Commute Alternatives Program, which serves to reduce VMT, congestion and GHG emission from motor vehicles thereby helping to achieve the goals of SB 375 and the SCS.	balanced job to housing ratio. Section 4.2, <i>Air Quality and Health Impacts/Risks</i> , evaluates the potential health risks associated with toxic air emissions.
Public Comments		
Dana Bagshaw	Requested consideration of impacts from the environment on the project. Specifically, the EIR needs to evaluate impacts such as rising sea levels on fixed rail trains in the flood zone.	Impacts from the environment on the project are identified as appropriate throughout Section 4.0 based on Appendix G to the State CEQA Guidelines. Refer to Section 4.8, <i>Greenhouse Gas Emissions/Climate Change</i> , for a discussion of climate change adaptation impacts and Section 4.10, <i>Hydrology and Water Quality</i> , for a discussion of flooding-related impacts.

Summary of Impacts and Mitigation Measures

Table 2 includes a brief description of the identified environmental impacts, proposed mitigation measures and the level of significance after mitigation. Specific 2040 MTP/SCS projects that may contribute to the impacts described below are listed in the tables at the end of individual impact sections (4.1 through 4.14).

This document is a Program EIR. Section 15168(a) of the CEQA Guidelines states that:

A Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either: (1) geographically; (2) as logical parts in a chain of contemplated actions; (3) in connection with 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 effects which can be mitigated in similar ways.

As a programmatic document, this EIR presents a regional assessment of the impacts of the proposed 2040 MTP/SCS and the RTPs prepared by the Monterey, San Benito and Santa Cruz Regional Transportation Planning Agencies (RTPAs). Analysis of site-specific impacts of individual projects is not the intended use of a program EIR. Many specific projects are not currently defined to the level that would allow for such an analysis. Individual project specific environmental analysis of each project will be undertaken as necessary by the appropriate implementing agency prior to each project being considered for approval. This program EIR serves as a first-tier environmental document under CEQA supporting second-tier environmental documents for:

- Transportation projects developed during the engineering design process; and
- Land use and development projects, including residential or mixed use projects and transit priority projects consistent with the SCS.

This EIR evaluates impacts against existing conditions, which are generally conditions existing at the time of the release of the NOP (December 2015). It was determined that a comparison to current,

existing baseline conditions would provide the most relevant information for the public, responsible agencies, and AMBAG decision-makers. For some issue areas, this EIR also includes consideration of impacts against a forecast future baseline condition in addition to the current, existing (2015) baseline conditions, controlling for impacts caused by population growth and other factors that would occur whether or not the 2040 MTP/SCS or the RTPs prepared by the Monterey, San Benito and Santa Cruz RTPAs are adopted. This future baseline analysis is provided for informational purposes only. For certain issue areas (including air quality, greenhouse gas emissions/climate change, energy, noise and transportation/circulation), impacts would occur as a result of background population growth, urbanization and volume of average daily traffic increases in the region that would occur by 2040, with or without implementation of the 2040 MTP/SCS. Thus, for these issue areas, a comparison to a future 2040 baseline is provided for informational purposes. However, all impact determinations are based on a comparison to existing 2015 baseline conditions.

Mitigation identified in this EIR, as listed in Table 2, shall be implemented by the Transportation Agency for Monterey County (TAMC), San Benito County Council of Governments (SBtCOG) and Santa Cruz County Regional Transportation Commission (SCCRTC) for transportation projects under their jurisdiction. Transportation project implementing agencies can and should implement these measures. For land use projects implementing the 2040 MTP/SCS, cities and counties in the AMBAG region can and should implement these measures, where relevant. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

Table 2 Summary of Environmental Impacts, Mitigation Measures and Residual Impacts

Impact	Mitigation Measure(s)	Significance After Mitigation
Aesthetics/Visual Resources		
Impact AES-1. Proposed transportation improvement projects and land use projects envisioned by the 2040 MTP/SCS may affect public views of scenic vistas and along designated scenic corridors, including state scenic highways. This would be a significant and unavoidable impact.	AES-1(a) Discouragement of Architectural Features that Block Scenic Views. Implementing agencies shall design projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Setbacks and acoustical design of adjacent structures shall be preferentially used as mitigation for potential noise impacts arising from increased traffic volumes associated with adjacent land development. The use of sound walls, or any other architectural features that could block views from the scenic highways or other view corridors, shall be discouraged to the extent possible. Where use of sound walls is found to be necessary, walls shall incorporate offsets, accents and landscaping to prevent monotony. In addition, sound walls shall be complementary in color and texture to surrounding natural features. AES-1(b) Tree Protection and Replacement. New roadways and extensions and widenings of existing roadways shall avoid the removal of existing mature trees to the extent possible. The implementing agency of a particular 2040 MTP/SCS project shall replace any trees lost at a minimum 2:1 basis and incorporate them into the landscaping design for the roadway when feasible. The implementing agency also shall ensure the continued vitality of replaced trees through periodic maintenance.	Significant and unavoidable

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Impact	Mitigation Measure(s)	Significance After Mitigation
Impact AES-2. Proposed transportation improvement projects and land use projects envisioned by the 2040 MTP/SCS may substantially degrade existing visual character in the AMBAG region. This would be a significant and unavoidable impact.	AES-2 Design Measures for Visual Compatibility. The implementing agency shall require measures that minimize contrasts in scale and massing between the project and surrounding natural forms and developments. Strategies to achieve this include: ▪ Siting or designing projects to minimize their intrusion into important viewsheds; ▪ Avoiding large cuts and fills when the visual environment (natural or urban) would be substantially disrupted; ▪ Ensuring that re-contouring provides a smooth and gradual transition between modified landforms and existing grade; ▪ Developing transportation systems to be compatible with the surrounding environments (e.g., colors and materials of construction material; scale of improvements); ▪ Protecting or replacing trees in the project area; ▪ Designing and installing landscaping to add natural elements and visual interest to soften hard edges, as well as to restore natural features along corridors where possible after widening, interchange modifications, re-alignment, or construction of ancillary facilities. The implementing agency shall provide a performance security equal to the value of the landscaping/irrigation installation to ensure compliance with landscaping plans; and ▪ Designing new structures to be compatible in scale, mass, character and architecture with existing structures.	Significant and unavoidable
Impact AES-3. Transportation projects envisioned in the 2040 MTP/SCS would result in increased lighting from security lighting, landscape and structure lighting and lights on vehicles. Land use projects envisioned in the 2040 MTP/SCS would also introduce new or intensified sources of lighting. This lighting may adversely affect views in the area and would be a significant but mitigable impact.	AES-3(a) Roadway Lighting. Roadway lighting shall be minimized to the extent possible, consistent with safety and security objectives and shall not exceed the minimum height requirements of the local jurisdiction in which the project is proposed. This may be accomplished through the use of hoods, low intensity lighting and using as few lights as necessary to achieve the goals of the project. AES-3(b) Lighting Design Measures. As part of planning, design and engineering for projects, implementing agencies shall ensure that projects proposed near light-sensitive uses avoid substantial spillover lighting. Potential design measures include, but are not limited to, the following: ▪ Lighting shall consist of cutoff-type fixtures that cast low-angle illumination to minimize incidental spillover of light into adjacent properties and undeveloped open space. Fixtures that project light upward or horizontally shall not be used. ▪ Lighting shall be directed away from habitat and open space areas adjacent to the project site. ▪ Light mountings shall be downcast and the height of the poles minimized to reduce potential for backscatter into the nighttime sky and incidental spillover of light onto adjacent private properties and undeveloped open space. Light poles will be 20 feet high or shorter. Luminary mountings shall have non-glare finishes. ▪ Exterior lighting features shall be directed downward and shielded in order to confine light to the boundaries of the subject project. Where more intense lighting is necessary for safety purposes, the design shall include landscaping to block light from sensitive land uses, such as residences. AES-3(c) Glare Reduction Measures. Implementing agencies shall minimize and control glare from transportation and infill development projects near glare-sensitive uses through the adoption of project design features such as: ▪ Planting trees along transportation corridors to reduce glare from the sun; ▪ Creating tree wells in existing sidewalks; ▪ Adding trees in new curb extensions and traffic circles; ▪ Adding trees to public parks and greenways; ▪ Landscaping off-street parking areas, loading areas and service areas; ▪ Limiting the use of reflective materials, such as metal; ▪ Using non-reflective material, such as paint, vegetative screening, matte finish	Less than significant

Impact	Mitigation Measure(s)	Significance After Mitigation
	coatings and masonry; ▪ Screening parking areas by using vegetation or trees; ▪ Using low-reflective glass; and ▪ Complying with applicable general plan policies or local controls related to glare ▪ Tree species planted to comply with this measure shall provide substantial shade cover when mature. Utilities shall be installed underground along these routes wherever feasible to allow trees to grow and provide shade without need for severe pruning.	
Agriculture and Forestry Resources		
Impact AG-1. Proposed transportation improvements and land use projects envisioned by the 2040 MTP/SCS could result in the conversion of Important Farmland to nonagricultural use, or conflict with existing zoning for agriculture, or a Williamson Act contract. This would be a significant and unavoidable impact.	AG-1 Impact Avoidance and Minimization. Implementing agencies shall implement measures, where feasible based on project-and site-specific considerations that include, but are not limited to those identified below. ▪ Require project relocation or corridor realignment, where feasible, to avoid Important Farmland, agriculturally-zoned land and/or Williamson Act contract; ▪ Compensatory mitigation at a minimum 1:1 (impacted:replaced) acreage ratio with Important Farmland of equivalent or better quality; ▪ Require acquisition of conservation easements on land at least equal in quality and size as mitigation for the loss of Important Farmland; and/or ▪ Institute new protection of farmland in the project area or elsewhere through the use of 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.).	Significant and unavoidable
Air Quality		
Impact AQ-1. Since the 2040 MTP/SCS would not conflict with the regional population forecast, and would reduce emissions of ozone precursors below 2015 baseline levels, it would not conflict with or obstruct implementation of the AQMP. Therefore, impacts would be less than significant.	None required.	Less than significant
Impact AQ-2. Construction activities associated with transportation projects under the 2040 MTP/SCS, as well as the land use projects envisioned by the 2040 MTP/SCS, would create fugitive dust and ozone precursor emissions and could violate air quality standards,	AQ-2(a) Application of MBARD Feasible Mitigation Measures. For all projects, the implementing agency shall incorporate the most recent MBARD feasible mitigation measures and/or technologies for reducing inhalable particles based on analysis of individual sites and project circumstances. Current MBARD feasible mitigation measures include the following. Additional and/or modified measures may be adopted by MBARD prior to implementation of individual projects under the 2040 MTP/SCS. The most current list of feasible mitigation measures at the time of project implementation shall be used. ▪ Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil and wind exposure. ▪ Prohibit all grading activities during periods of high wind (over 15 mph). ▪ Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). ▪ Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut	Significant and unavoidable

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Impact	Mitigation Measure(s)	Significance After Mitigation
contribute substantially to existing or projected air quality violations, or result in a cumulatively considerable net increases in PM₁₀ or ozone precursor emissions. This impact would be significant and unavoidable.	and fill operations and hydro seed area. ▪ Haul trucks shall maintain at least 2'0" of freeboard. ▪ Cover all trucks hauling dirt, sand, or loose materials. ▪ Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. ▪ Plant vegetative ground cover in disturbed areas as soon as possible. ▪ Cover inactive storage piles. ▪ Install wheel washers at the entrance to construction sites for all exiting trucks. ▪ Pave all roads on construction sites. ▪ Sweep streets if visible soil material is carried out from the construction site. ▪ Limit the area under construction at any one time. ▪ Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District shall be visible to ensure compliance with Rule 402 (Nuisance). AQ-2(b) Diesel Equipment Emissions Standards. The implementing agency shall ensure, to the maximum extent feasible, that diesel construction equipment meeting CARB Tier 4 emission standards for off-road heavy-duty diesel engines is used. If use of Tier 4 equipment is not feasible, diesel construction equipment meeting Tier 3 (or if infeasible, Tier 2) emission standards shall be used. These measures shall be noted on all construction plans and the implementing agency shall perform periodic site inspections. AQ-2(c) Electric Construction Equipment. The implementing agency shall ensure that to the extent possible, construction equipment utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.	
Impact AQ-3. Implementation of the 2040 MTP/SCS would reduce ozone precursors compared to 2015 existing conditions. However, implementation of the 2040 MTP/SCS would increase PM₁₀ emissions compared to 2015 existing conditions, which could contribute substantially to a projected air quality violation. long-term operational impacts related to PM₁₀ emissions would be significant and unavoidable.	AQ-3 Project-Level PM₁₀ Emissions Reduction. Implementing agencies shall evaluate PM₁₀ emissions as part of project-specific CEQA review and discretionary approval decisions for land use projects in the NCCAB. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce PM₁₀ emissions below MBARD standards to the extent feasible. PM₁₀ emissions reduction measures may include: ▪ Require new residential and commercial construction to apply dust suppressants, including water and non-toxic surfactants, and to comply with the maximum feasible dust and emissions control measures recommended by MBARD, to reduce particulate matter emissions from construction areas. ▪ Require new construction projects to use the newest available (Tier 3 or better) construction equipment, which generate lower emissions of diesel particulate matter when operating. ▪ Require new development to contribute mitigation fees to the MBARD Carl Moyer grant incentive programs that provide funding for regional PM₁₀-reduction measures, including replacement of diesel engines in buses and other vehicles that reduce emissions of diesel particulate matter in the District.	Significant and unavoidable

Impact	Mitigation Measure(s)	Significance After Mitigation
Impact AQ-4. Implementation of the 2040 MTP/SCS would not result in a significant regional increase in toxic air emissions or odorous compounds when compared to 2015 existing conditions. However, future growth and development facilitated by the 2040 MTP/SCS land use scenario could expose sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors. Impacts would be significant and unavoidable.	AQ-4 Health Risk Reduction Measures. Transportation implementing agencies shall implement the following measures: ▪ <u>During project-specific design and CEQA review, the potential localized particulate (PM₁₀ and PM_{2.5}) impacts and their health risks shall be evaluated for the project using procedures and guidelines consistent with U.S. EPA 2015's <i>Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM_{2.5} and PM₁₀ Nonattainment and Maintenance Areas</i>. If required based on the project-level hotspot analysis, project-specific mitigation shall be added to the project design concept or scope to ensure that local particulate (PM₁₀ and PM_{2.5}) emissions would not reach a concentration at any location that would cause estimated cancer risk to exceed the 2015 Office of Environmental Health Hazard Assessment (OEHHA) threshold of 10 in one million. Per the U.S. EPA guidance (2015), potential mitigation measures to be considered may include but shall not be limited to: providing a retrofit program for older higher emitting vehicles, anti-idling requirements or policies, controlling fugitive dust, routing traffic away from populated zones and replacing older buses with cleaner buses. These measures can and should be implemented to reduce localized particulate impacts as needed.</u> ▪ Retain a qualified air quality consultant to prepare a health risk assessment (HRA) in accordance with CARB and OEHHA requirements to determine the exposure of nearby residents to TAC concentrations. ▪ If impacts result in increased risks to sensitive receptors above significance thresholds, Plant trees and/or vegetation suited to trapping TACs and/or sound walls between sensitive receptors and the pollution source. This measure would trap TACs emitted from pollution sources such as highways, reducing the amount of TACs to which residents and other sensitive populations would be exposed. In addition, consistent with the general guidance contained in CARB's Air Quality and Land Use Handbook (April 2005) and Technical Advisory on Strategies to Reduce Air pollution Exposure Near High-Volume Roadways (April 2017), for land use projects, appropriate and feasible measures shall be incorporated into project building design for residential, school and other sensitive uses located within 500 feet, or other distance as determined by the lead agency, of freeways, heavily travelled arterials, railways and other sources of diesel particulate matter, including roadways experiencing significant vehicle delays (CARB 2005). The appropriate measures shall include one or more of the following methods, as determined by a qualified professional, as applicable. The implementing agency shall incorporate health risk reduction measures based on analysis of individual sites and project circumstances. These measures may include: ▪ Avoid siting new sensitive land uses within 500 feet of a freeway or railway. ▪ Require development projects for new sensitive land uses to be designed to minimize exposure to roadway-related pollutants to the maximum extent feasible through inclusion of design components including air filtration and physical barriers. ▪ Do not locate sensitive receptors near the entry and exit points of a distribution center. ▪ Locate structures and outdoor living areas for sensitive uses as far as possible from the source of emissions. As feasible, locate doors, outdoor living areas and air intake vents primarily on the side of the building away from the freeway or other pollution source. As feasible, incorporate dense, tiered vegetation that regains foliage year-round and has a long life span between the pollution source and the project. ▪ Maintain a 50-foot buffer from a typical gas dispensing facility (under 3.6 million gallons of gas per year). ▪ Install, operate and maintain in good working order a central heating and	Significant and unavoidable

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Impact	Mitigation Measure(s)	Significance After Mitigation
	ventilation (HV) system or other air take system in the building, or in each individual residential unit, that meets the efficiency standard of the MERV 13. The HV system should include the following features: - Installation of a high efficiency filter and/or carbon filter-to-filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85% supply filters should be used. Ongoing maintenance should occur. - Retain a qualified HV consultant or Home Energy Rating Systems (HERS) rater during the design phase of the project to locate the HV system based on exposure modeling from the mobile and/or stationary pollutant sources. - Maintain positive pressure within the building. - Achieve a performance standard of at least one air exchange per hour of fresh outside filtered air. - Achieve a performance standard of at least 4 air exchanges per hour of recirculation. Achieve a performance standard of 0.25 air exchanges per hour of in unfiltered infiltration if the building is not positively pressurized. - Require project owners to provide a disclosure statement to occupants and buyers summarizing technical studies that reflect health concerns about exposure to highway exhaust emissions. - Implement feasible attenuation measures needed to reduce potential air quality impacts to sensitive receptors such as air filtration systems.	
Impact AQ-5. Re-entrained dust has the potential to increase airborne PM₁₀ and PM_{2.5} levels in Monterey, San Benito and Santa Cruz Counties. The increase in growth expected through the 2040 MTP/SCS planning horizon would result in additional vehicle miles traveled compared to baseline conditions, which would add to the particulate emissions levels in the area. However, total re-entrained dust levels would be lower with implementation of the 2040 MTP/SCS than 2015 existing conditions. Implementation of MBARD control measures would further reduce such emissions. Therefore, impacts would be less than significant.	None required.	Less than significant

Impact	Mitigation Measure(s)	Significance After Mitigation
Biological Resources		
Impact B-1. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS may have substantial adverse impacts on special status plant and animal species, either directly or through habitat modifications. Impacts would be significant and unavoidable.	B-1(a) Biological Resources Screening and Assessment. On a project-by-project basis, a preliminary biological resource screening shall be performed as part of the environmental review process to determine whether the project has any potential to impact biological resources. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, a qualified biologist shall conduct a biological resources assessment to document the existing biological resources within the project footprint plus a buffer and to determine the potential impacts to those resources. The biological resources assessment shall evaluate the potential for impacts to all biological resources including, but not limited to: special status species, nesting birds, wildlife movement, sensitive plant communities, critical habitat, Essential Fish Habitat, and other resources judged to be sensitive by local, state and/or federal agencies. Depending on the results of the biological resources assessment, design alterations, further technical studies (i.e. protocol surveys) and/or consultations with the USFWS, CDFW and/or other local, state and federal agencies may be required. The following mitigation measures [B-1(b) through B-1(j)] shall be incorporated only as applicable into the biological resources assessment for projects where specific resources are present or may be present and impacted by the project. Note that specific surveys described in the mitigation measures below may be completed as part of the biological resources assessment where suitable habitat is present. The results of the biological resources screening and assessment shall be provided to the implementing agency for review and approval. B-1(b) Special Status Plant Species Surveys. If completion of the project-specific biological resources assessment determines that special status plant species have potential to occur on-site, surveys for special status plants shall be completed prior to any vegetation removal, grubbing, or other construction activity of each project (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally-timed to coincide with the target species identified in the project-specific biological resources assessment. All plant surveys shall be conducted by a qualified biologist approved by the implementing agency no more than two years prior to project implementation (annual grassland habitats may require yearly surveys). All special status plant species identified on-site shall be mapped onto a site-specific aerial photograph or topographic map. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency for review. If special status plant species are identified, mitigation measure B-1(c) shall apply. B-1(c) Special Status Plant Species Avoidance, Minimization and Mitigation. If state- or federally listed and/or CRPR 1 and 2 species are found during special status plant surveys [pursuant to mitigation measure B-1(b)], then the project shall be re-designed to avoid impacting these plant species to the maximum extent feasible. If CRPR 3 and 4 species are found, the biologist shall evaluate to determine if they meet criteria to be considered special status, and if so, the same process as identified for CRPR 1 and 2 species shall apply. If special status plants species cannot be avoided and would be impacted by a project implemented under the 2040 MTP/SCS, all impacts shall be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to implementing agency overseeing the project for approval. B-1(d) Endangered/Threatened Species Habitat Assessment and Protocol Surveys. Specific habitat assessment and survey protocol surveys are established for several federally and/or state endangered or threatened animal species. If the results of the biological resources assessment determine that suitable habitat may be present for any such species, protocol habitat assessments/surveys shall be completed in accordance with CDFW and/or USFWS/NMFS protocols prior to issuance of any	Significant and unavoidable

Impact	Mitigation Measure(s)	Significance After Mitigation
	construction permits/project approvals. Alternatively, in lieu of conducting protocol surveys, the implementing agency may choose to assume presence within the project footprint and proceed with development of appropriate avoidance measures, consultation and permitting, as applicable. If the target species is detected during protocol surveys, or protocol surveys are not conducted and presence assumed based on suitable habitat, mitigation measure B-1(e) shall apply. B-1(e) Endangered/Threatened Animal Species Avoidance and Compensatory Mitigation. If habitat is occupied or presumed occupied by federal and/or state listed species and would be impacted by the project, the implementing agency shall re-design the project in coordination with a qualified biologist to avoid impacting occupied/presumed occupied habitat to the maximum extent feasible. If occupied or presumed occupied habitat cannot be avoided, the implementing agency shall provide the total acreages for habitat that would be impacted prior to the issuance of construction permits/approvals. The implementing agency shall purchase credits at a USFWS, NMFS and/or CDFW approved conservation bank if available for the affected species and/or establish conservation easements or funds for acquisition of conservation easements as compensatory mitigation to offset impacts to federal and/or state listed species habitat. Compensatory mitigation shall be provided at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for permanent impacts. Compensatory mitigation may be combined/nested with special status plant species and sensitive community restoration where applicable. Temporary impact areas shall be restored to pre-project conditions. If on and/or off site mitigation sites are identified the implementing agency shall retain a qualified biologist to prepare a Habitat Mitigation and Monitoring Plan (HMMP) to ensure the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to federal and/or state listed species. The HMMP shall identify long term site management needs, routine monitoring techniques, techniques and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The HMMP shall be submitted to the agency overseeing the project for approval. B-1(f) Endangered/Threatened Species Avoidance and Compensatory Mitigation. The following measures shall be applied to aquatic and terrestrial species, where appropriate. Implementing agencies shall select from these measures as appropriate depending on site conditions, the species with potential for occurrence, and the results of the biological resources screening and assessment (measure B-1[a]). ▪ Pre-construction surveys for federal and/or state listed species with potential to occur shall be conducted where suitable habitat is present by a qualified biologist not more than 48 hours prior to the start of construction activities. The survey area shall include the proposed disturbance area and all proposed ingress/egress routes, plus a 100-foot buffer. If any life stage of federal and/or state listed species is found within the survey area, the appropriate measures in the BO or Habitat Conservation Plan (HCP)/Incidental Take Permit (ITP) issued by the USFWS/NMFS (relevant to federal listed species) and/or the ITP issued by the CDFW (relevant to state listed species) shall be implemented; or if such guidance is not in place for the activity, the qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. The results of the pre-construction surveys shall be submitted to the implementing agency for review and approval prior to start of construction. ▪ Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern within or adjacent to the limits of disturbance shall have highly visible orange construction Environmental Sensitive Area fencing installed	

Impact	Mitigation Measure(s)	Significance After Mitigation
	between said area and the limits of disturbance. ▪ All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed <u>during the dry season, typically</u> between April 1 and October 31, to avoid impacts to sensitive aquatic species. ▪ All projects occurring within or adjacent to sensitive habitats that may support federally and/or state endangered/threatened species shall have a qualified biologist present during all initial ground disturbing/vegetation clearing activities. Once initial ground disturbing/vegetation clearing activities have been completed, said biologist shall conduct daily pre-activity clearance surveys for endangered/threatened species. Alternatively, and upon approval of the CDFW and/or USFWS/NMFS or as outlined in project permits, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are being fully implemented. ▪ No endangered/threatened species shall be captured and relocated without authorization from the CDFW and/or USFWS/NMFS. ▪ If pumps are used for dewatering activities, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system. ▪ If at any time during construction of the project an endangered/threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. At that point a qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. Alternatively, the appropriate measures shall be implemented in accordance with the BO or HCP/ITP issued by the USFWS (relevant to federal listed species) and/or the ITP issued by the CDFW (relevant to state listed species) and work can then continue as guided by those documents and the agencies as appropriate. ▪ All vehicle maintenance/fueling/staging shall occur not less than 100 feet from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills. A minimum of one spill kit shall be available at each work location near riparian habitat or water bodies. ▪ No equipment shall be permitted to enter wetted portions of any affected drainage channel <u>other than equipment necessary to conduct approved dewatering activities required for project construction.</u> ▪ All equipment operating within streambeds (restricted to conditions in which water is not present) shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access. ▪ At the end of each work day, excavations shall be secured with cover or a ramp shall be provided to prevent wildlife entrapment. ▪ All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling. B-1(g) Non-Listed Special Status Animal Species Avoidance and Minimization. Depending on the species identified in the BRA, the following measures shall be selected from among the following to reduce the potential for impacts to non-listed special status animal species: ▪ Pre-construction clearance surveys shall be conducted within 14 days prior to the start of construction (including staging and mobilization). The surveys shall cover the entire disturbance footprint plus a minimum 100-foot buffer, and shall identify all special status animal species that may occur on-site. All non-listed special status species shall be relocated from the site either through direct capture or through passive exclusion. A report of the pre-construction survey shall be submitted to the implementing agency for their review and approval prior to the start of construction. ▪ A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal, to recover special status animal species	

Impact	Mitigation Measure(s)	Significance After Mitigation
	unearthed by construction activities. ▪ Upon completion of the project, a qualified biologist shall prepare a final compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results. The report shall be submitted within 30 days of completion of the project. ▪ If special status bat species may be present and impacted by the project, within 30 days of the start of construction a qualified biologist shall conduct presence/absence surveys for special status bats, in consultation with the CDFW, where suitable roosting habitat is present. Surveys shall be conducted using acoustic detectors and by searching tree cavities, crevices, and other areas where bats may roost. If active bat roosts or colonies are present, the biologist shall evaluate the type of roost to determine the next step. □ If a maternity colony is present, all construction activities shall be postponed within a 250-foot buffer around the maternity colony until it is determined by a qualified biologist that the young have dispersed or as recommended by CDFW through consultation. Once it has been determined that the roost is clear of bats, the roost shall be removed immediately. □ If a roost is determined by a qualified biologist to be used by a large number of bats (large hibernaculum), alternative roosts, such as bat boxes if appropriate for the species, shall be designed and installed near the project site. The number and size of alternative roosts installed will depend on the size of the hibernaculum and shall be determined through consultations with the CDFW. □ If other active roosts are located, exclusion devices such as valves, sheeting or flap-style one-way devices that allow bats to exit but not re-enter roosts discourage bats from occupying the site. B-1(h) Preconstruction Surveys for Nesting Birds. For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the CFGC, the Migratory Bird Treaty Act, and Bald and Golden Eagle Protection Act shall be conducted by a qualified biologist no more than 30 days prior to vegetation removal activities. A qualified biologist shall conduct preconstruction surveys for raptors. The survey for the presence of bald and golden eagles, shall cover all areas within of the disturbance footprint plus a one-mile buffer where access can be secured. The survey area for all other nesting bird and raptor species shall include the disturbance footprint plus a 300-foot and 500-foot buffer, respectively. If active nests (nests with eggs or chicks) are located, the qualified biologist shall establish an appropriate avoidance buffer ranging from 50 to 300 feet based on the species biology and the current and anticipated disturbance levels occurring in vicinity of the nest. The objective of the buffer shall be to reduce disturbance of nesting birds. All buffers shall be marked using high-visibility flagging or fencing, and, unless approved by the qualified biologist, no construction activities shall be allowed within the buffers until the young have fledged from the nest or the nest fails. For bald or golden eagle nests identified during the preconstruction surveys, an avoidance buffer of up to one mile shall be established on a case-by-case basis in consultation with the USFWS and CDFW. The size of the buffer may be influenced by the existing conditions and disturbance regime, relevant landscape characteristics, and the nature, timing and duration of the expected disturbance. The buffer shall be established between February 1 and August 31; however, buffers may be relaxed earlier than August 31 if a qualified ornithologist determines that a given nest has failed or that all surviving chicks have fledged and the nest is no longer in use. A report of these preconstruction nesting bird surveys and nest monitoring (if applicable) shall be submitted to the implementing agency for review and approval prior to the start of construction. B-1(i) Worker Environmental Awareness Program (WEAP). Prior to initiation of	

Impact	Mitigation Measure(s)	Significance After Mitigation
	construction activities (including staging and mobilization), all personnel associated with project construction shall attend WEAP training, conducted by a qualified biologist, to aid workers in recognizing special status resources that may occur in the project area. The specifics of this program shall include identification of the sensitive species and habitats, a description of the regulatory status and general ecological characteristics of sensitive resources, and review of the limits of construction and mitigation measures required to reduce impacts to biological resources within the work area. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers, and other personnel involved with construction of the project. All employees shall sign a form documenting that they have attended the WEAP and understand the information presented to them.	
Impact B-2. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS may result in substantial adverse impacts on sensitive habitats, including federally protected wetlands. This impact would be significant and unavoidable.	B-2(a) Jurisdictional Delineation. If the results of measure B-1(a) indicates projects implemented under the 2040 MTP/SCS occur within or adjacent to wetland, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW, USACE, RWQCB and/or CCC, a qualified biologist shall complete a jurisdictional delineation. The jurisdictional delineation shall determine the extent of the jurisdiction for each of these agencies and shall be conducted in accordance with the requirement set forth by each agency. The result shall be a jurisdictional delineation report that shall be submitted to the implementing agency, USACE, RWQCB, CDFW and/or CCC, as appropriate, for review and approval, and the project shall be designed to minimize impacts to jurisdictional areas to the maximum extent feasible. The delineation shall serve as the basis to identify jurisdictional areas to be protected during construction, through implementation of the avoidance and minimization identified in measure B-2(f). B-2(b) Wetlands, Drainages and Riparian Habitat Restoration. Impacts to jurisdictional drainages, wetlands and riparian habitat shall be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist, and shall occur on-site or as close to the impacted habitat as possible. A mitigation and monitoring plan shall be developed by a qualified biologist and submittal to the agency overseeing the project for approval. Alternatively, mitigation shall be accomplished through purchase of credits from an approved wetlands mitigation bank. B-2(c) Landscaping Plan. If landscaping is proposed for a specific project, a qualified biologist/landscape architect shall prepare a landscape plan for that project. This plan shall indicate the locations and species of plants to be installed. Drought tolerant, locally native plant species shall be used. Noxious, invasive, and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List, and/or California Invasive Plant Council Inventory shall not be permitted. Species selected for planting shall be regionally appropriate native species that are known to occur in the adjacent native habitat types. B-2(d) Sensitive Vegetation Community Avoidance and Mitigation. If the results of measure B-1(a) indicates projects implemented under the 2040 MTP/SCS would impact sensitive vegetation communities, impacts to sensitive communities shall be avoided through final project design modifications. If the implementing agency determines that sensitive communities cannot be avoided, impacts shall be mitigated on-site or offsite at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist. Temporarily impacted areas shall be restored to pre-project conditions. A Restoration Plan shall be developed by a qualified biologist and submitted to the agency overseeing the project for approval. B-2(e) Invasive Weed Prevention and Management Program. Prior to start of construction for each project that occurs within or adjacent to native habitats, an Invasive Weed Prevention and Management Program shall be developed by a qualified biologist to prevent invasion of native habitat by non-native plant species. The plan shall be submitted to the implementing agency for review and approval. A list of target species shall be included, along with measures for early detection and	Significant and unavoidable

Impact	Mitigation Measure(s)	Significance After Mitigation
	eradication. The plan, which shall be implemented by the implementing agency, shall also include, but not be limited to, the following measures to prevent the introduction of invasive weed species: ▪ During construction, the project shall make all reasonable efforts to limit the use of imported soils for fill. Soils currently existing on-site should be used for fill material. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species. ▪ To minimize colonization of disturbed areas and the spread of invasive species, the contractor shall: stockpile topsoil and redeposit the stockpiled soil after construction, or transport the topsoil to a permitted landfill for disposal. ▪ The erosion control/ restoration plans for the project must emphasize the use of sensitive species that are expected to occur in the area and that are considered suitable for use at the project site. ▪ All erosion control materials, including straw bales, straw wattles, or mulch used on-site must be free of invasive species seed. ▪ Exotic and invasive plant species shall be excluded from any erosion control seed mixes and/or landscaping plant palettes associated with the proposed project. ▪ All disturbed areas shall be hydroseeded with a mix of locally native species upon completion of work in those areas. In areas where construction is ongoing, hydroseeding shall occur where no construction activities have occurred within six (6) weeks since ground disturbing activities ceased. If exotic species invade these areas prior to hydroseeding, weed removal shall occur in consultation with a qualified biologist and in accordance with the restoration plan. B-2(f) Wetlands, Drainages and Riparian Habitat Best Management Practices During Construction. The following best management practices shall be required for development within or adjacent to wetlands, drainages, or riparian habitat: ▪ Access routes, staging and construction areas shall be limited to the minimum area necessary to achieve the project goal and minimize impacts to other waters including locating access routes and ancillary construction areas outside of jurisdictional areas. ▪ To control sedimentation during and after project implementation, appropriate erosion control materials shall be deployed to minimize adverse effects on jurisdictional areas in the vicinity of the project. ▪ Project activities within the jurisdictional areas should occur during the dry season (typically between June 1 and November 1) in any given year, or as otherwise directed by the regulatory agencies. ▪ During construction, no litter or construction debris shall be placed within jurisdictional areas. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site. ▪ All project-generated debris, building materials and rubbish shall be removed from jurisdictional areas and from areas where such materials could be washed into them. ▪ Raw cement, concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic species resulting from project-related activities, shall be prevented from contaminating the soil and/or entering wetlands, drainages or riparian habitat. ▪ All refueling, maintenance and staging of equipment and vehicles shall occur at least 100 feet from bodies of water and in a location where a potential spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water source). Prior to the onset of work activities, a plan must be in place for prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should an accidental spill occur.	

Impact	Mitigation Measure(s)	Significance After Mitigation
Impact B-3. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS may substantially interfere with wildlife movement, including fish migration, and/or impede the use of a native wildlife nursery. This impact would be significant and unavoidable.	B-3(a) Project Design for Wildlife Connectivity. All projects including long segments of fencing and lighting shall be designed to minimize impacts to wildlife. Fencing or other project components shall not block wildlife movement through riparian or other natural habitat. Where fencing or other project components that may disrupt wildlife movement is required for public safety concerns, they shall be designed to permit wildlife movement by incorporating design features such as: ▪ A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals; ▪ A minimum 12 inches between the top two wires, or top the fence with a wooden rail, mesh, or chain link instead of wire to prevent animals from becoming entangled; and ▪ If privacy fencing is required near open space areas, openings at the bottom of the fence measure at least 16 inches in diameter shall be installed at reasonable intervals to allow wildlife movement, or the fence may be installed with the bottom at least 16 inches above the ground level. ▪ If fencing or other project components must be designed in such a manner that wildlife passage would not be permitted, wildlife crossing structures shall be incorporated into the project design as appropriate. ▪ Lighting installed as part of any project shall be designed to be minimally disruptive to wildlife (see mitigation measure AES-3(a) Roadway Lighting for lighting requirements). B-3(b) Maintain Connectivity in Drainages. No permanent structures shall be placed within any drainage or river that would impede wildlife movement (i.e., no hardened caps or other structures in the stream channel perpendicular to stream flow be left exposed or at depth with moderate to high risk for exposure as a result of natural bed scour during high flow events and thereby potentially create impediments to passage). In addition, upon completion of construction within any drainage, areas of stream channel and banks that are temporarily impacted shall be returned to pre-construction contours and in a condition that allows for unimpeded passage through the area once the work has been complete. If water is to be diverted around work sites, a diversion plan shall be submitted to AMBAG, RTPA and/or local jurisdiction for review and approval prior to issuance of project construction permits/approvals. The diversion shall be designed in a way as to not impede movement while the diversion is in place. B-3(c) Construction Best Management Practices to Minimize Disruption to Wildlife. The following construction Best Management Practices (BMPs) shall be incorporated into all grading and construction plans in order to minimize temporary disruption of wildlife, which could hinder wildlife movement: ▪ Designation of a 20 mile per hour speed limit in all construction areas. ▪ <u>Whenever feasible, Daily</u> construction work schedules shall be limited to daylight hours only. ▪ Mufflers shall be used on all construction equipment and vehicles shall be in good operating condition. ▪ All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week. ▪ No pets are permitted on project site during construction.	Significant and unavoidable

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Impact	Mitigation Measure(s)	Significance After Mitigation
Impact B-4. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy. This impact would be less than significant.	None required.	Less than significant
Impact B-5. Implementation of transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be no impact.	None required.	No impact
Cultural and Historical Resources		
Impact CR-1. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS could cause a substantial adverse change in or disturb known or unknown historical resources as defined in CEQA Guidelines Section 15064.5. Impacts to historical resources would be significant and unavoidable.	CR-1 Historical Resources Impact Minimization. Prior to individual project permit issuance, the implementing agency of a 2040 MTP/SCS project involving earth disturbance or construction of permanent above ground structures or roadways shall prepare a map defining the Area of Potential Effects (APE). This map shall indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known historical resources are located within the impact zone. If a structure greater than 45 years in age is within the identified APE, a survey and evaluation of the structure(s) to determine their eligibility for recognition under State, federal, or local historic preservation criteria shall be conducted. The evaluation shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. The evaluation shall comply with CEQA Guidelines section 15064.5(b). Study recommendations shall be implemented, which may include, but would not be limited to, the following: ▪ Realign or redesign projects to avoid impacts on known historic resources where possible. ▪ 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.	Significant and unavoidable

Impact	Mitigation Measure(s)	Significance After Mitigation
	Comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect historic resources.	
Impact CR-2. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS could cause a substantial adverse change in or disturb known and unknown archeological resources as defined in CEQA Guidelines Section 15064.5. Impacts to archaeological resources would be significant and unavoidable.	CR-2 Archaeological Resources Impact Minimization. Before construction activities, implementing agencies shall retain a qualified archaeologist to conduct a record search at the Northwest Information Center to determine whether the project area has been previously surveyed and whether resources were identified. When recommended by the Information Center, implementing agencies shall retain a qualified archaeologist to conduct archaeological surveys before construction activities. Implementing agencies shall follow recommendations identified in the survey, which may include, but would not be limited to: subsurface testing, designing and implementing a Worker Environmental Awareness Program (WEAP), construction monitoring by a qualified archaeologist, or avoidance of sites and preservation in place. Recommended mitigation measures will be consistent with CEQA Guidelines Section 15126.4(b)(3) recommendations. In the event that evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earthmoving activities (e.g., ceramic shard, trash scatters, lithic scatters), all ground-disturbing activity in the area of the discovery shall be halted until a qualified archaeologist can assess the significance of the find. If the find is a prehistoric archaeological site, the appropriate Native American group shall be notified. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a testing plan shall be prepared and implemented. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the implementing agency to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics, and other factors, shall recommend additional measures such as the preparation and implementation of a data recovery plan. All cultural resources work shall follow accepted professional standards in recording any find including submittal of standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area. Implementing agencies shall comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect archaeological resources.	Significant and unavoidable
Impact CR-3. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS could cause a substantial adverse change in or disturb known and unknown paleontological resources as defined in CEQA Guidelines Section 15064.5. Impacts to paleontological resources would be significant and unavoidable.	CR-3 Paleontological Resources Impact Minimization. The implementing agency of a 2040 MTP/SCS project involving ground disturbing activities (including grading, trenching, foundation work, and other excavations) shall retain a qualified paleontologist, defined as a paleontologist who meets the Society of Vertebrate Paleontology (SVP) standards for Qualified Professional Paleontologist (SVP 2010), to conduct a Paleontological Resources Assessment (PRA). The PRA shall determine the age and paleontological sensitivity of geologic formations underlying the proposed disturbance area, consistent with SVP Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010) guidelines for categorizing paleontological sensitivity of geologic units within a project area. If underlying formations are found to have a high potential (sensitivity) for paleontological resources, the following measures shall apply: <i>Paleontological Mitigation and Monitoring Program.</i> A qualified paleontologist shall prepare a Paleontological Mitigation and Monitoring Program to be implemented during ground disturbance activity. This program shall outline the procedures for construction staff Worker Environmental Awareness Program (WEAP) training, paleontological monitoring extent and duration (i.e., in what locations and at what depths paleontological monitoring shall be required), salvage and preparation of fossils, the final mitigation and monitoring report, and paleontological staff qualifications.	Significant and unavoidable.

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Impact	Mitigation Measure(s)	Significance After Mitigation
	▪ <i>Paleontological Worker Environmental Awareness Program (WEAP).</i> Prior to the start of ground disturbance activity greater than two feet below existing grade, construction personnel shall be informed on the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. ▪ <i>Paleontological Monitoring.</i> Ground disturbing activity with the potential to disturbed geologic units with high paleontological sensitivity shall be monitored on a full-time basis by a qualified paleontological monitor. Should no fossils be observed during the first 50 percent of such excavations, paleontological monitoring could be reduced to weekly spot-checking under the discretion of the qualified paleontologist. Monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources. ▪ <i>Salvage of Fossils.</i> If fossils are discovered, the implementing agency shall be notified immediately, and the qualified paleontologist (or paleontological monitor) shall recover them. Typically fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist should have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. ▪ <i>Preparation and Curation of Recovered Fossils.</i> Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data and maps. ▪ <i>Final Paleontological Mitigation and Monitoring Report.</i> Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils and the scientific significance of those fossils, and where fossils were curated.	
Impact CR-4. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS could result in damage to or destruction of human burials. Impacts to human burials would be less than significant.	None required.	Less than significant

Impact	Mitigation Measure(s)	Significance After Mitigation
Energy		
Impact E-1. Future transportation improvement projects and implementation of the land use scenario envisioned by the 2040 MTP/SCS would increase demand for energy beyond existing conditions. However, the 2040 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy, and would be consistent with applicable federal, state, and local energy conservation policies. As such, this impact would be less than significant.	None required.	Less than significant
Impact E-2. Implementation of the 2040 MTP/SCS would generate energy demand that may require construction of new energy facilities or the expansion of such facilities. Impacts would be significant and unavoidable.	E-2(a) Mitigate Impacts of New or Expanded Energy Facilities. During the planning, design and project-level CEQA review process, apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion shall be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions shall include those necessary to avoid or reduce environmental impacts associated with, but not limited to: air quality, noise, traffic, biological resources, cultural resources, GHG emissions, hydrology and water quality and others that apply to specific construction or expansion of natural gas and electric facilities projects. E-2(b) Develop Energy Demand Calculations and Reduce Energy Demand. During the planning, design and project-level CEQA review process for individual development projects, develop electricity and natural gas demand calculations for any project anticipated to require substantial energy consumption. Implementing agencies shall implement design and mitigation measures that reduce energy consumption and promote the use of on-site renewable energy. This may include, but would not be limited to: installing energy-reducing shading mechanisms for windows, porches, patios, etc.; installing energy-reducing day lighting systems (e.g., skylights); use of low-energy interior and street lighting; and/or installation of solar photovoltaic (PV) panels or other on-site renewable energy that generates a minimum of 30 percent of the project's total energy demand.	Significant and unavoidable

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Impact	Mitigation Measure(s)	Significance After Mitigation
Geology and Soils		
Impact GEO-1. Implementation of proposed transportation improvements and future projects facilitated by the land use scenario envisioned in the 2040 MTP/SCS could be subject to seismic hazards, including fault rupture, ground-shaking, liquefaction and landslides, that could expose people or structures to substantial adverse effects. Impacts would be significant but mitigable.	GEO-1 Geotechnical Design. If a 2040 MTP/SCS project is located in a zone of high potential ground-shaking intensity, implementing agencies can and should complete a site specific geotechnical report conducted by a qualified geotechnical expert. Any investigations shall comply with the California Geological Survey's Guidelines for Evaluating and Mitigating Seismic Hazards in California and projects shall comply with the recommendations stated in the geotechnical analysis (California Geological Survey 2008). Recommendations may include, but are not limited to, the following: fill placement and compaction, isolated and continuous footing, site specific pipe bedding and site specific seismic design criteria.	Less than significant
Impact GEO-2. Grading associated with transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS could cause soil erosion and loss of top soil. However, compliance with applicable regulations would ensure that impacts would remain less than significant.	None required.	Less than significant
Impact GEO-3. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS could be located on potentially unstable soils or in areas of lateral spreading, subsidence, or high liquefaction potential. Impacts would be significant but mitigable.	GEO-3(a) Geotechnical Analysis. If a 2040 MTP/SCS project is located in an area of moderate to high liquefaction, lateral spreading, and/or subsidence potential or in underground areas located in an area of high groundwater potential, the RTPAs shall ensure and sponsor agencies can and should ensure that these structures are designed based upon site specific geology, soils, and earthquake engineering studies conducted by a qualified geotechnical expert. Projects shall follow the recommendations of these studies. Possible design measures include, but would not be limited to: deep foundations, removal of liquefiable materials, and dewatering. GEO-3(b) Hillside Stability Evaluation. If a 2040 MTP/SCS project requires cut slopes over 20 feet in height or is located in areas of bedded or jointed bedrock, the implementing agency shall ensure that hillside stability evaluations and/or specific slope stabilization studies are conducted by a qualified geotechnical expert. Projects shall follow the recommendations of these studies. Possible stabilization methods include buttresses, retaining walls and soldier piles. <u>In addition, to sustain a functional long-term transportation system along the coast, the strategies identified in Caltrans' 2004 Big Sur Coast Highway Management Plan shall be implemented where appropriate and when feasible. Applicable Big Sur Coast Highway Management Plan measures may include, but are not limited to:</u>	Less than significant

Impact	Mitigation Measure(s)	Significance After Mitigation
	<u>adaptation to the fluid landform; separation of the highway from the moving landform; and, temporary or permanent rockfall catchments.</u> GEO-3(c) Site Specific Geotechnical Evaluation. If a 2040 MTP/SCS project is located in an area of highly expansive soils, the RTPAs shall and sponsors agencies can and should ensure that a site-specific geotechnical investigation is conducted. The investigation shall identify hazardous conditions and recommend appropriate design factors to minimize hazards. Such measures could include concrete slabs on grade with increased steel reinforcement, removal of highly expansive material and replacement with non-expansive import fill material, or chemical treatment with hydrated lime to reduce the expansion characteristics of the soils.	
Greenhouse Gas Emissions/Climate Change		
Impact GHG-1. Construction of the transportation improvement projects and development within future land use projects envisioned by the 2040 MTP/SCS would generate temporary short-term GHG emissions that may have a significant effect. Impacts would be significant but mitigable.	GHG-1 Construction GHG Reduction Measures. The implementing agency shall incorporate the most recent GHG reduction measures and/or technologies for reducing diesel particulate and NO_x emissions measures for off-road construction vehicles during construction. The measures shall be noted on all construction plans and the implementing agency shall perform periodic site inspections. Current GHG-reducing measures include the following: ▪ Use of diesel construction equipment meeting CARB's Tier 24 <u>wherever feasible for or cleaner</u> off-road heavy-duty diesel engines, and comply with the State Off-Road Regulation. <u>Where the use of Tier 4 engines is not feasible, Tier 3 certified engines shall be used; where Tier 3 engines are not feasible, Tier 2 certified engines shall be used;</u> ▪ Use of on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation; ▪ All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the five minute idling limit; ▪ Use of electric powered equipment in place of diesel powered equipment when feasible; ▪ Substitute gasoline-powered in place of diesel-powered equipment, where feasible; and ▪ Use of alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, in place of diesel powered equipment for 15 percent of the fleet; and Use of materials sources from local suppliers; and ▪ Recycling of at least 50 percent of construction waste materials.	Less than significant
Impact GHG-2. Implementation of the 2040 MTP/SCS would not result in a significant increase in total GHG emissions from mobile and land use sources compared to 2015 baseline conditions. Impacts would be less than significant.	None required.	Less than significant

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Impact	Mitigation Measure(s)	Significance After Mitigation
Impact GHG-3. Implementation of the 2040 MTP/SCS would not Conflict with regional SB 375 per capita passenger vehicle CO ₂ emission reduction targets. Impacts would be less than significant.	None required.	Less than significant
Impact GHG-4. Implementation of the 2040 MTP/SCS would not interfere with climate action plans for the Cities of Monterey, Capitola, Santa Cruz, Gonzales and Watsonville, as well as Monterey County and Santa Cruz County. However, the 2040 MTP/SCS would conflict with the state's ability to achieve the AB 32, SB 32 and EO-S-3-05 GHG reduction goals. Impacts would be significant and unavoidable.	GHG-4 Project-Level Energy Consumption and Water Use Reduction. Implementing agencies shall evaluate energy consumption and water use as part of project-specific CEQA review and discretionary approval decisions for land use projects. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce energy consumption and water use below local standards, or, in the absence of local standards, below MBARD-recommended standards. Examples of energy- and water-saving measures include: - Require new residential and commercial construction to install solar energy systems or be solar-ready. - Require new residential and commercial development to install low-flow water fixtures. - Require new residential and commercial development to install water-efficient drought-tolerant landscaping, including the use of compost and mulch. - Require new development to exceed the applicable Title 24 energy-efficiency requirements.	Significant and unavoidable
Impact GHG-5. Implementation of proposed transportation improvements and future projects facilitated by the land use scenario envisioned in the 2040 MTP/SCS could be subject to coastal flooding and sea level rise. Impacts would be significant and unavoidable.	Mitigation Measures W-4(a) and W-4(b) from <u>As described in Section 4.10, Hydrology and Water Quality, existing federal, state and local programs and ordinances would require flood prevention measures in new development, including requiring structures to be elevated above the 100-year flood zone and tsunami inundation zones.</u> would partially reduce impacts, as they would require structures to be elevated one foot above the 100-year flood zone and 10 feet above the ground elevation in areas subject to tsunami. Because sea level rise inundation areas are geographically similar to coastal flood and tsunami hazard areas, these regulations measures would serve to minimize impacts to some extent. In addition, for all transportation projects under their jurisdiction, TAMC and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2040 MTP/SCS program where applicable for transportation projects located within a potential sea level rise inundation area. Coastal cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2040 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions. GHG-5 Sea Level Rise Adaptation. For projects located within a potential sea level rise inundation area, the implementing agency shall incorporate appropriate adaptation strategies to minimize hazards associated with sea level rise, such that project structures and other critical facilities would be located outside of an identified sea level rise inundation area. Appropriate adaptation strategies will depend on project- and site-specific considerations, including proximity to the coastline, elevation and type of structure or facility proposed. Adaptation strategies may include, but would not be limited to:	Significant and unavoidable

Impact	Mitigation Measure(s)	Significance After Mitigation
	▪ Project redesign to place structures and critical facilities outside of the potential sea level rise inundation area; ▪ Structural measures including drainage improvements, raising road surfaces or first floor elevations above the expected sea level rise inundation level, or strengthening structures to improve resiliency; ▪ Designing facilities to withstand periodic inundation and continue to function (i.e., waterproofing); ▪ Building a new levee or raising the elevation of an existing levee to protect the proposed building or structure, or construct engineered shoreline protection structures such as revetment and bulkheads; and/or ▪ Replenishment of sand from off-site locations to preserve beaches that are subject to erosion and land loss from rising sea levels (beach nourishment).	
Hazards and Hazardous Materials		
Impact HAZ-1. Proposed transportation improvement projects and land use projects included in the 2040 MTP/SCS would facilitate the routine transport, use, or disposal of hazardous material, and may result in reasonably foreseeable upset and accident conditions. Mandatory compliance with existing regulations and programs would minimize the risk associated with these activities or accident conditions. Thus, hazards to the public or environment would be less than significant.	None required.	Less than significant
Impact HAZ-2. Proposed transportation improvement projects and land use projects included in the 2040 MTP/SCS would facilitate hazardous emissions or handling of acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school. Existing regulations and programs would reduce the risk to	None required.	Less than significant

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Impact	Mitigation Measure(s)	Significance After Mitigation
schools to acceptable levels. Impacts would be less than significant.		
Impact HAZ-3. The 2040 MTP/SCS includes land use projects and transportation projects that could occur on previously unknown hazardous material sites or sites on the list compiled by Government Code Section 65962.5. Thus, construction of these projects could create a hazard to the public or environment. Impacts would be significant but mitigable.	HAZ-3 Site Remediation. If an individual project included in the 2040 MTP/SCS is located on or near a hazardous materials and/or waste site pursuant to Government Code Section 65962.5, or has the potential for residual hazardous materials and/or waste as a result of location and/or prior uses, the implementing agency shall prepare a Phase I ESA in accordance with the American Society for Testing and Materials' E-1527-05 standard. 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. All recommendations included in a Phase I ESA prepared for a site shall be implemented. 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. Examples of typical recommendations provided in Phase I/II ESAs include removal of contaminated soil in accordance with a soil management plan approved by the local environmental health department; covering stockpiles of contaminated soil to prevent fugitive dust emissions; capturing groundwater encountered during construction in a holding tank for additional testing and characterization and disposal based on its characterization; and development of a health and safety plan for construction workers.	Less than significant
Impact HAZ-4. Transportation improvement projects and land use development included in the proposed 2040 MTP/SCS may be located near a public use airport or private airstrip. Existing regulations and regulatory oversight would reduce the inherent hazard of development near airports to safe levels, and impacts would be less than significant.	None required.	Less than significant
Impact HAZ-5. Land use development and transportation projects included in the 2040 MTP/SCS could interfere with existing emergency and evacuation. However, required regular updates to emergency response and evacuation plans would account for development and projects. Impacts related to interference or impairment of an adopted emergency	None required.	Less than significant

Impact	Mitigation Measure(s)	Significance After Mitigation
response plan or emergency evacuation plan would be less than significant.		
Impact HAZ-6. The 2040 MTP/SCS includes land development and transportation projects within areas of moderate, high, and very high fire hazard. Infill development emphasized in the 2040 MTP/SCS and existing regulations and programs would reduce the vulnerability of people and structures to wildland fire. However, the risk of loss, injury or death from wildland fire would be possible given the fire hazard across much of the AMBAG region. Impacts would be significant and unavoidable.	HAZ-6 Wildland Fire Risk Reduction. If an individual project included in the 2040 MTP/SCS is located within the wildland-urban interface or areas favorable for wildland fires such that project-specific CEQA analysis finds a significant risk of loss, injury or death from fire, the implementing agency shall require appropriate mitigation to reduce the risk. Examples of mitigation to reduce risk of loss, injury or death from wildlife include, but are not limited to: ▪ <u>Avoid introducing new or expanded development such as residential subdivisions, schools and hospitals into fire-prone, fire-controlled ecologies (e.g., indigenous Monterey pine forest, Santa Cruz sand hills/knobcone pine forest, coastal maritime chaparral).</u> ▪ Require adherence to the local hazards mitigation plan, as well as the local general plan policies and programs aimed at reducing the risk of wildland fires through land use compatibility, training, sustainable development, brush management, and public outreach, and service standards for fire departments. ▪ Encourage the use of fire-resistant vegetation native to the AMBAG region and/or the local microclimate of the project site, and discourage the use of fire-prone species especially non-native, invasive species such as pampas grass or giant reed. ▪ Require a fire safety plan be submitted to and approved by the local fire protection agency. The fire safety plan shall include all of the fire safety features incorporated into the project and the schedule for implementation of the features. The local fire protection agency may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase of the project. ▪ Prohibit certain project construction activities with potential to ignite wildland fires during red-flag warnings issued by the National Weather Service for the project site location. Example activities that should be prohibited during red-flag warnings include welding and grinding outside of enclosed buildings. ▪ Require fire extinguishers to be onsite during construction of projects. Fire extinguishers shall be maintained to function according to manufacturer specifications. Construction personnel shall receive training on the proper methods of using a fire extinguisher.	Significant and unavoidable
Hydrology and Water Quality		
Impact W-1. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS could result in substantial eroded sediments and contaminants in runoff, as well as changes in drainage patterns that could degrade surface and ground water quality. However, compliance with federal, state,	None required.	Less than significant

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Impact	Mitigation Measure(s)	Significance After Mitigation
and local regulations would reduce impacts to water quality. Impacts would be less than significant.		
Impact W-2. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS would increase water demand in the AMBAG region. This demand may potentially require new or expanded water supplies, entitlements, or facilities. Impacts would be significant and unavoidable.	W-2(a) Construction Dust Suppression. The RTPAs shall and sponsor agencies can and should ensure that all 2040 MTP/SCS projects, where feasible, reclaimed and/or desalinated water is used for dust suppression during construction activities. This measure shall be noted on construction plans and shall be spot checked by the local jurisdiction. W-2(b) Landscape Watering. In jurisdictions that do not already have an appropriate local regulatory program related to landscape watering, 2040 MTP/SCS projects that would include landscaping shall be designed with drought tolerant plants and drip irrigation. When feasible, native plant species shall be used. In addition, landscaping associated with proposed improvements shall be maintained using reclaimed and/or desalinated water when feasible. W-2(c) Porous Pavement. In jurisdictions that do not already have an appropriate local regulatory program related to porous pavement, the sponsor of a 2040 MTP/SCS project that involves streetscaping, parking, transit and land use improvements shall ensure that porous pavement materials are utilized, where feasible, to allow for groundwater percolation. W-2(d) Water Infrastructure Improvements. The sponsor of 2040 MTP/SCS projects that would require potable water service shall coordinate with water supply system operators to ensure that the existing water supply systems have the capacity to handle the increase. If the current infrastructure servicing the project site is found to be inadequate, infrastructure improvements for the appropriate public service or utility should be provided by the implementing agency. W-2(e) Bioswale Installation. The sponsor of a 2040 MTP/SCS project, such as new roads or roadway extensions, that would substantially increase impervious surfaces shall ensure that bioswales are installed, where feasible, to facilitate groundwater recharge using stormwater runoff from the project site while improving water quality if not already required by the appropriate jurisdictions local regulatory programs.	Significant and unavoidable
Impact W-3. implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS would incrementally increase stormwater flows in the AMBAG region. Impacts would be less than significant.	None required.	Less than significant
Impact W-4. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040	None required.	Less than significant

Impact	Mitigation Measure(s)	Significance After Mitigation
MTP/SCS could be subject to flood hazards, dam failure, or tsunamis. However, pursuant to compliance with existing regulations, the 2040 MTP/SCS would not expose people or structures to a significant risk of loss, injury, or death associated with these hazards. Impacts would be less than significant.		
Land Use		
Impact LU-1. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2040 MTP/SCS would not physically divide an established community. This is impact would be less than significant.	None required.	Less than significant
Impact LU-2. The 2040 MTP/SCS may not be consistent with every applicable adopted State and local land use policy, or regulation adopted for the purpose of avoiding or mitigating environmental effects. This impact would be significant and unavoidable.	None available.	Significant and unavoidable

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Impact	Mitigation Measure(s)	Significance After Mitigation
Noise		
Impact N-1. Construction activities associated with transportation projects and land use projects under the 2040 MTP/SCS would create temporary noise and vibration level increases in discrete locations throughout the AMBAG region. Impacts would be significant and unavoidable.	N-1(a) Measures to Ensure Compliance with Local Construction Noise and Vibration Regulations. Implementing agencies of 2040 MTP/SCS projects shall ensure that, where residences or other noise sensitive uses are located within 800 feet of construction sites, appropriate measures shall be implemented to ensure compliance with local ordinance requirements relating to construction noise and vibration. Specific techniques may include, but are not limited to: restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise. N-1(b) Pile Driving. For any project within 800 feet of sensitive receptors that requires pilings, the implementing agencies shall require caisson drilling or sonic pile driving as opposed to impact pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review. N-1(c) Construction Equipment Noise and Vibration Control. Implementing agencies of 2040 MTP/SCS projects shall ensure that equipment and trucks used for project construction utilize the best available noise and vibration control techniques, including mufflers, intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds. N-1(d) Impact Equipment Noise Control. Implementing agencies of 2040 MTP/SCS projects shall ensure that impact equipment (e.g., jack hammers, pavement breakers and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, use of an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can achieve a reduction of 5 dBA. Whenever feasible, use quieter procedures, such as drilling rather than impact equipment operation. N-1(e) Construction Activity Timing Restrictions. The following timing restrictions shall apply to MTP/SCS project construction activities located within 2,500 feet of a dwelling unit, except where timing restrictions are already established in local codes or policies. Construction activities shall be limited to: ▪ Monday through Friday: 7 a.m. to 6 p.m. ▪ Saturday: 9 a.m. to 5 p.m. N-1(f) Placement of Stationary Noise and Vibration Sources. Implementing agencies of 2040 MTP/SCS projects shall locate stationary noise and vibration sources as far from sensitive receptors as feasible. Stationary noise sources that must be located near existing receptors will be adequately muffled. N-1(g) Physical Impacts Due to Vibration. Implementing agencies of 2040 MTP/SCS projects utilizing heavy construction equipment shall estimate vibration levels generated by construction activities and use the Caltrans vibration damage potential threshold criteria to screen for potential damage to buildings located on or off-site. If construction equipment would generate vibration levels exceeding the threshold criteria, a structural engineer or other appropriate professional shall be retained to ensure vibration levels do not exceed the thresholds during project construction. The structural engineer shall perform the following tasks, at minimum: ▪ Review the project's demolition and construction plans ▪ Survey the project site and vulnerable buildings, including geological testing, if necessary ▪ Prepare and submit a report to the lead agency or other appropriate party containing the following, at minimum: ▪ Any information obtained from the surveys identified above ▪ Any modifications to the estimated vibration thresholds based on building	Significant and unavoidable

Impact	Mitigation Measure(s)	Significance After Mitigation
	conditions, soil conditions, and planned demolition and construction methods to ensure that vibration levels would remain below levels potentially damaging to vulnerable buildings ▪ Specific mitigation measures to be applied during construction to ensure vibration thresholds (or Caltrans guidelines, in lieu of specific limits) are not exceeded, including modeling to demonstrate the ability of mitigation measures to reduce vibration levels below set limits ▪ A monitoring plan to be implemented during demolition and construction that includes post-demolition and post-construction surveys of the vulnerable building(s) and documentation demonstrating that the mitigation measures identified in the report have been applied Examples of mitigation that may be applied during demolition or construction include: ▪ Prohibiting of certain types of construction equipment ▪ Specifying lower-impact methods for demolition and construction, such as sawing concrete during demolition ▪ Phasing operations to avoid simultaneous vibration sources ▪ Installing vibration measure devices to guide decision-making The implementing agency shall be responsible for implementing all the mitigation measures recommended in the report as detailed in the report's monitoring plan.	
Impact N-2. Implementation of the 2040 MTP/SCS would potentially expose existing and future sensitive receptors to significant mobile source noise levels. Impacts would be significant and unavoidable.	N-2 Noise Assessment and Control for Mobile and Point Sources. Sponsor agencies of 2040 MTP/SCS projects shall complete detailed noise assessments using applicable guidelines (e.g., FTA Transit Noise and Vibration Impact Assessment for rail and bus projects and the Caltrans Traffic Noise Analysis Protocol) for roadway projects that may impact noise sensitive receptors. The implementing agency shall ensure that a noise survey is conducted that, at minimum: ▪ Determines existing and projected noise levels ▪ Determines the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards ▪ Identifies potential alternate alignments that allow greater distance from, or greater buffering of, noise-sensitive areas ▪ If warranted, recommends methods for mitigating noise impacts, including: ▪ Appropriate setbacks ▪ Sound attenuating building design, including retrofit of existing structures with sound attenuating building materials ▪ Use of sound barriers (earthen berms, sound walls, or some combination of the two) Where new or expanded roadways, rail, or transit projects are found to expose receptors to noise exceeding normally acceptable levels, the implementing agency shall implement techniques as recommended in the project-specific noise assessment. The preferred methods for mitigating noise impacts will be the use of appropriate setbacks and sound attenuating building design, including retrofit of existing structures with sound attenuating building materials where feasible. In instances where use of these techniques is not feasible, the use of sound barriers (earthen berms, sound walls, or some combination of the two) shall be considered. Long expanses of walls or fences shall be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements shall be used, including solid fences, walls, and landscaped berms.	Significant and unavoidable

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Impact	Mitigation Measure(s)	Significance After Mitigation
Impact N-3. The proposed 2040 MTP/SCS land use scenario would encourage infill development near transit and other transportation facilities, which may place sensitive receptors in areas with unacceptable noise levels. Impacts would be significant and unavoidable.	N-3 Noise Mitigation for Land Uses. If a 2040 MTP/SCS land use project is located in an area with exterior ambient noise levels above local noise standards, the implementing agency shall ensure that a noise study is conducted to determine the existing exterior noise levels in the vicinity of the project. If the project would be impacted by ambient noise levels, feasible attenuation measures shall be used to reduce operational noise to meet acceptable standards. In addition, noise insulation techniques shall be utilized to reduce indoor noise levels to thresholds set inapplicable State and/or local standards. Such measures may include, but are not limited to: dual-paned windows, solid core exterior doors with perimeter weather stripping, air conditioning system so that windows and doors may remain closed, and situating exterior doors away from roads. The noise study and determination of appropriate mitigation measures shall be completed during the project's individual environmental review.	Significant and unavoidable
Impact N-4. The proposed 2040 MTP/SCS would result in new truck, bus, and train traffic that could expose sensitive receptors and fragile buildings to excessive vibration levels. Impacts would be significant and unavoidable.	N-4 Vibration Mitigation for Transportation Projects. Implementing agencies of 2040 MTP/SCS projects shall comply with all applicable local vibration and groundborne noise standards, or in the absence of such local standards, comply with guidance provided by the FTA in Transit Noise and Vibration Impact Assessment (FTA 2006) to assess impacts to buildings and sensitive receptors and reduce vibration and groundborne noise. FTA recommended thresholds shall be used except in areas where local standards for groundborne noise and vibration have been established. Methods that can be implemented to reduce vibration and groundborne noise impacts include, but are not limited to: ▪ Rail Traffic □ Maximizing the distance between tracks and sensitive uses □ Conducting rail grinding on a regular basis to keep tracks smooth □ Conducting wheel truing to re-contour wheels to provide a smooth running surface and removing wheel flats □ Providing special track support systems such as floating slabs, resiliently supported ties, high-resilience fasteners, and ballast mats; □ Implementing operational changes such as limiting train speed and reducing nighttime operations. ▪ Bus and Truck Traffic □ Constructing of noise barriers □ Use noise reducing tires and wheel construction on bus wheels □ Use vehicle skirts (i.e., a partial enclosure around each wheel with absorptive treatment) on freight vehicle wheels	Significant and unavoidable
Population and Housing		
Impact PH-1. The 2040 MTP/SCS would result in substantial population growth in the AMBAG region. This impact is significant and unavoidable.	Mitigation of the 2040 MTP/SCS impacts on population growth would be infeasible. A moratorium on building permits, for example, would restrict housing and business development, which would cause potential residents or companies to be located outside of major population centers within the AMBAG region. However, a regionwide moratorium would be difficult to implement, if not completely infeasible, for economic, political, and legal reasons, especially over an extended period of time. Additionally, a moratorium would cause potential residents to reside in neighboring regions and commute into the region, which would increase GHG emissions and counter sustainability goals included in the 2040 MTP/SCS. A regionwide restriction on public services and utilities would also serve to limit population growth, but would be difficult, if not completely infeasible, to implement for the reasons described above. Additionally, failing to accommodate the forecasted population growth would be inconsistent with a fundamental objective of the 2040 MTP/SCS. Moreover, Government Code Section 65080(b)(2)(B)(ii) requires that the MTP/SCS must house all the population of the region, including all economic segments of the population, over the course of the planning horizon of the MTP/SCS. The MTP/SCS itself does	Significant and unavoidable

Impact	Mitigation Measure(s)	Significance After Mitigation
	not control local land use decisions. A building moratorium would impede the ability of local jurisdictions to construct a sufficient housing supply for the forecasted population growth. As a result, no mitigation measures to reduce this impact to less-than-significant levels are feasible.	
Impact PH-2. Land use development included in the 2040 MTP/SCS would temporarily displace existing housing and people as individual housing development sites are redeveloped. However, this displacement would be temporary and would be offset by a significant net increase in housing units by 2040. Impacts would be less than significant.	None required.	Less than significant
Transportation and Circulation		
Impact T-1. Daily hours of vehicle delay and total peak period CVMT in the AMBAG region would increase between baseline 2015 conditions and 2040 conditions with implementation of the 2040 MTP/SCS. The percent of commuter trips that are 30 minutes or less would decrease in single- and high occupancy vehicles, but would increase for transit trips. Impacts would be significant and unavoidable.	The 2040 MTP/SCS already includes policies, alternative transportation projects, and transportation demand management projects, which would encourage the use of transportation modes other than passenger vehicles. Nonetheless, the daily hours of vehicle delay, total peak period CVMT, and the percentage of commuter work trips exceeding 30 minutes in passenger vehicles would still increase in 2040 compared to the existing 2015 conditions. No feasible additional mitigation measures have been identified that would further reduce these metrics. Refer to Section 7, Alternatives, for a discussion of 2040 MTP/SCS alternatives that examine land use and transportation scenarios that incorporate different assumptions regarding the combinations of future land uses and transportation system improvements.	Significant and unavoidable
Impact T-2. The 2040 MTP/SCS would increase the percent of jobs within 0.5 mile of a high quality transit stop compared to existing 2015 conditions. This would be a beneficial impact.	None required.	Beneficial

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Impact	Mitigation Measure(s)	Significance After Mitigation
Impact T-3. The 2040 MTP/SCS includes transit projects that would improve and expand transit services in the region. The 2040 MTP/SCS would increase the percentage of jobs within proximity to transit stops and the percent of transit trips less than 30 minutes during peak period. Thus, the 2040 MTP/SCS would not substantially disrupt transit service and impacts would be less than significant.	None required.	Less than significant
Impact T-4. The 2040 MTP/SCS would improve conditions for bicycle and pedestrian travel in the AMBAG region, and bicycle and pedestrian facilities would not be substantially disrupted. Impacts would be less than significant.	None required.	Less than significant
Impact T-5. Daily VMT would increase between the baseline 2015 conditions and 2040 conditions. Thus, impacts from implementation of the 2040 MTP/SCS would be significant and unavoidable.	T-5 Project-Level VMT Analysis and Reduction. <u>Transportation project sponsor agencies shall evaluate transportation projects that involve increasing roadway capacity for their potential to increase VMT. Where project-level increases are found to be potentially significant, implementing agencies shall identify and implement measures that reduce VMT. Examples of measures that reduce the VMT associated with increases in roadway capacity include tolling new lanes to encourage carpools and fund transit improvements; converting existing general purpose lanes to high occupancy vehicle lanes; and implementing or funding off-site travel demand management.</u> Implementing agencies shall evaluate VMT as part of project-specific CEQA review and discretionary approval decisions for land use projects. Where project-level significant impacts are identified, implementing agencies shall identify and implement measures that reduce VMT. Examples of measures that reduce VMT include infill development, mixed use and transit oriented development, complete street programs, reduced parking requirements, and providing alternative transportation facilities, such as bike lanes and transit stops.	Significant and unavoidable

Impact	Mitigation Measure(s)	Significance After Mitigation
Tribal Cultural Resources		
Impact TCR-1. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2040 MTP/SCS have the potential to impact tribal cultural resources. Impacts would be less than significant with mitigation incorporated.	TCR-1 Tribal Cultural Resources Impact Minimization. Implementing agencies shall comply with AB 52, which may require formal tribal consultation. If the implementing agency determines that a project may cause a substantial adverse change to a tribal cultural resource, they shall implement mitigation measures identified in the consultation process required under PRC Section 21080.3.2, or shall implement the following measures where feasible to avoid or minimize the project-specific significant adverse impacts: ▪ Avoidance and preservation of the resources in place, including, but not limited to: planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria. ▪ Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following: □ Protecting the cultural character and integrity of the resource □ Protecting the traditional use of the resource □ Protecting the confidentiality of the resource. ▪ Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places. ▪ Native American monitoring by the appropriate tribe for all projects in areas identified as sensitive for potential tribal cultural resources and/or in the vicinity (within 100 feet) of known tribal cultural resources. ▪ If potential tribal cultural resources are encountered during ground-disturbing activities; work in the immediate area must halt and the appropriate tribal representative(s), the implementing agency, and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service [NPS] 1983) must be contacted immediately to evaluate the find and determine the proper course of action.	Less than significant

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