

This section provides an overview of the proposed Sonoma County Transportation Authority 2009 Comprehensive Transportation (2009 CTP or proposed project) and the environmental analysis of the proposed project. For additional detail regarding specific issues, please consult the appropriate chapter of Draft EIR Sections 4.1 through 4.13 (Environmental Setting, Impacts, and Mitigation Measures).

2.1 PROJECT CHARACTERISTICS

The 2009 CTP updates past transportation planning priorities and provides a guide to multi-modal transportation investments over the next 25 years. The goals of the CTP are to (1) maintain the system, (2) relieve congestion, (3) reduce emissions, and (4) plan for safety and health. The CTP is a financially constrained plan that looks at the growth projections for the region and prioritizes projects and programs that can reduce existing and future congestion. As such, the 2009 CTP includes the following components. Section 4.0 provides a detailed list of improvements:

- Highway Capital Improvements. Seven capital improvements listed in the Measure M Strategic Plan and projects funded from other sources, mostly focused on carpool lane improvements on the U.S. 101 freeway corridor.
- Local Road Improvements. Several of local road improvements listed in the Measure M Strategic Plan and also funded from other sources are included. These often focus on road widening or signaling of intersections.
- Transit Improvements. These include investments in the Measure M Strategic Plan and the Sonoma-Marin Area Rail Transit (SMART) passenger rail project.
- Non-Motorized Transportation Improvements. Projects in the 2008 Countywide Bicycle and Pedestrian Master Plan are included. This includes independent bike trails (Class I), striped bike lanes (Class II), and bike routes (Class III).
- Additional Improvements. This includes funding for maintenance of local streets, traffic safety and safe routes for schools, local projects funded through developer-related Transit Impact Fees, right-of-way and dedication improvements by developers.
- Regional Operations Programs. The CTP includes ongoing, financially constrained regional operations programs administered by the Metropolitan Transportation Commission (MTC). Funding for these programs is included in MTC's Draft Transportation 2035 Plan.
- Land Use and Pricing Assumptions. The CTP is designed to provide transportation infrastructure that accommodates the projected growth of Sonoma County and the larger region. The socioeconomic forecasts used in the CTP are based on the Association of Bay Area Governments' (ABAG) Projections 2005 with adjustments based on local forecasts and the release of its Projections 2007. ABAG population and employment forecasts were used as control totals for jurisdictions and county planning areas. Sub-allocation of control totals to traffic analysis zones within jurisdiction boundaries or county planning areas was based on local planning agencies and input from SCTA staff.

This EIR assesses the expected environmental impacts resulting from adoption and subsequent implementation of the proposed 2009 CTP at a program level of analysis, as permitted by CEQA. The environmental issues addressed in the Draft EIR were established through review of environmental documentation developed for the project, environmental documentation for nearby projects, and public and agency responses to the Notice of Preparation (NOP). **Table 2.0-1** summarizes the anticipated impacts of the CTP on the existing environment. **Table 2.0-1**

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does not list impacts that have been identified as less than significant prior to mitigation, but where mitigation has been included.

2.2 PROJECT ALTERNATIVES SUMMARY

Section 15126(d) of the State CEQA Guidelines requires that an EIR describe a reasonable range of alternatives to the project or to the location of the project that could feasibly accomplish the basic objectives of the project, and to evaluate the comparative merits of the alternatives. Section 4.0 provides a list of transportation improvements associated with each alternative

These alternatives are evaluated at a qualitative level of detail and are summarized below.

- **Alternative 1: *No Project/No Action Alternative*** – This alternative assumes that all reasonably foreseeable projects and programs (i.e., projects that are fully funded, programmed, and/or have cleared the environmental phase) from the adopted 2004 CTP and 2009 Regional Transportation Improvement Program are implemented, but that all other projects and programs do not proceed forward.
- **Alternative 2: *CTP Vision Scenario, Financially Unconstrained Capital Improvement Scenario*** – This scenario assumes the entire list of possible proposed CTP projects, including all transportation projects and programs included in the project, are added to the transportation system independent of financial constraints.
- **Alternative 3: *VMT Reduction – Transit Expansion/Smart Growth Focused Scenario*** – This alternative assumes that future transportation policy and improvements are focused on land use change and accompanying transit expansion to reduce vehicle miles traveled (VMT). It includes implementation of all capital highway improvements included in the project.
- **Alternative 4: *VMT Reduction – Pricing Policy Focused Scenario*** – This alternative focuses on using pricing measures and policy as a means of reducing travel demand and trip reduction. It includes the same capital highway and transit improvements and growth assumptions as the project.
- **Alternative 5: *Comprehensive/“Do Everything” Scenario*** – This scenario includes the entire list of possible proposed CTP projects independent of financial constraints and all previously identified measures to reduce VMT (Smart Growth-related land use changes and pricing measures).

2.3 SUMMARY OF ENVIRONMENTAL IMPACTS

Table 2.0-1 displays a summary of impacts for the proposed 2009 CTP and proposed mitigation measures that would avoid or minimize potential impacts. In the table, the level of significance is indicated both before and after the implementation of each mitigation measure.

For detailed discussions of all mitigation measures and of proposed 2009 CTP policies that would provide mitigation for each type of environmental impact addressed in this EIR, refer to the appropriate environmental topic section in the Draft EIR (i.e., Sections 4.1 through 4.13). Changes to mitigation measures from comments received on the Draft EIR are shown in revision marks (underline/~~strikeout~~.)

**TABLE 2.0-1
PROJECT IMPACTS MITIGATION TABLE**

Impact	Mitigation Measures	Significance After Mitigation
Aesthetics		
<p>Impact 4.1-1 Construction and operation of CTP projects, particularly freeway interchanges, could temporarily and/or permanently block panoramic views.</p>	<p>MM 4.1-1a The lead agency and/or project sponsor for subsequent projects under the CTP shall ensure that the project's design is consistent with design guidelines and local policies, programs, and standards that preserve scenic views and corridors.</p> <p>MM 4.1-1b The lead agency and/or project sponsor for subsequent projects under the CTP shall be designed to minimize contrasts in scale and massing between the project site and surrounding natural forms and development, particularly in areas that have been designated or eligible for State Scenic Highway designations.</p> <p>MM 4.1-1c The lead agency and/or project sponsor for subsequent projects under the CTP shall, to the extent feasible, use natural and native landscaping to enhance and complement the natural surroundings to minimize the contrast between the project and surrounding areas.</p> <p>MM 4.1-1d The lead agency and/or project sponsor for subsequent projects under the CTP shall, to the extent feasible, construct noise barriers of materials whose color and texture complements the surrounding landscape and development. Noise barriers shall be graffiti-resistant and landscaped with plants that screen the barrier, preferably with either native vegetation or landscaping.</p> <p>MM 4.1-1e The lead agency and/or project sponsor for subsequent projects under the CTP shall, to the extent feasible, limit view blockage by interchanges and SMART-related improvements. The edges of major cut and fill slopes shall be contoured to provide a more natural-looking finished profile.</p>	<p>Less than significant</p>
<p>Impact 4.1-2 The construction and operation of 2009 CTP projects could temporarily damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.1-3 Implementation of the 2009 CTP may</p>	<p>As noted in Impact 4.1-1, potential impacts to the existing visual character of the county can be mitigated with implementation of mitigation measures MM 4.1-1a through 4.1-1e</p>	<p>Less than significant</p>

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Impact	Mitigation Measures	Significance After Mitigation
create significant contrasts or add an incongruous visual element by substantially degrading the existing visual character of the county.	by designing the improvements to complement and blend with the existing visual landscape characteristics of the subsequent project sites consistent with the intent of applicable local scenic policies, programs, and standards.	
<p>Impact 4.1-4</p> <p>The construction and operation of 2009 CTP projects may create new sources of light and/or glare that would adversely affect nighttime views in project areas.</p>	<p>MM 4.1-4a Roadway light fixtures for subsequent projects shall be installed and shielded in such a manner that light rays emitted from the fixture at angles above the horizontal plane are minimized.</p> <p>MM 4.1-4b Construction lighting that is used for nighttime construction activities will include shields or other features to prohibit spillover lighting when used adjacent to residential areas.</p>	Less than significant
Air Quality		
<p>Impact 4.2-1</p> <p>The proposed 2009 CTP includes multi-modal transportation projects and programs that would not conflict with or obstruct implementation of BAAQMD's Clean Air Plan. Rather, the plan would help implement applicable Transportation Control Measures (TCMs) from the CAP on a timely basis. In addition, the CTP is consistent with CAP assumptions for population and VMT growth over time and its objectives and policies implement other elements of the CAP. It does not include policies that would minimize or eliminate potential buffer zones around existing and proposed land uses that would emit odors or TACs.</p>	None required.	Beneficial
<p>Impact 4.2-2</p> <p>The proposed 2009 CTP would help reduce ozone precursors of ROG and NOx by 2035 that are consistent with the BAAQMD's 2005 Ozone Strategy. The reductions in these two pollutants would not contribute to</p>	None required.	Beneficial

Impact	Mitigation Measures	Significance After Mitigation
existing or projected ozone violations.		
<p>Impact 4.2-3</p> <p>While the proposed 2009 CTP would not directly cause increases in emissions from the transportation sector, motor vehicle emissions of PM₁₀ and PM_{2.5} would increase by 26 and 75 percent, respectively, over existing conditions by 2035. However, these emissions would not lead to any violation of air quality standards, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase of emissions of PM₁₀ and PM_{2.5}, as these emissions are factored into the BAAQMD's plan to attain federal and state particulate standards.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.2-4</p> <p>Construction of capital improvements in the 2009 CTP would produce short-term emissions of nonattainment pollutants or precursors in the San Francisco Bay Area Air Basin. These emissions could lead to temporary increases in ROG, NO_x, PM₁₀ and PM_{2.5} emissions. This could lead to violations of air quality standards, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase of emissions.</p>	<p>MM 4.2-4</p> <p>Consistent with BAAQMD guidance, the following standard BAAQMD air quality Best Management Practices (BMPs) shall be implemented on the project site during the construction period to reduce emissions of PM₁₀ and PM_{2.5}:</p> <ul style="list-style-type: none"> • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites. • Sweep daily (preferably with water sweepers) all paved access roads, parking areas, and staging areas at construction sites. • Sweep streets daily (preferably with water sweepers) if visible soil material is carried onto adjacent public streets. • Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas. 	<p>Less than significant</p>

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Impact	Mitigation Measures	Significance After Mitigation
	<ul style="list-style-type: none"> • Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.). • Install sandbags or other erosion control measures to prevent silt runoff to public roadways. • Replant vegetation in disturbed areas as quickly as possible. • <u>Implement T-BACT (the Best Available Control Technologies for Toxics) for diesel construction equipment.</u> • <u>Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]).</u> • <u>All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.</u> 	
Traffic and Circulation		
<p>Impact 4.3-1 Implementation of the 2009 CTP would not directly cause increases in traffic or vehicle miles traveled. However, the 2009 CTP would support growth in Sonoma County that would substantially increase daily vehicle miles traveled in 2035 by 2,976,144 over existing conditions. The traffic impacts associated with the anticipated growth within the county (through 2020) were identified as significant and unavoidable in the County's General Plan 2020 EIR.</p>	<p>MM 4.3-1a SCTA shall seek funding to go beyond the financially constrained portion of the 2009 CTP to achieve VMT reductions that could be obtained through pricing strategies and additional transit, ridesharing programs, nonmotorized investments, and public education programs.</p> <p>MM 4.3-1b SCTA shall encourage local governments to implement land use strategies, pricing strategies, and additional transit, ridesharing programs, public education, and nonmotorized investments.</p>	Significant and unavoidable
<p>Impact 4.3-2 Implementation of the 2009 CTP would not directly cause increases in</p>	<p>MM 4.3-2a SCTA shall seek funding to go beyond the financially constrained portion of the 2009 CTP to achieve VHT reductions that could be obtained through pricing strategies and additional transit,</p>	Significant and unavoidable

Impact	Mitigation Measures	Significance After Mitigation
<p>daily vehicle hours traveled. However, the 2009 CTP would support growth in Sonoma County that would substantially increase daily vehicle hours miles traveled in 2035 by 282,874 over existing conditions. The impacts associated with the anticipated growth within the county (through 2020) were identified as significant and unavoidable in the County's General Plan 2020 Draft EIR. This impact is considered significant and unavoidable.</p>	<p>ridesharing programs, nonmotorized investments, and public education programs. Projects such as transit and land use strategies are shown to have the greatest potential benefits.</p> <p>SCTA shall encourage local governments to implement transportation system management improvements and specific transportation investments that reduce travel time on local roadways.</p>	
<p>Impact 4.3-3 Implementation of the 2009 CTP would not directly cause a reduction of average daily vehicle speeds. However, the 2009 CTP would support growth in Sonoma County that would substantially reduce average daily vehicle speeds in 2035 by 11 miles per hour over existing conditions. The traffic impacts associated with the anticipated growth within the county (through 2020) were identified as significant and unavoidable in the County's General Plan 2020 Draft EIR.</p>	<p>Implement Mitigation Measures 4.3-2a and 4.3-2b.</p>	<p>Significant and unavoidable</p>
<p>Impact 4.3-4 Implementation of the 2009 CTP would not directly increase PHD or PHT on the county's roadway system. However, the 2009 CTP would support growth in Sonoma County that would substantially increase daily PHD by 250,102 and PHT by 335,166 over existing conditions. The traffic impacts associated with</p>	<p>Implement Mitigation Measures 4.3-2a and 4.3-2b.</p>	<p>Significant and unavoidable</p>

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the anticipated growth within the county (through 2020) were identified as significant and unavoidable in the County's General Plan 2020 Draft EIR. This impact is therefore considered significant and unavoidable .		
<p>Impact 4.3-5 Implementation of the 2009 CTP includes projects and programs that address surface transportation issues, including ground access to airports. However, the 2009 CTP would not directly or indirectly impact regional air traffic patterns substantially.</p>	None required.	Less than significant
<p>Impact 4.3-6 Implementation of the 2009 CTP includes new or expanded projects that would result in improvements to the county's roadway infrastructure that would generally reduce existing safety hazards and limit any potential future hazards.</p>	None required.	Beneficial
<p>Impact 4.3-7 The 2009 CTP includes policies supporting smart growth that could indirectly impact parking capacity from future transit-oriented development that local governments determined require less off-street parking than required under conventional zoning codes.</p>	None required.	Less than significant
<p>Impact 4.3-8 The 2009 CTP includes projects and programs that support alternative modes of transportation, such as bicycle, pedestrian, and transit</p>	None required.	Beneficial

Impact	Mitigation Measures	Significance After Mitigation
modes that are consistent with existing regional and local plans that support alternative transportation.		
<p>Impact 4.3-9</p> <p>The 2009 CTP includes transportation projects that would be consistent with transportation policies in local general plans or other applicable local transportation plans.</p>	<p>None required.</p>	<p>Beneficial</p>
Biological Resources		
<p>Impact 4.4-1</p> <p>Implementation of the proposed 2009 CTP may result in the loss of populations or essential habitat for special-status plant and wildlife species.</p>	<p>MM 4.4-1a</p> <p>During the environmental review process for proposed CTP projects, project sponsors shall prepare a biological resources assessment shall be prepared for areas identified to contain or possibly contain special-status plant and animal species. Surveys shall be conducted as part of the environmental review process to determine the presence and extent of sensitive habitats and/or species in the project vicinity. Surveys shall be conducted during the appropriate seasons for proper identification of species. The assessment shall consider the potential for significant impacts on special-status plant and animal species and shall identify feasible mitigation measures to mitigate such impacts, as set forth in mitigation measure MM 4.4-1b below.</p> <p>Formal protocol-level surveys may be required on a species-by-species basis to determine the local distribution of these species. Consultation with the USFWS and/or CDFG shall be conducted at an informal level for transportation projects that could adversely affect federal or state candidate, threatened, or endangered species to determine the need for further consultation or permitting actions.</p> <p>MM 4.4-1b</p> <p>Project sponsors shall seek to preserve, to the extent feasible, wetlands, habitat corridors, sensitive natural communities, and other essential habitat areas that may be adversely affected by transportation projects where special-status plant and animal species are known to be present or potentially occurring. Where impacts cannot be avoided, projects shall include the implementation of site-specific or project-specific effective mitigation strategies developed by a qualified professional in consultation with state or federal resource agencies with jurisdiction (if applicable).</p>	<p>Less than significant</p>

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Impact	Mitigation Measures	Significance After Mitigation
	<p>Mitigation strategies include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • For special-status plant species: Preservation of existing populations from direct and indirect impacts, and where feasible seed and soil collection shall occur to ensure that the plant population is maintained. • For special-status animal species: Avoidance of the species and its habitat as well as the potential provision of habitat buffers, avoidance of the species during nesting or breeding seasons, replacement or restoration of habitat on- or off-site, relocation of the species to another suitable habitat area presently uninhabited by the species, or payment of mitigation credit fees. • Project designs shall be reconfigured, whenever feasible, to avoid sensitive wetland or biological resources and avoid disturbances to wetland and riparian corridors. Projects shall minimize ground disturbances and construction footprints near sensitive areas to the extent feasible. • Individual projects shall minimize the use of in-water construction methods in areas that support sensitive fish species, especially when fish are present. • <u>Individual projects will avoid the use of in-water construction methods in all state of federally jurisdictional surface waters, where feasible.</u> • A qualified biologist shall locate and fence off identified sensitive resources before construction activities begin and, where required, shall inspect areas to ensure that barrier fencing, stakes, and setback buffers are maintained during construction. • For work sites located adjacent to special-status plant or wildlife populations, a biological resource education program shall be provided for construction crews and contractors (primarily crew and construction foremen) before construction activities begin. The education program shall address each special-status species, their habitat, laws protecting these resources, the avoidance and minimization measures being applied to protect these resources, and pertinent contact information. 	

Impact	Mitigation Measures	Significance After Mitigation
<p>Impact 4.4-2 Implementation of the proposed 2009 CTP could result in the loss of populations or essential habitat for special-status avian species, including raptors.</p>	<p>MM 4.4-2</p> <p>Should the location of a subsequent project under the 2009 CTP be within 300 feet of any trees, the following mitigation measure would be applicable.</p> <p>If site disturbance and construction activities are planned to occur during the nesting season (typically February 15 through August 1), the project sponsor shall retain a qualified biologist to conduct a focused survey for active nests of special-status birds prior to ground disturbance or tree removal. If active nests are found, trees/shrubs with nesting birds shall not be disturbed until abandoned by the birds or a qualified biologist deems disturbance potential to be minimal (in consultation with USFWS and/or CDFG, where appropriate). Other restrictions may include establishment of exclusion zones (no ingress of personnel or equipment around the nest) or alteration of the construction schedule.</p> <p>If construction activities or tree removal are proposed to occur during the non-breeding season (September through January), a survey is not required, no further studies are necessary, and no mitigation is required.</p>	<p>Less than significant</p>
<p>Impact 4.4-3 Implementation of the proposed 2009 CTP could result in the loss of populations or essential habitat for special-status bat species through tree removal or other construction activities.</p>	<p>MM 4.4-3</p> <p>Should the location of a subsequent project under the 2009 CTP be within 300 feet of any trees or structures proposed for removal, the following mitigation measure would be applicable.</p> <p>To ensure that there will be no adverse impacts to roosting special-status bat species, the project sponsor shall retain a qualified biologist to conduct a survey prior to the removal of trees or structures (including bridges) within the project area that are deemed suitable roosting habitats by a qualified biologist. If no bat roosts are detected, then no further action is required if the trees or structures are removed prior to the next breeding season. If special-status bats are found roosting within the project area, then the following mitigation will reduce the potential disturbance:</p> <p>If a female or maternity colony of bats is found within the project area and the project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large tree not planned for removal), a qualified biologist shall determine the physical and time-limited buffer zones that shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier around the roost and/or the timing of the construction activities outside of the maternity roosting season (generally after July 31 and before</p>	<p>Less than significant</p>

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	<p>March 1).</p> <p>If an active nursery roost is known to occur within the project area and the project cannot be conducted outside of the maternity roosting season, consultation shall be initiated with CDFG to determine appropriate exclusionary or removal methods. The bats shall be excluded from the roosting site after July 31 and before March 1 to prevent the formation of maternity colonies. Non-breeding bats shall be safely evicted, under the direction of a qualified biologist.</p>	
<p>Impact 4.4-4</p> <p>Implementation of the proposed 2009 CTP may result in disturbance, degradation, and/or removal of riparian habitat or other sensitive natural communities.</p>	<p>MM 4.4-4</p> <p>In accordance with CDFG guidelines and other resource agency guidance, project sponsors shall minimize impacts on sensitive natural communities, especially riparian habitats, when designing and permitting projects.</p> <p>Where applicable, subsequent projects under the 2009 CTP shall conform to the provisions of special area management or restoration plans (e.g., West Petaluma Area Plan), which outline specific measures to protect sensitive natural communities including riparian and wetland habitats.</p>	<p>Less than significant</p>
<p>Impact 4.4-5</p> <p>Implementation of the proposed 2009 CTP may result in the loss of jurisdictional waters of the U.S., including wetlands.</p>	<p>MM 4.4-5a</p> <p>Project designs of subsequent projects under the 2009 CTP shall be reconfigured, whenever possible, to avoid waters of the U.S., including wetlands, and avoid disturbances to wetland and riparian corridors. Projects shall minimize ground disturbances and construction footprints near such areas to the extent feasible.</p> <p>MM 4.4-5b</p> <p>Where potential waters of the U.S. are present within CTP project sites, project sponsors shall retain a qualified biologist to perform a formal wetland delineation to be submitted to USACE for verification. If USACE determines that there are jurisdictional waters on the project area, the project sponsor shall ensure that the project will result in no net loss of waters of the U.S. by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, subject to approval from the appropriate resource agencies and in accordance with applicable regulations. Compensatory mitigation may consist of (a) obtaining credits from a mitigation bank; (b) making a payment to an in-lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; and/or (c) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or</p>	<p>Less than significant</p>

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	preservation activity.	
<p>Impact 4.4-6 Implementation of the proposed 2009 CTP may interfere with the movement of native resident or migratory wildlife species.</p>	<p>MM 4.4-6a Project sponsors of subsequent projects under the 2009 CTP shall, to the extent feasible, avoid open space areas and sensitive natural habitats, especially stream and riparian corridors, when designing and permitting projects.</p> <p>Where applicable, projects shall conform to the provisions of special area management or restoration plans (e.g. West Petaluma Area Plan), which outline specific measures to protect sensitive habitats.</p> <p>Where migratory corridors cannot be avoided (e.g., walls or fences are constructed that may obstruct wildlife movement), the incorporation of mitigation measures identified under Impacts 4.4-1, 4.4-4, and 4.4-5 would assist in mitigating impacts to migratory corridors.</p> <p>MM 4.4-6b Project sponsors should include into project design, to the maximum extent feasible, mitigation measures and best practices aimed at minimizing or avoiding impacts to migratory patterns, including strategies from the U.S. Department of Transportation Federal Highway Administration’s Critter Crossings program.</p>	<p>Less than significant</p>
<p>Impact 4.4-7 Implementation of the proposed 2009 CTP would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any adopted biological resources recovery or conservation plan of any federal or state agency.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Cultural Resources</p>		
<p>Impact 4.5-1 Implementation of the proposed 2009 CTP could result in a substantial adverse change in the significance of historical resources. Construction projects could also unearth human remains that would require cessation of activities until</p>	<p>MM 4.5-1a During the environmental review process for proposed CTP projects, project sponsors shall determine if there is a potential for a significant impact to historic resources to occur. If it is determined there is a potential significant impact to these resources, project sponsors shall implement the laws and regulations of the responsible regulatory agency. Examples of such mitigation measures include the following:</p> <ul style="list-style-type: none"> • A qualified historian shall review previous site investigations of 	<p>Less than significant</p>

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<p>further analysis, as required by state law, is conducted.</p>	<p>the project site (if available) to determine the historic significance of the project site. If it is determined there are potential resources on the project site, the qualified architectural historian or historian shall also determine whether structures greater than 50 years in age are within the area of potential to be affected by the project and to determine their eligibility for recognition under state, federal, or local historic preservation criteria.</p> <ul style="list-style-type: none"> • If there are projects being developed adjacent to sites with an identified historic resource, a qualified historian shall be utilized to determine the extent of the potential degradation and recommend measures to reduce the impacts to the resource. The project sponsor shall implement the measures to protect the integrity of the resource or site. <p>MM 4.5-1b</p> <p>The project sponsor’s planning department shall be notified immediately if any prehistoric or historic resources are uncovered during construction of project facilities. All construction must stop in the vicinity of the find, and a qualified archaeologist shall be retained to evaluate the finds and recommend appropriate action.</p>	
<p>Impact 4.5-2</p> <p>Implementation of the proposed 2009 CTP could result in a substantial adverse change in the significance of a cultural resource, defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that its significance would be materially impaired. Construction projects could also unearth human remains that would require cessation of activities until further analysis, as required by state law, is conducted.</p>	<p>MM 4.5-2a</p> <p>During the environmental review process for proposed CTP projects, project sponsors <u>in consultation with the appropriate culturally affiliated tribe(s)</u> shall determine if there is a potential for a significant impact to cultural resources to occur. If it is determined there is a potential significant impact to these resources, project sponsors shall implement the laws and regulations of the responsible regulatory agency. Examples of such mitigation measures include the following:</p> <ul style="list-style-type: none"> • A qualified archaeologist shall review previous site investigations of the project site (if available) to determine the historic significance of the project site. A qualified archaeologist shall perform a records review through the Northwest Information Center at Sonoma State University to determine the potential for, or existence of, cultural resources. A qualified archaeologist shall review the records search to determine the significance (as defined by CEQA and National Historic Preservation Act guidelines) of cultural resources identified within the area of potential effect. <p>MM 4.5-2b</p> <p>If a potentially significant cultural resource is encountered during subsurface earthwork activities for the project, all construction</p>	<p>Less than significant</p>

Impact	Mitigation Measures	Significance After Mitigation
	<p>activities within a 100-foot radius of the find shall cease until a qualified archaeologist, <u>in consultation with the appropriate culturally affiliated tribe(s)</u> determines whether the resource is significant. The project sponsor shall include a standard inadvertent discovery clause, <u>including a requirement for consultation with the appropriate culturally affiliated tribe(s)</u>, in every construction contract to inform contractors of this requirement. Potentially significant cultural resources consist of, but are not limited to, stone, bone, glass, ceramic, wood or shell artifacts, fossils, or features including hearths, structural remains, or historic dumpsites. If the resource is determined significant under CEQA, the qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan that will capture those categories of data for which the site is significant. The archaeologist shall also perform appropriate technical analyses, prepare a comprehensive report and file it with the Northwest Information Center, and provide for the permanent curation of the recovered materials.</p> <p>MM 4.5-2c</p> <p>The project sponsor shall implement the appropriate mitigation measures presented by a qualified archeologist, <u>and developed in consultation with the appropriate affiliated tribes(s)</u>, for any discovery of significant resources, based on applicable state and federal regulations. All construction must stop in vicinity of the find, and a qualified archaeologist shall be retained to evaluate the finds and recommend appropriate action.</p> <p>The project sponsor shall implement the mitigation recommendations presented by a qualified archaeologist for any unanticipated discoveries of significant resources. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project proponent shall be required to implement any mitigation necessary for the protection of cultural resources.</p> <p>MM 4.5-2d</p> <p>If human remains are discovered, all work must stop in the immediate vicinity of the find, the project sponsor's planning department shall be notified immediately, and the County Coroner must be notified according to Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.</p>	

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<p>Impact 4.5-3 Construction activities associated with implementation of the 2009 CTP could result in impacts to undiscovered paleontological resources.</p>	<p>MM 4.5-3a Where earthwork activity is proposed to depths below 3 feet, the project sponsor shall perform a search of the University of California, Berkeley Museum of Paleontology collections database to proactively identify any evidence of paleontological resources in the proposed project area.</p> <p>MM 4.5-3b If any paleontological resources (fossils) are discovered during a project's ground-disturbing activity, all work in the immediate vicinity must stop and the project sponsor's planning department shall be immediately notified. A qualified paleontologist shall be retained to evaluate the finds and recommend appropriate mitigation measures for the inadvertently discovered paleontological resources.</p> <p>Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project sponsor shall be required to implement any mitigation necessary for the protection of paleontological resources.</p>	<p>Less than significant</p>
Geology and Soils		
<p>Impact 4.6-1 The proposed Comprehensive Transportation Plan invests in new capital roadway and transit improvements that will increase the capacity of the county's transportation infrastructure to move people and goods. This would increase the risk of loss, injury, or death to travelers or structures due to earthquakes, landslides, ground failure, or liquefaction.</p>	<p>MM 4.6-1 Project sponsors shall address the following measures in project-level analyses for proposed transportation improvements.</p> <ul style="list-style-type: none"> • Site-specific analyses shall consider a site's seismicity and soil response, and dynamic characteristics of the proposed structure, and shall comply with the appropriate California Building Code, Caltrans construction standards, and State of California design standards for construction in or near fault zones, as well as all standard design, grading, and construction best management practices in order to avoid or reduce geologic hazards. • The project sponsor shall ensure that geotechnical analyses are conducted in construction areas to determine soil types and faulting probability prior to preparation of the project design. These investigations shall identify areas of potential failure and recommend geotechnical measures with which the project shall comply to eliminate any problems. Identified geotechnical measures shall be incorporated into the project design. • For future projects located within Alquist-Priolo Earthquake 	<p>Significant and unavoidable</p>

Impact	Mitigation Measures	Significance After Mitigation
	<p>Fault Zones, recommendations shall be prepared and implemented in accordance with California Geological Survey Guidelines for Evaluating the Hazard of Earthquake Fault Rupture.</p> <ul style="list-style-type: none"> • Project sponsors shall ensure that projects either avoid or stabilize landslide areas and unstable slopes. • For projects located within liquefaction or earthquake-induced landslide seismic hazard zones, recommendations shall be prepared and implemented in accordance with California Geological Survey Guidelines for Evaluating and Mitigating Seismic Hazards. 	
<p>Impact 4.6-2 Construction of capital improvements in the proposed 2009 CTP could require significant earthwork and road cuts, which could increase soil erosion and slope instability potential associated with soils.</p>	<p>MM 4.6-2a The project sponsors shall ensure that project designs provide adequate slope drainage and appropriate landscaping to minimize the occurrence of slope instability and erosion. Design features shall include measures to reduce erosion caused by stormwater consistent with applicable agency water quality control requirements. Road cuts shall be designed to maximize the potential for revegetation.</p> <p>MM 4.6-2b Implementing agencies shall ensure that projects avoid landslide areas and potentially unstable slopes wherever feasible.</p> <p>MM 4.6-2c The project implementing agencies shall ensure that site-specific geotechnical investigations conducted by a qualified geotechnical expert shall be required prior to preparation of project design. These investigations would identify areas of potential failure and identify remedial geotechnical measures to eliminate any geotechnical problems.</p>	<p>Less than significant</p>
<p>Impact 4.6-3 Construction and operation of proposed capital roadway and transit improvements on expansive soils or on weak, unconsolidated soils could damage and weaken these soils over time.</p>	<p>MM 4.6-3a Project sponsors shall ensure that projects avoid geologic units or soils that are unstable or contain expansive soils and/or soils prone to lateral spreading, subsidence, liquefaction, or collapse wherever feasible. When avoidance of such conditions is not feasible, mitigation measure MM 4.6-3b shall be implemented.</p> <p>MM 4.6-3b Project sponsors shall ensure that geotechnical investigations are conducted by qualified professionals to identify the potential for differential settlement and expansive soils. Identified corrective measures, such as structural reinforcement and replacing soil with engineered fill, shall be incorporated into project designs.</p>	<p>Less than significant</p>
<p>Impact 4.6-4</p>	<p>None required.</p>	<p>Less than significant</p>

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Impact	Mitigation Measures	Significance After Mitigation
<p>Development of capital roadway and transit improvements could expose persons or structures to the risk of loss, injury, or death from seiches or tsunamis. However, given the location of proposed CTP projects and their proximity to the Pacific Ocean and San Pablo Bay, impacts are considered less than significant.</p>		
<p>Hazards and Hazardous Materials</p>		
<p>Impact 4.7-1 The 2009 CTP includes transportation projects that have the potential to create significant hazards to the public or the environment through the routine transport, use, or disposal of hazardous materials. The Plan, however, would also improve the condition of roadways, reducing the potential for roadway accidents that could result in transport-related hazardous material spills.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.7-2 Implementation of the proposed 2009 CTP would not omit or create a hazard to the public or the environment by locating new or expanded roadways or transit alignments that transport hazardous materials within one-quarter mile of a school.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.7-3 Construction of new or expanded transportation facilities can disturb contaminated properties, particularly those in brownfield areas near proposed U.S. 101 freeway</p>	<p>MM 4.7-3 Subsequent projects under the CTP shall consult all known databases of contaminated sites and undertake a Phase I Environmental Site Assessment or other appropriate hazard assessment in the process of planning, environmental clearance, and construction for projects included in the 2009 CTP. <u>Prior to development on or near active cleanup sites, the project proponent shall coordinate with all appropriate agencies.</u> If contamination is</p>	<p>Less than significant</p>

Impact	Mitigation Measures	Significance After Mitigation
improvements.	found, the implementation agency shall coordinate remediation of contamination in accordance with applicable Sonoma County, Regional Water Quality Control Board, <u>the Department of Toxic Substances Control</u> , and state standards.	
Hydrology and Water Quality		
<p>Impact 4.8-1</p> <p>The construction and operation of transportation improvements in the 2009 CTP, particularly new and expanded roadways, could degrade existing water quality or violate water quality standards or waste discharge requirements. Urban runoff could include discharge of sediments, non-sediment solids, nutrients, and other pollutant sources.</p>	<p>MM 4.8-1a</p> <p>Subsequent projects shall comply with Caltrans, County, and city grading and erosion control requirements and other associated requirements, as applicable. Project sponsors shall prepare and implement, as necessary, a Stormwater Pollution Prevention Plan (SWPPP), as required by the North Coast Regional Water Quality Control Board or the Bay Area Regional Water Quality Control Board. The SWPPP shall be consistent with the Manual of Standards for Erosion and Sedimentation Control by the Association of Bay Area Governments, the California Stormwater Quality Association, Stormwater Best Management Practice Handbook for Construction, policies, recommendations, and requirements of the local urban runoff program, and the recommendations of the RWQCB, as appropriate. Typical components of a SWPPP may include but are not limited to the following:</p> <ul style="list-style-type: none"> To the extent feasible, excavation and grading activities shall be performed between April 15 and October 15. If excavation does occur during the wet season, the project sponsor shall regulate storm runoff from the construction area through a stormwater management/erosion control plan. This may include on-site silt traps and basins with multiple discharge points to natural drainages and energy dissipaters. Loose material stockpiles shall be covered and runoff shall be diverted away from exposed soil. If work stops due to rain, a positive grading away from slopes shall be provided to carry the surface runoff to areas where runoff can be controlled, such as temporary silt basins. Post-grading, erosion protection shall be provided on cut and fill slopes, and revegetation shall be facilitated and initiated as soon after completion of grading as possible and before October 15. Revegetation shall emphasize drought tolerant perennial native vegetation. Temporary erosion control measures, which may include hydroseeding or alternative methods such as straw, straw with tackifier, or erosion control blankets instead of seeding, shall be provided until perennial revegetation occurs. Hazardous 	<p>Less than significant</p>

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	<p>materials used on construction sites shall be stored in covered containers and protected from rain and runoff. Spill cleanup materials shall be readily available at all construction sites, and employees shall be trained in spill prevention and cleanup.</p> <ul style="list-style-type: none"> • BMPs such as those described above shall be in place and operational prior to major earthwork. <u>BMPs shall be in place and operational prior to any construction activities. Post-construction.</u> The construction phase facilities shall be maintained regularly and be cleared of accumulated sediment as necessary. <p>SWPPP(s) for projects adjacent to or within drainages shall also incorporate the following erosion control criteria:</p> <ul style="list-style-type: none"> • Except when necessary for construction crossings or barriers, construction equipment shall not be operated in flowing water. • Stream diversion structures shall be designed to preclude accumulation of sediment. • Barriers shall be constructed to prevent the discharge of turbid water in excess of specified limits when work areas are adjacent to live streams. • Riparian vegetation shall be removed only when necessary. • Construction material shall not be deposited where it could be eroded and carried to the stream by runoff or stream flows. <p>MM 4.8-1b If a proposed project is located within or adjacent to a water body that requires a Streambed Alteration Agreement, one shall be completed by the project sponsor prior to initiation of any ground-disturbing activities.</p> <p>MM 4.8-1c If a proposed project is located within or adjacent to a water body within the jurisdiction of the San Francisco Bay Conservation and Development Commission (BCDC), the project must be in compliance with both the McAteer-Petris Act and the BCDC San Francisco Bay Plan.</p> <p>MM 4.8-1d In compliance with the Clean Water Act, any project which could potentially discharge pollutants into any water supply from any point source shall require National Pollutant Discharge Elimination System (NPDES) permits.</p>	

Impact	Mitigation Measures	Significance After Mitigation
	<p>MM 4.8-1e Where specific projects are located within or adjacent to a water body that is under the jurisdiction of the Regional Water Quality Control Board, the projects shall implement the following measures:</p> <ul style="list-style-type: none"> • <u>Include construction BMPs specifically targeted towards retaining sediment onsite, preventing erosion of streambanks and pollution from construction vehicles, and collecting and treating storm water runoff onsite.</u> • <u>Utilize staging areas for vehicles that are removed from riparian areas and all construction should occur during the dry season. If such measures cannot be taken, the individual project should be required to analyze alternatives and provide mitigation measures for adverse impacts.</u> • <u>Where feasible, avoid the removal of riparian vegetation. If not feasible, the individual project shall be required to demonstrate a plan for revegetation including a post-construction monitoring plan to determine the success of revegetation efforts. Monitoring and maintenance plans shall also be in place to ensure that runoff treatment mechanisms such as sediment basins or silt fences continue to function properly. Runoff from all areas of new impervious surfaces should be mitigated for potential impacts to receiving water quality and flow.</u> • <u>Where feasible, specific projects shall incorporate Low Impact Development techniques to implement Mitigation Measure 4.8-1e.</u> 	
<p>Impact 4.8-2 The transportation improvements in the 2009 CTP would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.8-3 The transportation improvements in the 2009 CTP could alter existing drainage patterns or substantially increase the rate or amount of surface runoff. This could contribute runoff water that exceeds the capacity of</p>	<p>MM 4.8-3a In implementing subsequent projects, project sponsors shall comply with design guidelines established by the California Stormwater Best Management Practice Handbook for New Development and Redevelopment or other methods acceptable to Caltrans, the County, and/or cities, as applicable, to minimize the increase in volume and rate of stormwater runoff and amount of pollutants entering the storm drains. Existing pervious surfaces shall be</p>	<p>Less than significant</p>

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<p>existing or planned stormwater drainage systems and result in flooding.</p>	<p>preserved to the extent feasible to minimize increases in stormwater runoff and rates. Additional measures may include construction of detention basins or structures that will delay peak flows and reduce flow velocities, or expansion and restoration of wetlands and riparian buffer areas and use of swales that serve as open drain systems to manage surface water runoff.</p> <p>MM 4.8-3b Subsequent projects shall comply with Caltrans, County, or city stormwater quality control measures required under their applicable NPDES permit requirements for stormwater discharges, as applicable.</p> <p>MM 4.8-3c All bridges and culverts shall be designed so that water is adequately conveyed throughout project-specific sites. Adequate conveyance can be confirmed by the project applicant preparing and submitting a drainage plan to the appropriate permitting agency. The drainage plan shall depict the specifics of the project drainage system. The drainage plan shall demonstrate that the system components are adequately sized and configured to address peak runoff and protect against storm events as required by the applicable agency.</p>	
<p>Impact 4.8-4 The 2009 CTP will not place roadways or other structures within a 100-year flood hazard area that could impede or redirect flood flows.</p>	<p>None required.</p>	<p>Less than significant</p>

Impact	Mitigation Measures	Significance After Mitigation
Land Use		
<p>Impact 4.9-1 Implementation of the transportation improvements in the proposed 2009 CTP would generally be consistent with existing local land use plans and policies, given the bottom-up planning process used to develop SCTA's transportation priorities. As such, the CTP is not expected to cause any land use disruption or displacement and would generally bring together communities by encouraging policies and projects that better integrate land use and transportation planning.</p>	<p>Although this impact is less than significant, consistency with local land use plans and policies can be further assured through implementation of the following recommended mitigation measure: MM 4.9-1 During the project design and environmental review phase, lead agencies for proposed CTP projects shall consult with the appropriate land use agency(ies) to ensure consistency with local land use policies, particularly for Caltrans projects. If any inconsistency is identified, the project shall be designed and engineered to assure consistency with local land use policies.</p>	<p>Less than significant</p>
<p>Impact 4.9-2 The proposed 2009 CTP does not include projects that are located within habitat conservation plans. As such, the CTP would not conflict with any applicable habitat conservation plan or natural community conservation plan.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.9-3 Implementation of the proposed 2009 CTP could result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to transportation-related uses. Without proper mitigation, this could lead to conflicts with zoning for agricultural use or conflicts with Williamson Act contracts.</p>	<p>There are four proposed projects in the 2009 CTP that are located on or directly adjacent to areas designated as important agricultural resources. While the amount of agricultural lands that would potentially be impacted by these projects is unclear, any relative impact on the county's regionally significant agricultural lands is considered less than significant. Nevertheless, if particular projects would eliminate significant farmlands, the following measure is recommended to address these circumstances: MM 4.9-3 Project sponsors shall perform project-specific mitigation measures prior to certification of environmental documentation that would minimize the conversion of farmland. Mitigation measures that may be considered include:</p> <ul style="list-style-type: none"> • Placement of berms or walls and fencing for the reduction of conflicts between transportation and farming uses. • Corridor realignment to avoid farmland or direct impacts to 	<p>Less than significant</p>

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Impact	Mitigation Measures	Significance After Mitigation
	farmland. <ul style="list-style-type: none"> • Setbacks to avoid farmland encroachment. • Where conversion of farmlands of concern cannot be avoided, require (at minimum) long-term preservation of one acre of existing farmland of equal or higher quality for each acre of state-designated Prime Farmland, Farmland of Statewide Importance, and Unique Farmland that would be converted to non-agricultural uses. This protection may consist of the establishment of farmland easements or other similar mechanisms. 	
Noise		
<p>Impact 4.10-1</p> <p>2009 CTP projects will generate short-term construction-generated noise that could result in a substantial temporary increase in ambient noise and groundborne vibration levels at nearby noise-sensitive land uses. This could result in the exposure of persons to or generate noise levels in excess of standards established in local general plans or noise ordinance or applicable standards of other agencies.</p>	<p>MM 4.10-1</p> <p>Noise and groundborne vibration-reduction measures shall be identified and incorporated into the construction activities of subsequent projects under the CTP to reduce potentially significant impacts to nearby noise-sensitive land uses, to the extent feasible. Such measures may include, but are not necessarily limited to, the following:</p> <ul style="list-style-type: none"> • Construct temporary sound barriers to shield noise-sensitive land uses. • Locate noise-generating stationary equipment (e.g., power generators, compressors) at the farthest practical distance from nearby noise-sensitive land uses. • Phase demolition, earth-moving, and ground-impacting operations so as not to occur in the same time period. • Use equipment noise-reduction devices (e.g., mufflers, intake silencers, and engine shrouds) in accordance with manufacturers' recommendations. • Substitute noise-generating equipment with quieter equipment or procedures. For instance, In comparison to impact piles, drilled piles or the use of a sonic or vibratory pile driver are quieter alternatives where geological conditions would permit their use. • Limit noise-generating construction activities to the least noise-sensitive daytime hours. 	<p>Less than significant</p>

Impact	Mitigation Measures	Significance After Mitigation
<p>Impact 4.10-2</p> <p>Proposed roadway improvements in the CTP, particularly new, realigned, or expanded roadways, could cause a substantial increase in ambient noise in areas that would exceed standards established in local general plans or noise ordinances and increase local noise levels by three or more dBA over existing conditions.</p>	<p>MM 4.10-2</p> <p>Project sponsors for proposed CTP projects shall analyze individual projects, in accordance with applicable CEQA and/or NEPA requirements, for potential noise and groundborne vibration impacts. Where significant impacts are identified, mitigation measures shall be implemented to reduce identified adverse noise impacts. Such measures may include, but are not necessarily limited to, the following:</p> <ul style="list-style-type: none"> • Construction of acoustic barriers to shield nearby noise-sensitive land uses. The specific heights, lengths, and feasibility of acoustic barriers will be determined on a project-by-project basis and will involve Caltrans in the determination of feasibility for such barriers along state highways. • Site/project redesign and use of buffers to ensure that future development is compatible with transportation facilities. • Changes to transportation facility design. Examples may include changes in proposed roadway alignment or construction of roadways so that they are depressed below grade of nearby sensitive land uses to create an effective barrier between the roadway and sensitive receptors. • Improvement of the acoustical insulation of dwelling units where setbacks and sound barriers do not sufficiently reduce noise. • Use of low-noise pavements (e.g., rubberized asphalt). 	<p>Significant and unavoidable</p>
<p>Impact 4.10-3</p> <p>The proposed SMART commuter rail service improvements would permanently increase ambient noise levels along the railroad right-of-way from periodic passing trains. However, noise impacts would not exceed FTA's Severe Noise Impact Criteria and local noise standards in general plans or noise ordinances.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.10-4</p> <p>Proposed rail service on the railroad right-of-way will require use of train horns that will produce substantial</p>	<p>No mitigation is available.</p>	<p>Significant and unavoidable</p>

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increases in ambient noise that would exceed applicable noise exposure standard of 60 dBA Ldn.		
<p>Impact 4.10-5</p> <p>The proposed CTP will create permanent increases in groundborne vibration from commuter rail operations that would expose persons to minimal groundborne vibration or groundborne noise levels that are less than FTA's vibration impact criterion of 0.01 inches per second root-mean-square (RMS) vibration velocity. While the vibration velocity impacts would be perceptible to humans, they would not be considered bothersome.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.10-6</p> <p>The proposed 2009 CTP would not include projects located within an airport land use plan or private airstrip that would expose people residing or working in the project area to increased noise levels. Further, while proposed projects would be located in the vicinity of existing airports, they would not expose people to substantially increased noise levels.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Population and Housing</p>		
<p>Impact 4.11-1</p> <p>Implementation of the transportation improvements proposed in the 2009 CTP could potentially result in the displacement of existing residences or businesses and result in the need to construct additional housing units</p>	<p>MM 4.11-1</p> <p>Prior to the approval of any CTP project that results in displacement of population, housing, or jobs, the project sponsor shall evaluate alternate route alignments and transportation facilities that minimize the displacement of homes and businesses to the maximum extent feasible. If the displacement of residences is warranted, the project sponsor shall coordinate with the Sonoma County Community Development Commission and implement a relocation program for persons that would be displaced by the proposed project, in</p>	<p>Less than significant</p>

Impact	Mitigation Measures	Significance After Mitigation
in the county over the planning horizon.	compliance with the California Relocation Assistance Law.	
<p>Impact 4.11-2</p> <p>The transportation projects included in the Comprehensive Transportation Plan will not induce substantial population growth in an area. The CTP will not directly result in new development of housing or employment centers or extend roads or other infrastructure that would expose substantial new areas to unplanned growth.</p>	<p>None required.</p>	<p>Less than significant</p>
Public Services		
<p>Impact 4.12-1</p> <p>Implementation of the proposed 2009 CTP could pose demands on future public services, such as police and fire/emergency personnel. However, these demands are expected to be minimal and unlikely to require the construction of additional public facilities in the county.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.12-2</p> <p>Implementation of the proposed 2009 CTP would result in new SMART commuter rail service and freight service that could impact emergency response times.</p>	<p>None required.</p>	<p>Less than significant</p>
<p>Impact 4.12-3</p> <p>Construction of capital improvements in the proposed CTP will produce solid waste that will not impact the existing Central Landfill operated by Sonoma County. Construction debris would need to be transported to</p>	<p>MM 4.12-3a If a CTP project requires solid waste collection, the lead agency will ensure that the existing solid waste disposal facility(ies) can accommodate the demand for disposal.</p> <p>MM 4.12-3b The construction site contractor for a CTP project shall coordinate with Sonoma County's Recycling Coordinator to ensure that source reduction techniques and recycling measures are incorporated into</p>	<p>Less than significant</p>

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other facilities outside of Sonoma County.	<p>project construction.</p> <p>MM 4.12-3c</p> <p>Lead agencies for CTP projects shall integrate green building measures into project design, such as those identified in the U.S. Green Building Council's Leadership in Energy and Environmental Design, Energy Star Homes, GreenPoint Rated Homes, and the California Green Builder Program. These measures would include the following:</p> <ul style="list-style-type: none"> • Reuse and minimization of construction and demolition (C&D) debris and diversion of C&D waste from landfills to recycling facilities. • The inclusion of a waste management plan that promotes maximum C&D diversion. • Source reduction through (1) use of materials that are more durable and easier to repair and maintain, (2) design to generate less scrap material through dimensional planning, (3) increased recycled content, (4) use of reclaimed materials, and (5) use of structural materials in a dual role as finish material (e.g., stained concrete flooring, unfinished ceilings). • Reuse of existing structure and shell in renovation projects. • Design for deconstruction without compromising safety. • Design for flexibility through the use of moveable walls, raised floors, modular furniture, moveable task lighting, and other reusable building components. • Development of indoor recycling program and space. 	
Energy		
<p>Impact 4.13-1</p> <p>Implementation of the 2009 CTP would not directly cause increases in energy consumption from the transportation sector. However, in addressing current and projected mobility challenges, Though the 2009 CTP would accommodate planned growth in Sonoma County, <u>projected that will substantially increase</u> consumption of</p>	<p>MM 4.13-1a</p> <p>Project sponsors shall promote green building standards in new or expanded transportation-related facilities (e.g., transit maintenance facilities) that can reduce energy use, rely on renewable energy resources, and reduce waste generation and water usage.</p> <p>MM 4.13-1b</p> <p>Project sponsors shall promote use of low-energy technologies in roadway and transit facilities (e.g., use light emitting diodes in street lights, rail switching facilities).</p> <p>MM 4.13-1c</p> <p>As transit operators invest in new or expanded bus and rail service, they shall consider investments in alternative fuel buses and rolling stock (e.g., hybrid electric drivetrains) that consume less</p>	<p>Significant and unavoidable. <u>Less than significant.</u></p>

Impact	Mitigation Measures	Significance After Mitigation
<p>nonrenewable petroleum-based products like gasoline and diesel fuel are projected to decrease over existing conditions by 2035. By 2035, motor vehicles would consume 68,728 159,000 fewer more gallons of gasoline and 11,286 5,000 more gallons of diesel fuel per day than under existing conditions. This represents a 12 20 percent decrease in gasoline consumption and a 16 7 percent increase in diesel fuel. In addition, proposed commuter rail service and freight service on the SMART corridor will consume 916,000 gallons of diesel fuel daily 30 billion BTUs of energy annually starting in 2014; however, any increases in diesel fuel for locomotives is expected to be more than offset by reductions in vehicle use from SMART riders. The CTP's cumulative impact on energy consumption is less than significant and unavoidable.</p>	<p>nonrenewable fossil fuels.</p>	
<p>Impact 4.13-2 Construction of capital roadway and transit improvements in the 2009 CTP will involve use of off-road vehicles and equipment that will consume gasoline, diesel, electricity, natural gas, and other nonrenewable energy sources. These increases in energy consumption will generally be consistent with local general plan policies in conservation elements and other policy plans and are not expected to be substantial.</p>	<p>MM 4.13-2 Project sponsors of capital projects shall evaluate the energy demands of construction activities and incorporate best available control technology and best management practices to the extent practicable. This includes the following types of measures that can reduce energy consumption during project construction:</p> <ul style="list-style-type: none"> • Reduce vehicle trips for construction materials to and from construction sites; • Limit idling of construction equipment engines to less than 15 minutes; • Require that all construction engines be properly tuned; • Encourage ridesharing by construction personnel traveling to and from construction sites; • Plan construction activities to minimize the use of on-site 	<p>Less than significant</p>

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	<p>construction equipment; and</p> <ul style="list-style-type: none"> Require off-road vehicles and equipment at construction sites to operate on alternative fuels. 	
Cumulative Impacts		
<p>Impact 5.0-1 <u>Implementation of the 2009 CTP would help decrease emissions of carbon dioxide equivalents (CO₂e) from motor vehicles in 2035 by almost 550,000 pounds per day over existing (2005) conditions. While any emissions of GHG from the transportation sector contribute to the significant issues of global climate change, the CTP's contribution to a net reduction in GHG emissions is considered to be beneficial.</u></p>	<p>MM 5.0-1a SCTA shall consider working in partnership with the Bay Area Air Quality Management District to conduct demonstration projects in Sonoma County that help reduce GHG emissions. This would help implement Bay Area Ozone Strategy TCM-17.</p> <p>MM 5.0-1b SCTA shall work in partnership with appropriate stakeholders (e.g., Bay Area Air Quality Management District, Sonoma County Alliance, Leadership Institute for the Ecology and the Economy) to develop public information campaigns to educate residents, merchants, and the traveling public about transportation strategies that can help reduce GHG emissions.</p> <p>MM 5.0-1c SCTA shall encourage project sponsors to design transportation-related improvements such as transit buildings and facilities to be certified by the Leadership in Energy and Environmental Design program (LEED).</p> <p>MM 5.0-1d SCTA shall work with local governments to limit idling time for commercial vehicles, including delivery and construction vehicles.</p> <p>MM 5.0-1e SCTA shall work with project sponsors to develop standards for construction management, including use of recycled materials or low-carbon products.</p> <p>MM 5.0-1f SCTA shall work with MTC, BCDC, and other partners to address vulnerability of the county's transportation infrastructure and appropriate adaptation strategies to protect those transportation resources that are likely to be impacted by sea level rise and flooding associated with global climate change. Examples could include, but not be limited to:</p> <ul style="list-style-type: none"> Engineering designs for new transportation projects shall demonstrate that they have factored in sea level rise and potential increases in storm surge inundation, and are budgeting for and already incorporating mitigation measures to adapt to projected sea level rise and storm surge. These mitigation measures should consider the effects on Bay and coastal zone resources and avoid or reduce risk to the infrastructure and the region. For transportation projects that increase the capacity of existing infrastructure, project sponsors shall demonstrate they have investigated the vulnerability of their existing facilities to sea level rise and potential increases in storm surge inundation, and are budgeting for and already incorporating mitigation measures to adapt to projected sea level rise and storm surge. These mitigation measures should consider the effects on Bay 	<p>Beneficial</p>

Impact	Mitigation Measures	Significance After Mitigation
	<p>and coastal zone resources and avoid or reduce risk to the infrastructure and the region.</p> <p>MM 5.0-1g Where applicable, project sponsors for subsequent projects under the 2009 CTP shall include mitigation measures to reduce impacts related to significant storm events, sea level rise, and flooding resulting from global climate change.</p>	
<p>Impact 5.0-2 Implementation of the 2009 CTP would result in construction of capital improvements that would emit carbon dioxide and other greenhouse gas emissions. While the continuation of construction activities over time will contribute GHG emissions to existing climate change, construction-related emissions would be expected to decrease per capita over time as low-carbon fuel standards and other climate change measures consistent with AB 32 and other State mandates are implemented. In addition, these impacts would be short-term in duration and as such, this impact is considered to be less than significant.</p>	<p>MM 5.0-2a SCTA shall work with the BAAQMD and other appropriate stakeholders to develop guidance and/or requirements to use low-carbon emitting techniques or equipment in the construction process for capital improvements included in the 2009 CTP.</p>	<p><u>Less than significant</u></p>
<p>Impact 5.0-3 Implementation of the 2009 CTP would help decrease emissions of carbon dioxide equivalents (CO₂e) in 2035 by almost 550,000 pounds per day over existing (2005) conditions. This would be a 21.6 percent reduction in GHG emissions by 2035, which is generally consistent with AB 32's mandate to reduce GHG emissions to 1990 levels by 2020 (equivalent to an approximately 15 percent reduction in GHG from today's levels) as well as local efforts in Sonoma County. This impact is</p>	<p>MM 5.0-3 SCTA shall work with appropriate stakeholders provide funding for future transportation plans and projects are consistent with AB 32 implementation standards and guidelines once they are developed.</p>	<p><u>Less than significant</u></p>

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Impact	Mitigation Measures	Significance After Mitigation
considered to be less than significant.		