

# Grove Avenue Corridor Project

SAN BERNARDINO COUNTY, CALIFORNIA  
DISTRICT 8 – SBD – Ontario  
FPN HPLUL-5092(039)/ Project ID: 0815000220

## Draft Environmental Impact Report/ Environmental Assessment



Prepared by the

**State of California Department of Transportation  
and  
City of Ontario**

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. 327 and the Memorandum of Understanding dated December 23, 2016, and executed by FHWA and Caltrans.



August 2019







# General Information about This Document

## ***What's in this document:***

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration (FHWA), and the City of Ontario have prepared this Draft Environmental Impact Report/Environmental Assessment (EIR/EA), which examines the potential environmental impacts of the alternatives being considered for the Grove Avenue Corridor Project (proposed project or project) located in San Bernardino County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA). The City of Ontario is the lead agency under the California Environmental Quality Act (CEQA). The document tells you why the project is being proposed, what alternatives we have considered for the project, how the existing environment could be affected by the project, the potential impacts of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

## ***What you should do:***

- Please read this document.
- Additional copies of this document and the related technical studies are available for review at:
  - Caltrans District 8 office at 464 W. 4<sup>th</sup> Street, San Bernardino, CA 92401 and at the City of Ontario City Clerk at 303 East “B” Street, Ontario, CA 91764-4105. This document may be downloaded at the following website: [www.ontarioca.gov/planning](http://www.ontarioca.gov/planning)
  - South Ontario Library, 3850 East Riverside Drive, Ontario, CA 91761
  - Ovitt Family Community Library, 215 East “C” Street, Ontario, CA 91764
- Attend the public meeting at the Ontario Senior Center located at 225 East “B” Street, Ontario, CA 91764 from 5:00 to 8:00 p.m. on September 19, 2019.
- We’d like to hear what you think. If you have any comments about the proposed project, please attend the public meeting and/or send your written comments to the City of Ontario by the deadline.
  - Submit comments via postal mail to:  
Mr. Richard Ayala, Senior Planner, City of Ontario, Planning Caltrans,  
“Attn: Grove Avenue Corridor Project”, 303 East “B” Street, Ontario, CA 91764-4105
  - Submit comments via e-mail to [rayala@ontarioca.gov](mailto:rayala@ontarioca.gov)
- Be sure to submit comments by the deadline: October 2, 2019.

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***What happens next:***

After comments are received from the public and reviewing agencies, the City of Ontario and Caltrans, as assigned by FHWA, may (1) give environmental approval to the proposed project, (2) do additional environmental studies, or (3) abandon the project. If the project is given environmental approval and funding is obtained, the City of Ontario and Caltrans could design and construct all or part of the project.

***Alternative formats:***

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please call or write to Mr. Richard Ayala, Senior Planner, City of Ontario, Planning Department, "Attn: Grove Avenue Corridor Project", 303 East "B" Street, Ontario, CA 91764-4105; (909) 395-2036 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY), 1 (800) 735-2929 (Voice) or 711.


Widen Grove Avenue, from 4<sup>th</sup> Street to Airport Drive

**DRAFT ENVIRONMENTAL IMPACT REPORT/ENVIRONMENTAL ASSESSMENT**

Submitted Pursuant to: (State) Division 13, Public Resources Code  
(Federal) 42 U.S.C. 4332(2)(C) and 49 U.S.C. 303

THE STATE OF CALIFORNIA  
Department of Transportation  
and  
City of Ontario

8/7/19  
Date of Approval

  
David Bricker  
Deputy District Director, District 8  
Division of Environmental Planning  
California Department of Transportation  
NEPA Lead Agency

8/7/19  
Date of Approval

  
Richard Ayala  
City of Ontario  
CEQA Lead Agency

The following person may be contacted for additional information concerning this document:

Richard Ayala  
City of Ontario  
909 395 2036  
303 East "B" Street  
Ontario, CA 91764



# Summary

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## ***National Environmental Policy Act Assignment***

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 United States Code (U.S.C.) 327, for more than 5 years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (Moving Ahead for Progress in the 21<sup>st</sup> Century) (Public Law [P.L.] 112-141), signed by President Obama on July 6, 2012, amended 23 U.S.C. 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the California Department of Transportation (Caltrans) entered into a Memorandum of Understanding (MOU) pursuant to 23 U.S.C. 327 (National Environmental Policy Act [NEPA] Assignment MOU) with the Federal Highway Administration (FHWA). The NEPA Assignment MOU became effective October 1, 2012, and was renewed on December 23, 2016, for a term of 5 years. In summary, Caltrans continues to assume FHWA responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the United States Department of Transportation (USDOT) Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions (CE) that FHWA assigned to Caltrans under the 23 U.S.C. 326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

Caltrans is the lead agency under NEPA. The City of Ontario (City) is the lead agency under the California Environmental Quality Act (CEQA). The proposed project is known as the Grove Avenue Corridor Project (Project) and is located in the city of Ontario, San Bernardino County, California.

## **S-1 Overview of Project Area**

The City, in cooperation with Caltrans District 8, proposes to widen Grove Avenue in the city of Ontario and the county of San Bernardino from four to six lanes between 4<sup>th</sup> Street and State Street/Airport Drive. Grove Avenue is located approximately 1.4 miles east of Euclid Avenue and approximately 1.2 miles west of Vineyard Avenue along Interstate 10 (I-10). The project area is bound on the north by 4<sup>th</sup> Street and on the south by State Street/Airport Drive. The widened segment of Grove Avenue would be located south of I-10 and would serve the city of Ontario.

Land uses in the project vicinity include residential, commercial, industrial, parks and recreation, and public facilities. In the project study area, several approved or planned projects in the project study area may affect or require design coordination with the project. These projects are:

- I-10 Corridor Project (FHWA)
- I-10/Grove Avenue Interchange Project
- Omnitrans West Valley Connector (Federal Transit Administration [FTA])
- I-15 Corridor Improvement Project
- San Bernardino County Flood Control District's Master Stormwater System Maintenance Program (MSWMP)
- Metro Gold Line Foothill Extension Construction Authority
- College Park Specific Plan
- Ontario Center Specific Plan
- Ontario Festival Specific Plan
- Meredith International Centre Specific Plan
- Guasti Plaza Specific Plan
- Omnitrans Route 290
- San Bernardino County Transportation Authority (SBCTA) Ontario Airport Rail Access
- Mountain Village – City of Ontario Specific Plan
- Pomona Corridors Specific Plan

## **S-2 Purpose and Need**

The purpose of the proposed Grove Avenue Corridor Project is to accomplish the following objective:

- Alleviate existing and anticipated future congestion along Grove Avenue between 4<sup>th</sup> Street and Airport Drive and improve traffic operations along the corridor in the city of Ontario.

Improvements to Grove Avenue are needed to accommodate recent and projected growth in passenger and goods/trucks movement associated with Ontario International Airport and changes in land use since Grove Avenue was originally constructed.

Based on traffic projections and the existing and planned land uses in the vicinity, the existing Grove Avenue facility is forecast to operate at unsatisfactory level of service (LOS) at three intersections within the project limits by 2045 without improvements.

### **S-3 Proposed Action**

Caltrans, in cooperation with the City and the County, proposes to widen Grove Avenue from a four-lane roadway to a six-lane roadway from 4<sup>th</sup> Street to State Street/Airport Drive. Grove Avenue is located approximately 1.4 miles east of Euclid Avenue and approximately 1.2 miles west of Vineyard Avenue along I-10. The project area is bound on the north by 4<sup>th</sup> Street and on the south by State Street/Airport Drive.

One No Build Alternative and one Build Alternative are under consideration. The No Build Alternative would include no improvements.

The Build Alternative proposes local street improvements along Grove Avenue and improvements at the Grove Avenue/Holt Boulevard intersection. This alternative is bound on the north by 4<sup>th</sup> Street and on the south by State Street/Airport Drive. Table S-1 provides a summary of these alternatives. Because the No Build Alternative represents the scenario under which existing conditions remain unchanged, the Build Alternative has been identified by the Project Development Team (PDT) as the preferred alternative and is generally referred to as the Grove Avenue Corridor Project or the proposed project (or project) in this document.

### **S-4 Joint CEQA/NEPA Document**

The Grove Avenue Corridor Project is subject to federal, as well as City and State, environmental review requirements because the City proposes the use of federal funds from FHWA and/or the project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with both CEQA and NEPA. The City is the project proponent and the lead agency under CEQA. FHWA's responsibility for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S.C. Section 327 and the MOU dated December 23, 2016, and executed by FHWA and Caltrans. With NEPA Assignment, FHWA assigned and Caltrans assumed all of the USDOT Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within California, except for certain categorical exclusions that FHWA assigned to Caltrans under the 23 U.S.C.

326 CE Assignment MOU, projects excluded by definition, and specific project exclusions.

Some impacts determined to be significant under CEQA may not lead to a determination of significance under NEPA. Because NEPA is concerned with the significance of the project as a whole, quite often a “lower level” document is prepared for NEPA. One of the most commonly seen joint document types is an Environmental Impact Report (EIR)/Environmental Assessment (EA).

After receiving comments from the public and reviewing agencies, a Final EIR/EA will be prepared. The City and Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final EIR/EA will include responses to comments received on the Draft EIR/EA and will identify the preferred alternative. If the decision is made to approve the project, a Notice of Determination will be published for compliance with CEQA, and Caltrans will decide whether to issue a Finding of No Significant Impact (FONSI) or require an Environmental Impact Statement (EIS) for compliance with NEPA. A Notice of Availability (NOA) of the FONSI will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order (EO) 12372.

## **S-5 Project Impacts**

Table S-1 provides a brief comparison of the impacts of the No Build Alternative and the Build Alternative (proposed project). Other alternatives to the project (e.g., alternative sites, reversible lanes, widening both sides, widening to the west) would not meet the purpose and need or would have greater impacts and have been considered but dismissed from further consideration.



Table S-1. Summary of Major Potential Impacts from Alternatives

Environmental Resource	No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
Consistency with State, Regional, and Local Plans and Programs	The No Build Alternative is inconsistent with several plans.	The Build Alternative is inconsistent with the Southern California Association of Governments (SCAG) Regional Comprehensive Plan (RCP).	<p><b>LU-3:</b> The remnant parking lot on the west side of John Galvin Park will be reconfigured to maintain as many parking spots at this location as possible.</p> <p><b>VA-2:</b> Where it is not feasible to save the existing trees, new tree and vegetation plantings shall be included in the final design of the roadway. Replacement trees shall be two 24-inch boxed trees for each tree removed by the project. All areas disturbed by the project shall be fitted with new landscaping, including trees, groundcovers, accent plants, and turf grass (in park areas adjacent to existing remaining turf).</p> <p><b>NC-1:</b> The project shall preserve as many mature trees as practicable. Although there is no City or County ordinance for tree removal, the project's landscape plan will incorporate a tree replacement plan with a replacement ratio of 2:1 – for every mature tree removed, two trees will be planted to be consistent with Measure VA-2. Mature trees (larger than 20 feet high) that are to be removed shall be replaced with two 24-inch box trees. Design plans shall indicate locations of existing mature trees (larger than 20 feet high) to be preserved in place. Tree replacement shall meet all Caltrans and City standards and policies, and near John Galvin Park, the replacement tree species will incorporate species that have been identified as those of the original planting of John Galvin Park in the 1930s</p>
Parks and Recreation	No impact.	Permanent impacts to approximately 0.12 acre of park space. 1.2 acres of park space would be temporarily impacted due to temporary construction easements (TCE).	<p><b>LU-1:</b> Turf grass and rock curbs will be replaced in TCE areas within Grove Memorial Park to match pre-project conditions in consultation with the property owner (City) during and at completion of construction.</p> <p><b>LU-2:</b> Turf grass and rock curbs will be replaced in TCE areas within John Galvin Park to match pre-project conditions in consultation with the property owner (City) during and at completion of construction.</p> <p><b>LU-3:</b> The remnant parking lot on the west side of John Galvin Park will be reconfigured to maintain as many parking spots at this location as possible.</p>

Table S-1. Summary of Major Potential Impacts from Alternatives

Environmental Resource	No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
Growth	The No Build Alternative is inconsistent with the regional mobility goals in the study area; however, it is not anticipated to influence growth within the study area.	No impact.	No avoidance, minimization, and/or mitigation measures required.
Cultural Resources	No impact.	No impact.	<p><b>CR-1:</b> If cultural resources are discovered at the job site, all work activities shall stop within a 60-foot radius of the discovery, the discovery area shall be protected, and the Resident Engineer shall be notified. Cultural resources shall not be moved or taken from the job site until Caltrans investigates and determines the significance of the find. Work activities shall not resume within the discovery area until Caltrans provides written notification authorizing work activities to resume.</p> <p><b>CR-2: Human Remains.</b> If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission (NAHC), who will designate the Most Likely Descendent (MLD). At this time, the Caltrans District 8 Environmental Branch Chief, Andrew Walters (909) 383-2647, will be contacted so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.</p>
Community Character and Cohesion and Environmental Justice	No impact.	No impact.	<p><b>COM-1:</b> Where acquisition and relocation are unavoidable, provisions of the Uniform Act and the 1987 Amendments, as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by USDOT (March 2, 1989) and, where applicable, the California Public Park Preservation Act of 1971, will be followed. An appraisal of the affected property will be obtained, and an offer for the full appraisal will be made.</p> <p><b>COM-2:</b> Outreach activities targeted to low-income residents will be conducted during the planning, design, and construction phases of the Build Alternative.</p>

Table S-1. Summary of Major Potential Impacts from Alternatives

Environmental Resource		No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
Utilities/Emergency Services		Without the proposed project improvements, emergency response times would continue to worsen.	Approximately 136 utilities have the potential to be affected by the proposed Build Alternative.	<p><b>UT-1:</b> During final design, the Project Engineer will prepare utility relocation plans in consultation with the affected utility providers/owners for those utility facilities that will need to be relocated, removed, or protected in-place.</p> <p><b>UT-2:</b> During final design, the Project Engineer will prepare utility relocation plans in consultation with the affected utility providers/owners for those utility facilities that will need to be relocated, removed, or protected in place. If relocation is necessary, the final design will focus on relocating utilities within the State right-of-way (ROW) or other existing public ROWs and/or easements. If relocation outside of existing or the additional public ROWs and/or easements required for the project is necessary, the final design will focus on relocating those facilities in adjacent public ROWs and in a manner so as to not result in significant community, land use, or natural resource impacts.</p> <p><b>UT-3:</b> Close coordination with utility service providers and implementation of a public outreach program will be conducted, as needed, to minimize impacts to surrounding communities.</p> <p><b>UES-1:</b> Prior to and during any construction activities, the City will coordinate with emergency service providers to ensure that all providers are aware of temporary road closures and detours.</p> <p><b>UES-2:</b> Emergency service phone numbers (i.e., fire, emergency medical, police) will be posted in visible locations in all active construction areas.</p> <p><b>UES-3:</b> To avoid conflicts during construction, the project's Resident Engineer will notify all emergency and other essential service providers no less than 2 weeks prior to the start of construction. Agencies to be notified include:</p> <ul style="list-style-type: none"> <li>• City of Ontario Police Department</li> <li>• City of Ontario Fire Department</li> <li>• San Bernardino County Sheriff's Department</li> <li>• San Bernardino County Fire Department</li> </ul>
Relocation	Business displacements	No impact.	0 full business relocations	<p><b>COM-1:</b> Where acquisition and relocation are unavoidable, provisions of the Uniform Relocation Act and the 1987 Amendments, as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for</p>

**Table S-1. Summary of Major Potential Impacts from Alternatives**

Environmental Resource		No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
	Residential displacements	No impact.	12 full residential displacements	Federal and Federally Assisted Programs adopted by USDOT (March 2, 1989) and, where applicable, the California Public Park Preservation Act of 1971 will be followed. An appraisal of the affected property will be obtained, and an offer for the full appraisal will be made.
Traffic and Transportation/ Pedestrian and Bicycle Facilities		Two intersections are forecast to operate at unsatisfactory LOS in opening year (2025) no-build conditions: By 2045, four intersections in the immediate vicinity are forecast to operate at unsatisfactory LOS in design-year (2045) no-build conditions.	Average delays for intersections in the immediate project vicinity are forecast to significantly improve with implementation of the Build Alternative. Because no arterial roadways would be permanently closed, there are no permanent impacts to access or circulation, and no indirect impacts are anticipated with implementation of the Build Alternative.	<p><b>T-1:</b> Final Transportation Management Plan (TMP) – A TMP (July 2015) was prepared during development of the preliminary engineering for the project. During final design, a Final TMP will be prepared. At a minimum, the Final TMP will include the detailing of any projected temporary street closures or expected traffic delays due to project construction activities. The Final TMP will include a public awareness program that will use an appropriate combination of the Highway Advisory Radio (HAR), local media, newsletters, and/or flyers. The following elements will be major components of the Final TMP: Public Awareness Campaign, particularly related to the scheduling of work; Construction Zone Enhanced Enforcement Program (COZEED); utilization of portable changeable message signs (CMSs); and notification to be sent to local cities and emergency responders, if applicable.</p> <p><b>T-2:</b> During project construction, the Project Engineer will ensure that the measures in the Final TMP are properly implemented by the contractor.</p> <p><b>T-3:</b> During final design and construction, the Project Engineer will work with affected property owners to identify means to avoid and minimize parking impacts, including space management, such as restriping of parking areas and identifying parking replacement options.</p> <p><b>T-4:</b> All pedestrian facilities will be designed to meet or exceed requirements of the Americans with Disabilities Act (ADA) and current safety standards. Access to pedestrians and bicyclists shall be maintained to the extent practicable during the construction period.</p> <p><b>T-5:</b> Prior to and during construction, the Project Engineer will coordinate with Omnitrans, the Ontario-Montclair School District, and other affected transit providers to request and comply with applicable procedures for any required temporary bus stop relocations or other disruptions to transit service during construction, if necessary.</p>

Table S-1. Summary of Major Potential Impacts from Alternatives

Environmental Resource	No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
			<b>T-6:</b> During final design and prior to and during construction, the Project Engineer will coordinate with the design and construction team for the I-10/Grove Avenue Interchange Project to ensure the Grove Avenue Corridor Project and the I-10/Grove Avenue Interchange Project are designed compatibly.
Paleontological Resources	No impact	Low to moderate potential for impacting paleontological resources.	<b>P-1:</b> Develop and implement a Paleontological Monitoring Plan (PMP), with monitoring in excavations more than 10 feet deep for sediments mapped as Holocene at the surface and more than 5 feet deep for excavations mapped as Pleistocene at the surface. The PMP will guide and facilitate the identification and treatment of paleontological resources, if any are found, during project construction to reduce adverse effects on significant resources. The PMP will summarize identified paleontologically sensitive areas within the area of potential effects (APE), the organization and responsibilities of the paleontological team, the responsibilities of other parties, and the treatment and communications procedures to be implemented if paleontological resources are encountered during the project.

**Table S-1. Summary of Major Potential Impacts from Alternatives**

<b>Environmental Resource</b>	<b>No Build Alternative</b>	<b>Build Alternative (Proposed Project)</b>	<b>Avoidance, Minimization or Mitigation Measures</b>
Hazardous Waste/Materials	No impact.	May require the removal of utility poles along Grove Avenue and Holt Boulevard that consist of creosote treated wood and are considered areas of concern (AOCs). If removed, the poles should be managed as treated wood waste (TWW) in accordance with the Department of Toxic Substances Control (DTSC) Alternative Management Standards for TWW. The Build Alternative would require the removal of multiple residential structures and, depending on the structures' age, they may contain asbestos-containing material (ACM) and lead-based paint (LBP). The presence of these materials would need to be investigated prior to removal of the structures to comply with environmental and worker safety regulatory requirements for ACM and LBP.	<b>HW-1:</b> Prior to property acquisition, limited soil investigations at 1194 E. Holt Boulevard and 1111 E. Holt Boulevard will be performed to determine the presence of compromised soils. If any compromised soils are present, they shall be removed and disposed of per regulatory requirements.
Cumulative Impacts	No impact.	No impact.	No avoidance, minimization, and/or mitigation measures required.
Visual/Aesthetics	No impact.	Less than substantial, the effect is anticipated to be a moderately low change to the visual environment.	<b>VA-1:</b> The existing trees, particularly within the park area, provide scale, shade, and visual relief to the extent of roadway paving. Preserving existing trees to the extent feasible will help maintain the existing visual character of the roadway. <b>VA-2:</b> Where it is not feasible to save the existing trees, new tree and vegetation plantings shall be included in the final design of the roadway. Replacement trees shall be two 24-inch boxed trees for each tree removed by the project. All areas disturbed by the project shall be fitted with new landscaping, including trees,

Table S-1. Summary of Major Potential Impacts from Alternatives

Environmental Resource	No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
			<p>groundcovers, accent plants, and turf grass (in park areas adjacent to existing remaining turf).</p> <p><b>VA-3:</b> To support the replacement of plantings, the project shall include a permanent irrigation system to all new plantings. Materials used for irrigation shall be as per City of Ontario standards.</p> <p><b>VA-4:</b> Decorative paving shall be employed for medians, islands, and parkway strips that are too narrow to plant. Paving color and texture/pattern shall match City of Ontario standards.</p>
Floodplain/Hydrology	No impact.	Culvert crossings would be extended to accommodate the roadway widening by 37 feet. The 100-year flood event would still be contained in the channel.	<p><b>HYD-1:</b> Provide positive drainage during construction and refrain from filling designated floodplains. Construction site surface runoff will be channeled into existing drainage facilities so as to not cause water flow on neighboring properties. Offsite flows will be managed in a manner that will mimic the existing drainage network and will not inundate the roadway surface of any of the existing drainage systems.</p> <p><b>HYD-2:</b> Implement standard Best Management Practices (BMPs) as identified in the City of Ontario's Water Quality Management Plan, including temporary construction site BMPs to address site soil stabilization and reduce deposition of sediments to receiving waters.</p> <p><b>HYD-3:</b> Include erosion control and water quality protection during construction at the West Cucamonga Channel. BMPs will be designed and implemented to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP). Typical measures that may be implemented include preservation of existing vegetation, use of soil binders or hydroseeding, and installation of silt fences or fiber rolls.</p> <p><b>HYD-4:</b> Contractor shall develop a contingency plan for unforeseen discovery of underground contaminants in the Stormwater Pollution Prevention Plan (SWPPP).</p> <p><b>HYD-5:</b> Limit construction activities between October and May to those actions that can adequately withstand high flows and entrainment of construction materials. The Contractor shall prepare a Rain Event Action Plan (REAP) and discuss high flows mitigation.</p>
Water Quality	No impact.	Would add 2.57 acres of additional Impervious Surface Area.	<b>WQ-1: Implement Temporary Construction BMPs.</b> The project will be required to conform to the requirements of the National Pollutant Discharge Elimination System (NPDES) Permit for

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Environmental Resource	No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
			<p>Construction Activities, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002.</p> <p><b>WQ-2: Prepare and Implement an SWPPP.</b> The Contractor will be required to develop an acceptable SWPPP. The SWPPP shall contain BMPs that have demonstrated effectiveness at reducing stormwater pollution. The SWPPP shall address all construction-related activities, equipment, and materials that have the potential to affect water quality. All Construction Site BMPs will be installed, maintained, and inspected to control and minimize the impacts of construction-related pollutants. The SWPPP shall include BMPs to control pollutants, sediment from erosion, stormwater runoff, and other construction-related impacts. In addition, the SWPPP shall include implementation of specific stormwater effluent monitoring requirements based on the project's risk level to ensure that the implemented BMPs are effective in preventing discharges from exceeding any of the water quality standards.</p> <p><b>WQ-3: Incorporate Design Principles into Final Roadway Design.</b> Design Principles are permanent measures to minimize pollution discharges by retaining source materials and stabilizing soils. The three objectives associated with Design Principle BMPs include maximizing vegetated surfaces; preventing downstream erosion; and stabilizing soil areas. These design objectives will be applied to the entire project.</p>
Air Quality	No impact.	Minimal short-term construction impacts are anticipated to be generated from excavation, grading, hauling, and various other activities needed to construct the project; however, reactive organic gas (ROG) and other emissions are expected to be low due to the limited construction activities scheduled for the project. Therefore, the thresholds of significance established for ROG emissions by the South Coast Air Quality	No avoidance, minimization, and/or mitigation measures required.



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Environmental Resource	No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
		Management District (SCAQMD) would not be exceeded during construction of the project.	
Noise	Without the proposed project, approximately 166 dwelling units would experience noise impacts. Noise levels for design-year no-build conditions are expected to increase up to 3 decibels (dB) over existing noise levels due to projected traffic volume increases over existing conditions. Estimated no-build traffic noise levels were found to approach or exceed the applicable Noise Abatement Criteria (NAC) at representative residential locations.	127 dwelling units are expected to experience noise impacts. Increases in noise levels are due to the addition of the two lanes (one in each direction) within the Grove Avenue corridor. The additional lanes would shift traffic closer to representative receivers within the proposed project area. Under future design-year 2045 build conditions, most of the receiver locations have traffic noise levels that were found to approach or exceed the applicable NAC.	<b>N-1:</b> Based on the studies completed, Caltrans and the City will incorporate noise abatement in the form of soundwalls that meet the criteria for reasonableness and feasibility. The recommended soundwalls would reduce the traffic noise by at least 5 dB at the impacted receivers, would meet the design goal by providing a 7-dB reduction for at least one receiver, and would cost less than the reasonable cost allowance. If, during final design, conditions have substantially changed, noise abatement may change or not be necessary, depending on the results of the updated noise analysis during final design information. The final decision of the noise abatement will be made upon completion of the project design and the public involvement process.  During circulation of the draft environmental document, soundwall surveys will be conducted with all property owners and residents of benefited receptors located within the footprint of the Build Alternative. If more than 50 percent of the responding benefited receptors oppose the soundwall, then the soundwall will not be constructed.
Natural Communities	No impact.	No impact to communities of concern or regional species of concern.  The project would result in permanent unavoidable impacts to approximately 174 trees (by trimming and removals).	<b>NC-1:</b> The project shall preserve as many mature trees as practicable. Although there is no City or County ordinance for tree removal, the project's landscape plan will incorporate a tree replacement plan with a replacement ratio of 2:1 – for every mature tree removed, two trees will be planted to be consistent with Measure VA-2. Mature trees (larger than 20 feet high) that are to be removed shall be replaced with two 24-inch box trees. Design plans shall indicate locations of existing mature trees (larger than 20 feet high) to be preserved in place. Tree replacement shall meet all Caltrans and City standards and policies, and near John Galvin Park, the replacement tree species will incorporate species that have been identified as those of the original planting of John Galvin Park in the 1930s.
Threatened and Endangered Species	No impact.	No impact.	No avoidance, minimization, and/or mitigation measures required.

Table S-1. Summary of Major Potential Impacts from Alternatives

Environmental Resource	No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
Invasive Species	No impact.	There is potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasives, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that seed is spread along the highway.	<b>IS-1:</b> In compliance with the EO on Invasive Species (EO 13112) and guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity (i.e., near or adjacent to drainages), extra precautions will be taken if invasive species are found in or next to the construction areas. This includes the inspection and cleaning of construction equipment and eradication strategies, as required by the Caltrans Biological Monitor, to be implemented should an invasion occur. Any cleaning of equipment or site watering will be conducted in adherence to any applicable drought conditions and related regulations. A Caltrans biologist or landscape Architect will approve any seed lists (for planting).
Animal Species	No impact.	Less than significant impact after mitigation.	<p><b>Mitigation Measure AS-1:</b> To avoid effects to nesting birds, the Project Engineer will require the contractor to conduct vegetation removal or tree-trimming activities outside of the nesting bird season (i.e., February 15 through August 31).</p> <p>If vegetation clearing is necessary during the nesting season, the Project Engineer will require the contractor to have a qualified biologist conduct a preconstruction survey within 150 feet of construction areas no more than 10 days prior to construction at the location to identify the location of nests, if any. A qualified biologist is one that has previously surveyed for nesting bird species within southern California.</p> <p>Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist around each nest site. The buffer will be clearly marked in the field by construction personnel under guidance of the contractor's qualified biologist, and construction or clearing will not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active.</p> <p>The qualified biologist will monitor the nests on a weekly basis to ensure that construction activities do not disturb or disrupt nesting activities.</p> <p>If the qualified biologist determines that construction activities are disturbing or disrupting nesting activities, then the biologist will notify the Project Engineer, who has the authority to stop or modify construction to reduce the noise and/or disturbance to the nests. Responses may include, but are not limited to, increasing the size of the exclusionary buffer, curtailing nearby work</p>

Table S-1. Summary of Major Potential Impacts from Alternatives

Environmental Resource	No Build Alternative	Build Alternative (Proposed Project)	Avoidance, Minimization or Mitigation Measures
			activities, turning off vehicle engines and other equipment wherever possible to reduce noise, installing a protective noise barrier between the nest and the construction activities, and/or working in other areas until the young have fledged.
Wetlands and Other Waters	No impact.	The project would result in no permanent impacts and approximately 0.46 acre (795 linear feet) of temporary impacts to nonwetland Waters of the U.S. as a result of improvements to existing, enclosed box culverts for Grove Avenue.	<b>WET-1:</b> Construction activities within the West Cucamonga Channel and Princeton Basin will be designed and conducted to maintain downstream flow conditions. All construction activities will be effectively isolated from water flows to the greatest extent feasible. This may be accomplished by working in the dry season or dewatering the work area in the wet season. When work in standing or flowing water is required, structures for isolating the in-water work area and/or diverting the water flow must not be removed until all disturbed areas are cleaned and stabilized. The diverted water flow must not be contaminated by construction activities. Structures used to isolate the in-water work area and/or diverting the water flow (e.g., coffer dam, geotextile silt curtain) must not be removed until all disturbed areas are stabilized.

## S-6 Coordination with Public and Other Agencies

Table S-2 lists the permits/approval status of each permit required for construction of the project (Build Alternative).

**Table S-2. Project Permits and Approvals**

Agency	Permit/Approval	Status
U.S. Army Corps of Engineers	Non-notifying Clean Water Act (CWA) Section 404 Nationwide Permit (NWP) 14 (Linear Transportation Projects), provided all terms and conditions of the NWP permit program (33 <i>Code of Federal Regulations</i> [CFR] 330) are met.	Not yet applied
San Bernardino County Flood/U.S. Army Corps of Engineers	A 408 permit will be required for potential impacts to the Cucamonga Creek.	Not yet applied
Regional Water Quality Control Board	CWA Section 401 Water Quality Certification. It should be noted that although it is anticipated that the project may likely qualify for a non-notifying NWP 14, CWA Section 401 Water Quality Certification must be issued prior to CWA Section 404 authorization for (any) impacts to Waters of the U.S. A fee commensurate with the extent of the activity will be required as part of this permit.	Not yet applied
California Department of Fish and Wildlife	Lake or Streambed Alteration Agreement (SAA). A fee commensurate with the extent of the activity will be required as part of this permit.	Not yet applied
City of Ontario	Pursuant to Section 10-2.06, the City requires approval and removal permits for parkway trees to be removed. To remove a parkway tree, it must meet criteria set forth by the City. No person shall remove or relocate any parkway tree without prior authorization from the City.	Not yet applied
State Water Resources Control Board	Construction General Permit, Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000002.	Not yet applied
State Historic Preservation Officer	Determination of Eligibility.	Letter of Concurrence dated April 25, 2017
FHWA	Air Quality Conformity Determination.	To be obtained prior to environmental document certification

In addition to the permits listed above, a cooperative agreement with Omnitrans will be required to temporarily defer or relocate the five bus stop stations within the limits of the project. Three bus stations on 4<sup>th</sup> Street between N. Virginia Avenue and N. Calaveras Avenue are part of Bus Route 86, and two bus stations located on Holt Boulevard at the intersection of Holt Boulevard and Grove Avenue are part of Bus Routes 61 and 80.

The project anticipates entering into a Service Agreement with the Southern Pacific Railroad (SPRR) for flaggers and inspection during periods of work along Grove Avenue between Holt Boulevard and Airport Drive. It is also anticipated that a Construction and Management (C+M) Agreement and Operations Engineer (OE) clearance, Section 13 Clauses, will be inserted into the Construction Specifications.

Individual utility agreements are expected with the associated owners of gas, electrical, water, and communication facilities for the Build Alternative (proposed project). Additional agreements may be required depending on selection of the preferred alternative. For the Build Alternative (proposed project), agreements will be needed for the oil companies.

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# **Chapter 1** Proposed Project

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## **1.1 Introduction**

The California Department of Transportation (Caltrans) and the City of Ontario (City) propose to widen Grove Avenue from 4<sup>th</sup> Street to State Street/Airport Drive for the design year of 2045 under the proposed Grove Avenue Corridor Project. The No Build Alternative would retain the existing configuration of Grove Avenue, while the Build Alternative (as the preferred alternative and proposed project) proposes to widen Grove Avenue from a four-lane roadway to a six-lane roadway from Interstate 10 (I-10) to State Street/Airport Drive. Implementation of the Build Alternative would alleviate existing and anticipated future congestion, improve traffic operations and mobility, and provide route continuity along Grove Avenue in conformance with the City of Ontario's General Plan Circulation Element. Specifically, it would accommodate recent and projected growth in passenger and goods/trucks movement associated with Ontario International Airport. This project would coincide with the I-10/Grove Avenue Interchange Project, which would construct a new interchange along I-10 at Grove Avenue, replacing the existing interchange at 4<sup>th</sup> Street. The Grove Avenue Corridor Project is currently expected to be open to traffic in year 2025.

Caltrans is the lead agency under the National Environmental Policy Act (NEPA). The City is the lead agency under the California Environmental Quality Act (CEQA).

### **1.1.1 Project Location and Setting**

Within the project area, Grove Avenue is an arterial road that runs in the north-south direction through Ontario in San Bernardino County. The proposed Grove Avenue Corridor Project would occur on an approximately 1.24-mile-long stretch of Grove Avenue between 4<sup>th</sup> Street to the north and State Street/Airport Drive to the south (see Figures 1-1 and 1-2). There are also proposed improvements to the Grove Avenue and Holt Boulevard intersection. The closest major freeways to the project area are I-10 to the north and State Route (SR) 60 to the south.

The project limits extend approximately 550 feet north of 4<sup>th</sup> Street to approximately 650 feet south of State Street/Airport Drive. Grove Avenue has two lanes each running northbound and southbound, including a center turning lane in two sections, starting from south of 4<sup>th</sup> Street to the northern project limit and from Holt Street to D Street. The Grove Avenue corridor right-of-way (ROW) is owned by the City, and all required easements for the project would be acquired by the City. Refer to Figures 1-1 and 1-2 for the project location and vicinity maps.



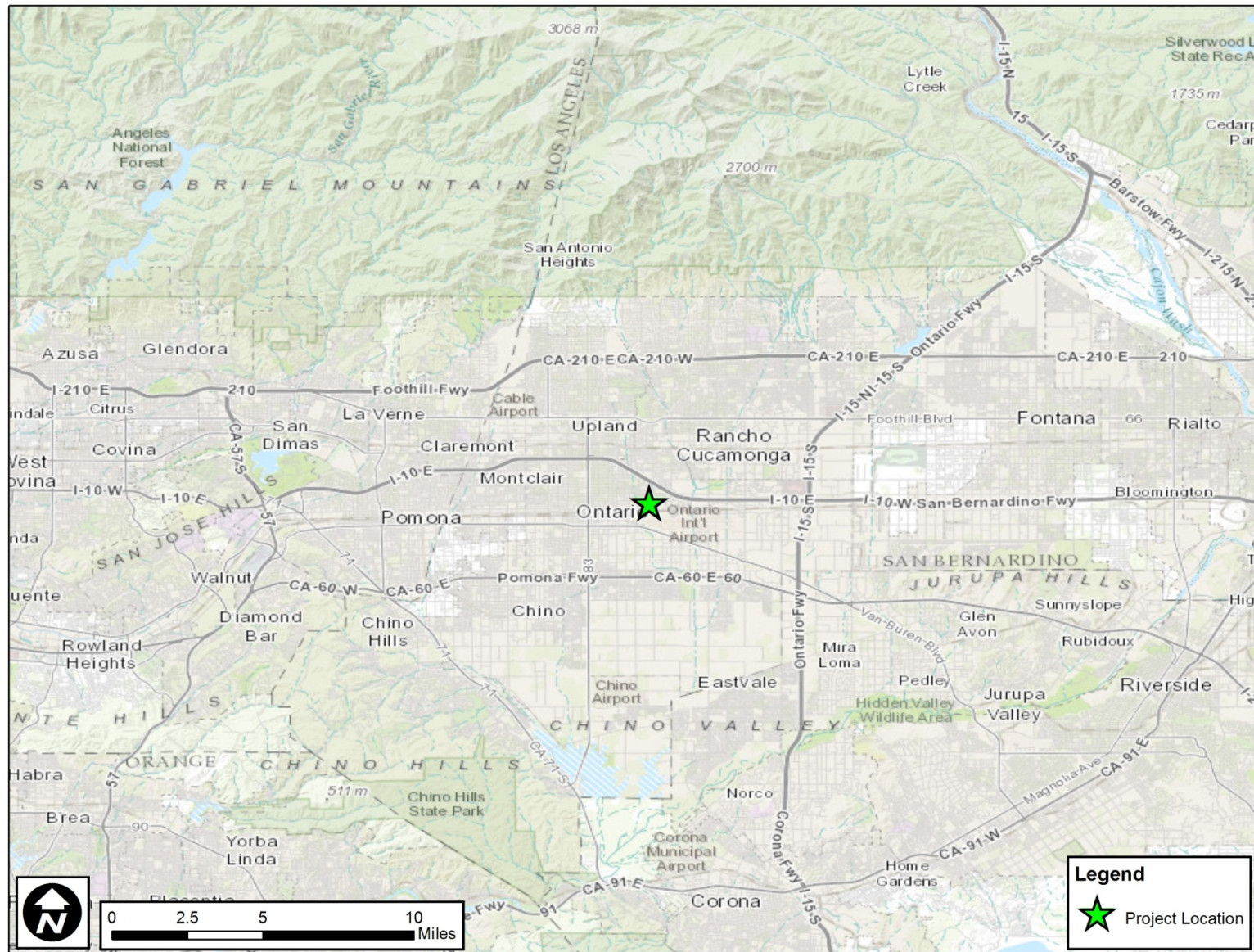


Figure 1-1. Project Location Map



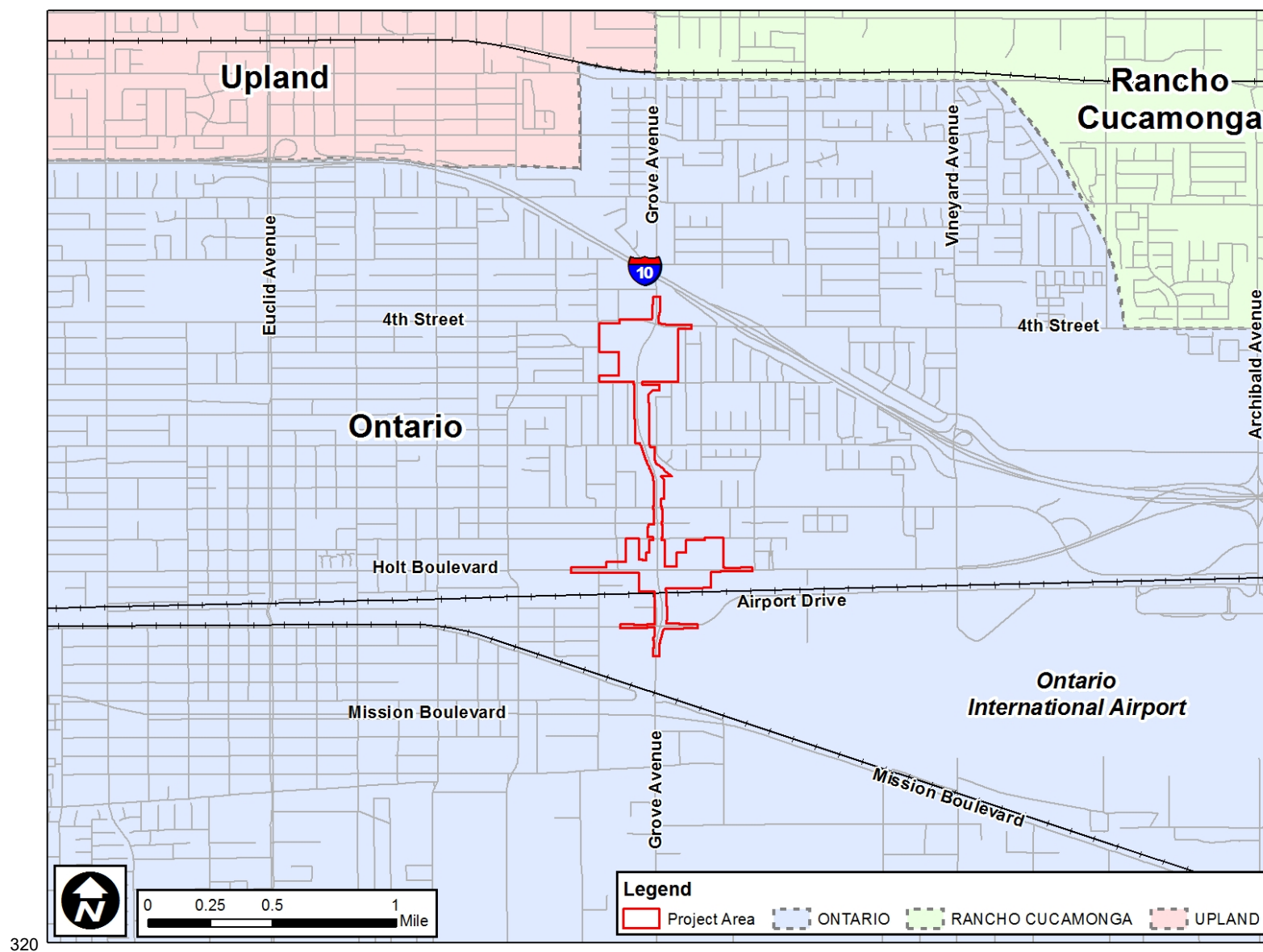


Figure 1-2. Project Vicinity Map

The primary intersections in the project area are 4<sup>th</sup> Street, Holt Boulevard, and State Street/Airport Drive. In addition, 4<sup>th</sup> Street is classified by the City as a principal arterial east of Grove Avenue and a collector street to the west. Holt Boulevard is a primary arterial, and State Street/Airport Drive is a collector street.

At the State Street/Airport Drive intersection, the project construction limits extend approximately 700 feet in either direction on State Street/Airport Drive. At the Holt Boulevard intersection, the construction limits extend on Holt Avenue for approximately 1,600 feet to the west and 1,750 feet to the east. At the 4<sup>th</sup> Street intersection, the construction limits extend for approximately 650 and 630 feet to the west and east of the intersection, respectively.

Grove Avenue crosses under an Amtrak railroad grade separation between Holt Boulevard and State Street/Airport Drive.

Land uses in the project study area include residential, commercial, industrial, and open space, with most land uses being low- to medium-density residential uses. Grove Avenue goes through the center of John Galvin Park in the northern portion of the project area. Ontario International Airport is adjacent to the southeast corner of the project area.

### **1.1.2 Programming Status**

The proposed Grove Avenue Corridor Project is included in the 2015 Federal Statewide Transportation Improvement Program (FSTIP), Amendment #15-04. The FSTIP approved \$2.293 million in federal funds in the 2014/2015 fiscal year for preliminary engineering. Of that \$2.293 million, \$1.693 million is dedicated to design and \$0.720 million is dedicated to the environmental process. There is a total capital cost estimation of \$31.8 million for the entire Grove Avenue Corridor Project.

### **1.1.3 Planning Background**

The proposed Grove Avenue Corridor Project would conform to the City of Ontario's General Plan. The General Plan is considered the general framework for the City's growth over the next 20 years or more into the future. To accommodate the anticipated growth, the General Plan provides numerous lasting policies, governance manuals, city council priorities, and implementation plans. Specifically, the General Plan's Functional Roadway Classification Plan shows existing and proposed traffic and circulation facilities within the City. Included in the Functional Roadway Classification Plan is the Grove Avenue Corridor Project, which proposes to widen the existing roadway from four lanes to six lanes between I-10 and Holt Boulevard. A Project Study

Report for the Grove Avenue corridor improvements was conducted in 2010 by the City.

## **1.2 Purpose and Need**

The purpose and need statement for any given project serves three primary functions. First, it establishes the problem, or problems, leading up to why the project is being proposed (i.e., need); second, it identifies the project objectives that would solve those problems (i.e., purpose). A third, and equally important, function of the purpose and need statement is that it provides a basis for comparing the alternatives against one another and comparing the alternatives against the project. The following sections describe in more detail the project's purpose and need.

### **1.2.1 Purpose of the Project**

The purpose of the proposed Grove Avenue Corridor Project is to accomplish the following objective:

- Alleviate existing and anticipated increases in congestion along Grove Avenue between 4<sup>th</sup> Street and Airport Drive and improve traffic operations along the corridor in the city of Ontario.

### **1.2.2 Need for the Project**

Improvements to Grove Avenue are needed to accommodate recent and projected growth in passenger and goods/trucks movement associated with Ontario International Airport and changes in land use since Grove Avenue was originally constructed.

Based on traffic projections and the existing and planned land uses in the vicinity, the existing Grove Avenue facility is forecast to operate at unsatisfactory level of service (LOS) at three intersections within the project limits by 2045 without improvements.

#### **1.2.2.1 Capacity, Transportation Demand, and Safety**

Currently, there is sufficient capacity on the Grove Avenue corridor to accommodate existing travel demands within the project limits.

Existing traffic conditions play a critical role in the overall analysis of infrastructure investments. Existing conditions and volumes provide a baseline by which to evaluate current performance of the circulation system and are used as the basis of future forecast volumes. Capacity on a corridor such as Grove Avenue is measured by analyzing performance at intersections. A basic signalized intersection can be

characterized by performance measures as a function of the average vehicle control delay. Control delay is the portion of the total delay attributed to traffic signal operation for signalized intersections. Control delays include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Once delays have been estimated for each lane group and aggregated for each approach and the intersection as a whole, the appropriate LOS is determined. All LOS analyses use methodologies approved in the *Highway Capacity Manual 2000 Edition* (HCM).

As shown in Table 1-1, there are six grades of LOS, ranging from LOS A (representing excellent operation) to LOS F (representing forced flow and jammed conditions).

**Table 1-1. LOS Thresholds for an Intersection with Traffic Signals**

Level of Service	Description	Signalized Intersection Delay (seconds per vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	$\leq 10$
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	$>10$ and $\leq 20$
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	$> 20$ and $\leq 35$
D	Fair operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	$>35$ and $\leq 55$
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	$>55$ and $\leq 80$
F	Forced flow. Represents jammed conditions. Backups form at locations downstream or on the cross street and may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop-and-go type traffic flow.	$> 80$

Source: *Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington, D.C., 2000.*

The existing Grove Avenue corridor traffic analysis follows the HCM intersection capacity analysis method using Synchro 7 Software computer program. The study was conducted in February 2013. The results provide average control delay and volume to capacity (v/c) delay, which are used to generate LOS. Each intersection is based on vehicle delay analysis for the morning peak period (7:00 a.m. to 9:00 a.m.) and evening

peak period (4:00 p.m. to 6:00 p.m.), resulting in four segments for analysis: eastbound, westbound, northbound, and southbound. Table 1-2 provides existing HCM average control delays, HCM v/c ratio, and HCM LOS, reported in the *Traffic Operations Analysis* (January 2015) Technical Appendix.

**Table 1-2. Existing (2013) Peak Hour Intersection LOS Summary**

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Grove Avenue/4 <sup>th</sup> Street	35.0	D	34.5	C
Grove Avenue/I Street	5.7	A	3.8	A
Grove Avenue/G Street	7.1	A	5.5	A
Grove Avenue/D Street	5.4	A	4.4	A
Grove Avenue/Holt Boulevard	33.7	C	31.8	C
Grove Avenue/State Street-Airport Drive	20.4	C	29.9	C

Source: *Traffic Operations Analysis Report*, 2015.

All intersections are functioning at LOS C or better, except for 4<sup>th</sup> Street during the AM peak hour; however, the 4<sup>th</sup> Street intersection is borderline LOS D while still providing flow above unstable levels.

### ***Population and Traffic Forecasts***

Based on Federal Highway Administration (FHWA) and Caltrans requirements for the I-10/Grove Avenue Interchange Project, traffic forecasts need to address a horizon of 20 years beyond project opening, which requires development of 2045 conditions because the opening year for the proposed Grove Avenue Corridor Project and proposed I-10/Grove Avenue Interchange Project is anticipated to be 2025.

A key objective of the traveling modeling effort for this project was to maintain consistency with the traffic forecasts developed for the recently completed *I-10 Corridor Study – Project Approval/Environmental Document (PA/ED) High Occupancy Vehicle (HOV) and Express Lanes Project* by the San Bernardino County Transportation Authority (SBCTA). The San Bernardino County Transportation Analysis Model (SBTAM) used for the *I-10 Corridor Study – PA/ED HOV and Express Lanes Project* was utilized for the Grove Avenue Corridor Project, including all roadway network and demographic data assumptions. The SBTAM, which utilizes the TransCAD platform (version 5.0 r4), includes additional detail within San Bernardino County and has been recalibrated based on countywide traffic activity. The Grove

Avenue Corridor Project model analysis includes a No Build Alternative and a Build Alternative.

The SBTAM incorporates the baseline demographic dataset developed by SBCTA for San Bernardino County consistent with population growth forecasts published by the Southern California Association of Governments (SCAG). The SCAG region consists of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. Key demographic projections for San Bernardino County and the SCAG region are provided in Table 1-3.

**Table 1-3. Key Demographic Data**

Area	Population	Resident Population	Households	Residents Employed
<b>Existing – 2012</b>				
San Bernardino County	2,015,994	1,962,290	605,913	700,600
SCAG Region	16,964,830	16,640,598	548,465	7,386,196
<b>2035</b>				
San Bernardino County	2,749,810	2,685,254	847,405	1,059,329
SCAG Region	21,852,486	21,497,514	7,230,262	9,310,132
<b>Percent Growth from 2012 to 2035</b>				
San Bernardino County	36	37	40	51
SCAG Region	29	29	29	26

Source: I-10 Corridor Project Traffic Study, August 2014 (Appendix A-3).

Although the regional growth rate stabilized in the last 20 years, from 1990 to 2010 the urbanization and suburbanization of the region has continued (SCAG Regional Transportation Plan [RTP]). In 2010, San Bernardino County exceeded 2 million people and increased its share of the population from 17.7 percent in 1990 to 23.4 percent in 2010. According to SCAG, the fast growth of population relative to employment in Riverside and San Bernardino counties has led to an imbalance of jobs and housing in the region, posing a serious transportation problem.

### ***Projected Capacity Needs, Delay, and Level of Service***

The I-10 Corridor Traffic Operations Analysis (January 2015) provided data for existing traffic conditions (2012), opening year conditions (2025), and the horizon year (2045). Because the horizon year forecasts for 2045 are required in this analysis, the 2035 forecast volumes were post-processed by applying the forecast annual growth rate in 2035 forecast volumes to generate 2045 forecasts. Overall, the average growth of traffic volumes at the study area intersections between existing and opening year 2025

was approximately 2 percent per year. Between opening year 2025 and horizon year 2045, the average growth of traffic volumes at the study area intersections was approximately 1 percent per year.

Opening year 2025 no-build conditions assume the current interchange conditions at 4<sup>th</sup> Street and existing lane configurations are the same in the study area. Table 1-4 summarizes the opening year 2025 no-build peak-hour LOS results at the study intersections.

**Table 1-4. Opening Year 2025 No-Build Peak-Hour Intersection LOS Summary**

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Grove Avenue/4 <sup>th</sup> Street	44.7	D	63.8	E
Grove Avenue/I Street	6.7	A	6.3	A
Grove Avenue/G Street	9.0	A	9.0	A
Grove Avenue/D Street	6.4	A	9.2	A
Grove Avenue/Holt Boulevard	<b>82.8</b>	<b>F</b>	<b>134.7</b>	<b>F</b>
Grove Avenue/State Street	25.1	C	29.3	C

Note: **BOLD** indicates unsatisfactory.

Horizon year 2045 no-build conditions also assume the current interchange conditions at 4<sup>th</sup> Street and existing lane configurations in the study area. Table 1-5 summarizes the horizon year 2045 no-build peak-hour LOS results at the study intersections.

**Table 1-5. Horizon Year 2045 No-Build Peak-Hour Intersection LOS Summary**

Intersection	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
Grove Avenue/4 <sup>th</sup> Street	51.2	D	<b>117.4</b>	<b>F</b>
Grove Avenue/I Street	8.0	A	7.5	A
Grove Avenue/G Street	11.1	B	20.6	C
Grove Avenue/D Street	18.3	B	14.8	B
Grove Avenue/Holt Boulevard	<b>213.8</b>	<b>F</b>	<b>352.9</b>	<b>F</b>
Grove Avenue/State Street	<b>88.3</b>	<b>F</b>	<b>83.2</b>	<b>F</b>

Note: **BOLD** indicates unsatisfactory.

By opening year, these forecasts predict that the Grove Avenue and Holt Boulevard intersection will operate at LOS F conditions under no-build conditions. The Holt Boulevard, 4<sup>th</sup> Street, and State Street intersections will continue to deteriorate to LOS F conditions as forecasted in the horizon year 2045 No Build LOS summary.

### ***Safety***

Corridors that are highly congested generally have higher congestion-related crash rates. Demand for higher capacity is a result of the tremendous growth in passenger and goods/truck movement associated with Ontario International Airport and the overall change in land use since the existing interchange was built in the late 1950s.

There are three critical transportation deficiencies in the project area:

1. Several local street corridors, street intersections, and freeway ramps will suffer from congestion as a result of inadequate capacity to handle future traffic operations leading to the I-10/4<sup>th</sup> Street interchange. This congestion is a result of the growth in goods movement and truck traffic in the city of Ontario, especially near Ontario International Airport.
2. The existing Grove Avenue roadway cross section and its connections to the State and National Highway System are currently inconsistent and nonuniform for its role as an alternate north-south arterial corridor to Interstate 15 (I-15).
3. Provide route continuity along Grove Avenue in conformance with the City of Ontario General Plan Circulation Element, which identifies Grove Avenue as a six-lane principal arterial.

These deficiencies will be further exacerbated by the future traffic forecasts and anticipated traffic demands in the project area.

#### **1.2.2.2 Roadway Deficiencies**

Several local street corridors, street intersections, and freeway ramps will suffer from congestion as a result of inadequate capacity to handle future traffic operations leading to the I-10/4<sup>th</sup> Street interchange resulting from growth in goods movement and truck traffic in Ontario, especially near Ontario International Airport.

Existing Grove Avenue's roadway cross section and access to the State and National highway systems are currently inconsistent and nonuniform for its role as an alternate north-south arterial corridor to I-15.

These deficiencies will be further exacerbated by the future year traffic forecasts and anticipated traffic demands for the project area.



### **1.2.2.3 Social Demands or Economic Development**

The existing Grove Avenue corridor is a primary regional access for the city of Ontario and Ontario International Airport. Ontario International Airport is the center of a developing freight movement system that includes the airport, two railroads, four major freeways, and an expanding network of freight forwarders.

The existing 4<sup>th</sup> Street/I-10 interchange in the project area also provides direct access to the cities of Ontario, Rancho Cucamonga, and Upland via I-10, as well as key residential, retail, industrial, commercial, and mixed-use developments highlighted in their General Plans.

Construction of the Build Alternative would result in the conversion of existing land uses to transportation-related uses. The Build Alternative would permanently affect existing residential, commercial, industrial, parks and recreation, and public facilities, but it has been designed to avoid existing built land uses to the extent practicable while adhering to design and operational criteria to maintain a safe roadway. During final design, efforts would be undertaken to further minimize construction and operation impacts to existing and planned land uses.

Given the shortage of major developable vacant lands adjacent to the proposed project, the Build Alternative would provide a significant advantage to affect development decisions in the area. The Grove Avenue Corridor Project is not expected to substantially influence the overall amount or type of growth. The pattern and rate of population and housing growth would be expected to remain consistent with the population anticipated by existing General Plans for the area. The potential for growth in the study area is consistent with local land use plans and current trends. The project would not influence growth, and no growth-related impacts are expected. Current growth trends and potential future growth are considered in local land use plans, and the project would not influence growth that is not currently planned.

### **1.2.2.4 Legislation**

SBCTA is responsible for administering the County's half-cent sales tax dedicated to transportation, Measure I, and as the County Transportation Commission, SBCTA is responsible for overseeing certain federal and State funding programs. Measure I was first approved in November 1989 and was extended through 2040. Major street improvement projects, such as the widening of Grove Avenue, are identified as part of the Measure I 2010-2040 Strategic Plan and SBCTA Ordinance No. 04-01.

### **1.2.2.5 Modal Interrelationships and System Linkages**

#### ***Freight Movement***

The continuous movement of goods is a crucial aspect of continued economic development for Ontario, the Inland Empire, and the nation. Freight movement via truck transport is a major component to maintain the complex trade system, including southern California's seaports, airports, rail yards, and distribution centers. If no improvements are made to the existing Grove Avenue corridor, trucks traveling from Ontario International Airport to I-10 will experience severe traffic congestion by design year 2045.

#### ***Omnitrans***

The project site and its vicinity are served by Omnitrans. Omnitrans is a public transit agency that provides an extensive fixed-route bus system, including Routes 61, 63, and 80 in the project area. In particular, Omnitrans Routes 63 and 80, which travel along Holt Boulevard within the project study area, would benefit from more reliable travel if the proposed improvements were constructed at the Grove Avenue/Holt Boulevard intersection.<sup>1</sup> In addition to their existing fixed route system, Omnitrans is conducting a route and mode-of-transit analysis for the Holt Boulevard/4<sup>th</sup> Street corridor. If implemented, this new route would cross Grove Avenue at Holt Boulevard and would run from Fontana near the Kaiser Permanente Medical Center; through Rancho Cucamonga, Ontario, and Montclair; and end at the Transcenter in Pomona.

#### ***Metrolink***

Metrolink is a commuter rail line that provides service to Ontario and other cities in San Bernardino and Riverside counties. The Metrolink San Bernardino Line is perpendicular to Grove Avenue north of I-10. The Riverside Line connects Union Station in Los Angeles to the downtown Riverside Station with a stop at the East Ontario Station in Ontario, southeast of the proposed Grove Avenue Corridor Project area. The Metrolink San Bernardino Line connects Union Station in Los Angeles to the downtown Riverside Station with a stop near the proposed project at the Upland Station, approximately 1.5 miles northwest of the proposed project.

#### ***Ontario International Airport***

Ontario International Airport is a 1,700-acre passenger and commercial service airport adjacent to the southeast portion of the project site. Ontario International Airport is the third major airport in the area after Los Angeles International Airport and John Wayne Airport. In 2014, approximately 4.2 million passengers used the airport. In addition to

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<sup>1</sup> <http://omnitrans.org/schedules/>

passenger services, Ontario International Airport is a hub for commercial traffic, accounting for 474,346 tons of air cargo in 2014. Ontario International Airport is the west coast air and truck hub for UPS and is a major distribution point for FedEx, Ameriflight, Empire, Kalitta, and West Air. The proposed Grove Avenue Corridor Project is an integral component for the success of the airport because it would greatly enhance north-south mobility leading to Ontario International Airport.<sup>2</sup>

### **Highways**

I-10 connects to I-15 approximately 5 miles east of Grove Avenue. I-15 provides a regional connection between Orange, Riverside, and San Bernardino counties through its interchanges with SR-60 and SR-91. The SR-60/Grove Avenue interchange is approximately 2 miles south of the project area.

#### **1.2.2.6 Air Quality Improvements**

The following transportation control measures are anticipated to improve air quality and are included as part of the proposed project:

- Implementation of the Build Alternative would produce benefits to regional air quality by reducing project congestion levels within the study area.
- Grove Avenue is designated as a Bicycle Corridor by the City of Ontario Multipurpose Trails and Bikeway Corridor Plan. The Build Alternative proposes an outside lane width of 15 feet, in accordance with the City of Ontario Master Plan of Streets and Highways. Standard sidewalks would be provided on both sides of Grove Avenue within the project limits.

#### **1.2.2.7 Independent Utility and Logical Termini**

FHWA regulations (23 *Code of Federal Regulations* [CFR] 771.111 (f)) require that a proposed project:

1. Connect logical termini and be of sufficient length to address environmental matters on a broad scope;
2. Have independent utility or independent significance (be usable and require a reasonable expenditure even if no additional transportation improvements in the area are made); and
3. Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

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<sup>2</sup> Ontario International Airport... News and Facts...Statistics...Volume of Air Traffic...Retrieved March 9, 2015.

The project corridor is of sufficient length (approximately 1.24 miles) to adequately address transportation issues that have been identified in the stated purpose and need. The Build Alternative would be of sufficient length to provide significant congestion relief in this corridor within the project limits. These improvements would function effectively in addressing the congestion on Grove Avenue and coincide with the I-10/Grove Avenue Interchange Project. As a result, the proposed project connects logical termini on Grove Avenue with the I-10 mainline. This project area is large enough to appropriately address the potential environmental impacts of the proposed project. In addition, the proposed project can meet the identified need for congestion relief as an independent project and is not dependent on any other projects to meet the identified purpose for the interchange improvements. Finally, the proposed improvements would be designed and constructed to minimize potential conflict with other reasonably foreseeable transportation improvements in the area.

### **1.3 Project Description**

This section describes the proposed action and the project alternatives developed to meet the purpose and need of the project, while avoiding or minimizing environmental impacts. There is one Build Alternative and a No Build Alternative. The project is located in San Bernardino County on a 1.24-mile-long stretch of the Grove Avenue corridor south of the I-10/Grove Avenue interchange. Within the limits of the project, Grove Avenue is a conventional four-lane road. The purpose of the project is to widen the corridor to alleviate existing and anticipated future congestion, provide improved traffic operations, and provide route continuity along Grove Avenue in conformance with the City of Ontario's General Plan Circulation Element.

#### **1.3.1 Project Alternatives**

The Grove Avenue Corridor Project considers one No Build Alternative and one Build Alternative to address existing and future projected traffic demands. A summary of the proposed project alternatives is provided below.

##### **1.3.1.1 Build Alternative (Preferred Alternative and Proposed Project)**

The Build Alternative, shown in Figure 1-3, includes widening Grove Avenue from four lanes to six lanes between 4<sup>th</sup> Street and State Street/Airport Drive in accordance with the City of Ontario Master Plan. South of 4<sup>th</sup> Street, Grove Avenue would be widened to the west to avoid impacts to the historic Jay Littleton Ballpark. Between I Street and Holt Boulevard, Grove Avenue would be widened to the east, and between Holt Boulevard and State Street/Airport Drive, Grove Avenue would be widened on both sides.

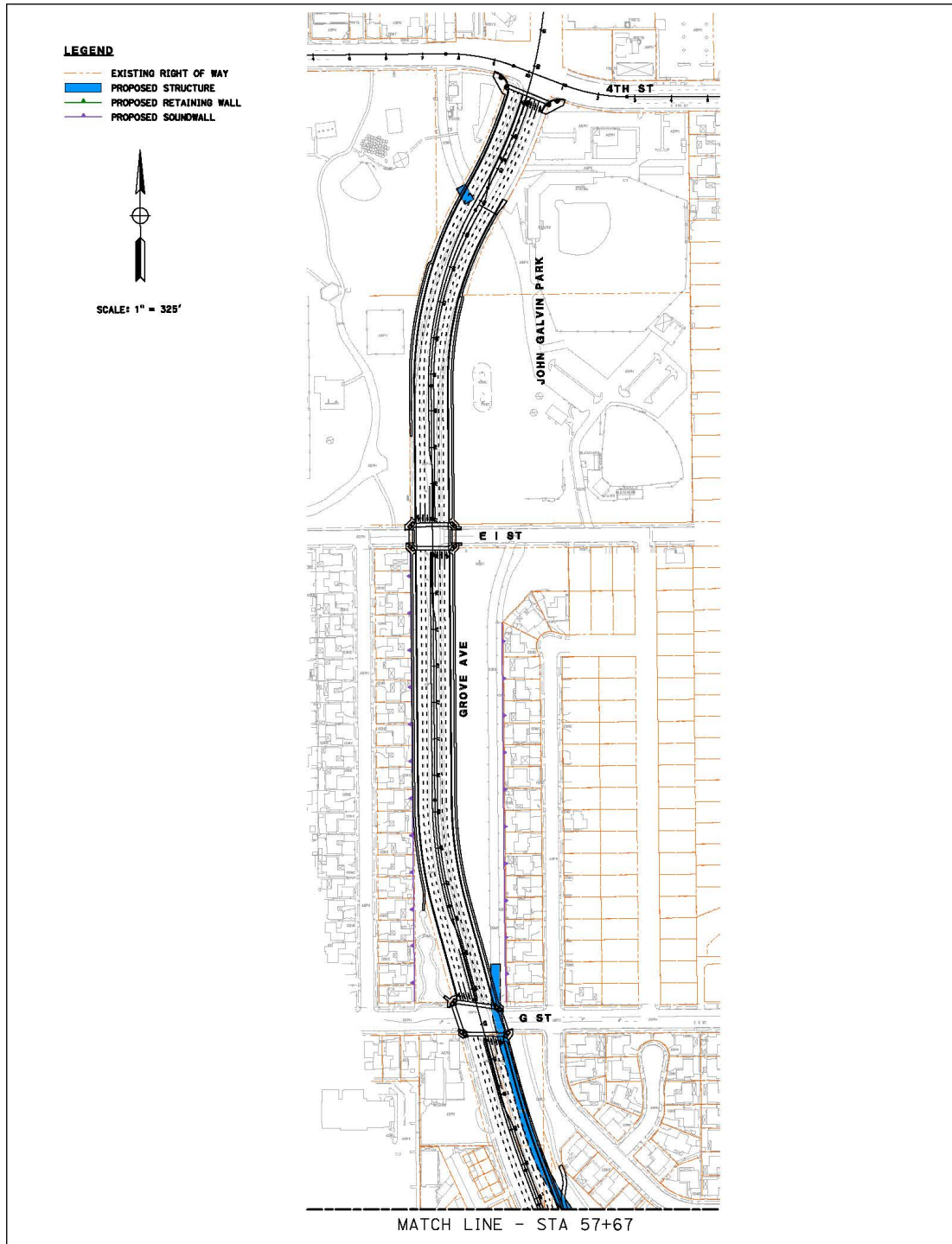


Figure 1-3. Build Alternative (Sheet 1 of 2)

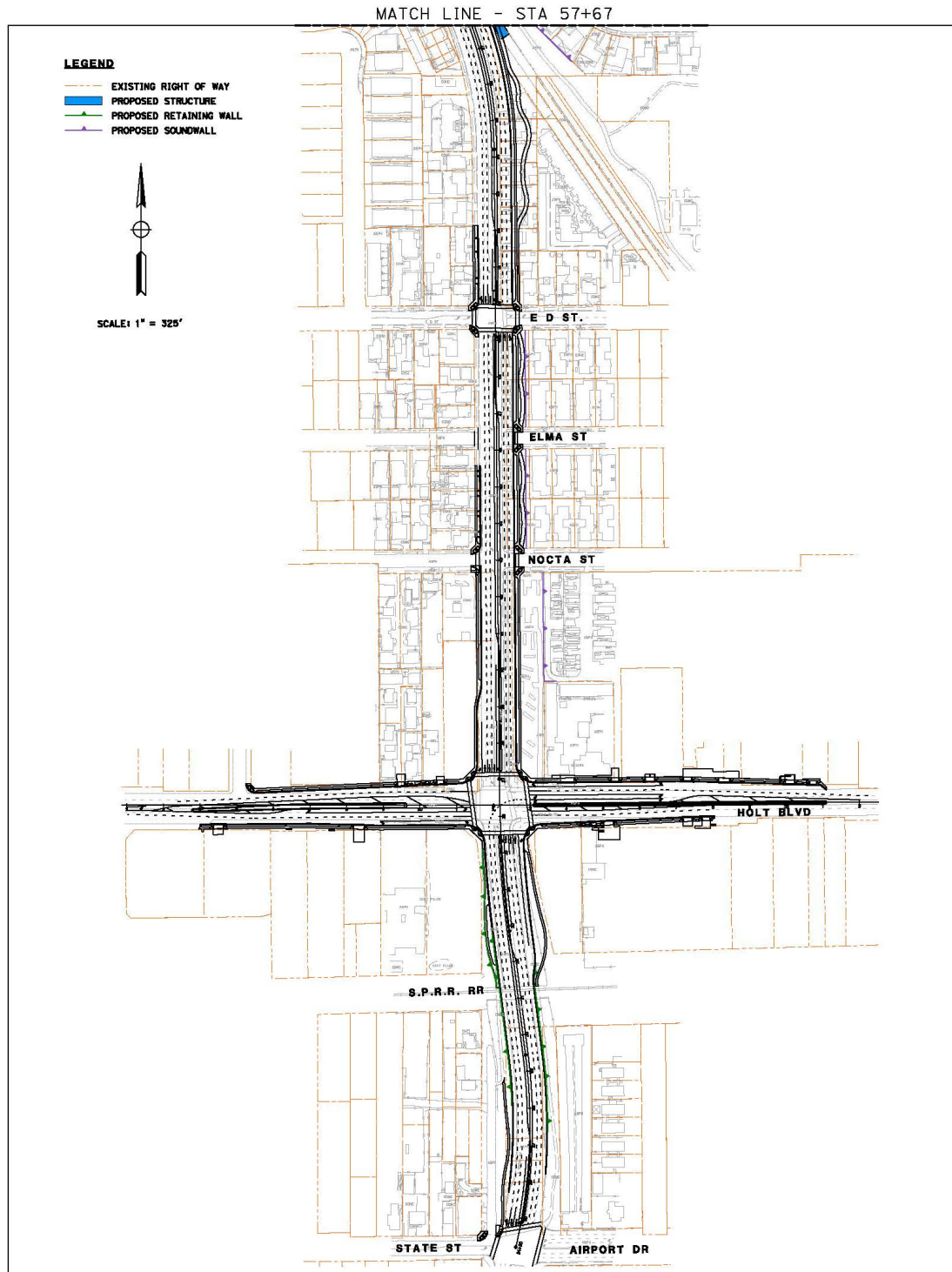


Figure 1-3. Build Alternative (Sheet 2 of 2)

In addition, Holt Boulevard would be widened at the Grove Avenue intersection from one through lane, one through-right lane, and one left-turn lane in each direction to two through lanes, one through-right lane, and two left-turn lanes in each direction. The Build Alternative would include covering a portion of two culverts: G Street Culvert and Grove Avenue Culvert.

### ***Earthwork and Retaining Walls***

The cut slopes would be a standard 2 (horizontal) to 1 (vertical), and fill slopes would be a standard 4 (horizontal) to 1 (vertical). Four retaining walls are proposed under the Southern Pacific Railroad (SPRR) Bridge between Holt Boulevard and State Street/Airport Drive to accommodate the widening of Grove Avenue to avoid impacts to the SPRR Bridge. The retaining walls would range from 6 to 10 feet in height and would be constructed at the following locations:

- Northbound Grove Avenue under the SPRR Bridge, between the roadway and the sidewalk
- Northbound Grove Avenue between the SPRR Bridge and Holt Boulevard, at the back of the sidewalk
- Southbound Grove Avenue under the SPRR Bridge, between the roadway and the sidewalk
- Southbound Grove Avenue between the SPRR Bridge and Holt Boulevard, at the back of the sidewalk

### ***Nonmotorized and Pedestrian Features***

Grove Avenue is designated as a Bicycle Corridor by the City of Ontario Multipurpose Trails and Bikeway Corridor Plan. The Build Alternative proposes an outside lane width of 15 feet in accordance with the City of Ontario Master Plan of Streets and Highways. Standard sidewalks would be provided on both sides of Grove Avenue within the project limits.

### ***Right-of-Way Acquisition***

The proposed project impacts a mostly developed area of Ontario. To provide ROW for the local street widening, the Build Alternative would acquire approximately 14 properties and partially acquire approximately 70 properties. The ROW impacts consist of single-family and multi-family residential properties, vacant parcels, and commercial properties including, but not limited to, an auto repair facility and a towing yard. In addition, temporary construction easements (TCEs) would be needed from several properties where grading and other temporary construction uses would occur.

### ***Unique Features of the Build Alternative***

The Build Alternative was designed to reduce impacts associated with property acquisitions. The Build Alternative reduces the number of property acquisitions to 14, which includes 8 single-family residences, and would not result in demolition of Sovereign Grace Baptist Church.

#### **1.3.1.2 Transportation System Management and Transportation Demand Management Alternatives**

Although transportation system management measures alone could not satisfy the purpose and need of the project, the following transportation system management measures have been incorporated into the Build Alternative for this project:

- Coordination of traffic signals

#### **1.3.1.3 No Build Alternative**

The No Build Alternative proposes no improvements within the project area. Grove Avenue would maintain the existing four through lanes, and the existing configuration at the Grove Avenue/Holt Boulevard intersection would be maintained.

As discussed in Section 1.2.2.1, Capacity, Transportation Demand, and Safety, while the existing configuration is adequate for existing traffic flows, there will be inadequate service at the Grove Avenue/Holt Boulevard intersection by the 2025 build year. Intersection performances will continue to deteriorate up to the 2045 horizon year.

### **1.3.2 Comparison of Alternatives**

After comparing and weighing the benefits and impacts of all feasible alternatives, some of which are summarized in Table 1-6, the Project Development Team (PDT) has identified the Build Alternative as the Preferred Alternative, subject to public review. Because the other alternative is the No Build Alternative (under which no improvements would be constructed on Grove Avenue), the Build Alternative also serves as the proposed project as analyzed in this environmental document. Final identification of the Preferred Alternative by the City and Caltrans will occur after the public review and comment period.

The Build Alternative proposed for this project requires a commitment of resources and would result in some environmental impacts. This commitment is balanced with the ability to meet the purpose and need and the effects of not implementing the project (the No Build Alternative). Table 1-6 provides a summary of key issues where impacts have been identified.



**Table 1-6. Key Issues**

<b>Criteria</b>		<b>No Build Alternative</b>	<b>Build Alternative (Proposed Project)</b>
<p>Meets the purpose and need: The purpose of the proposed Grove Avenue Corridor Project is to accomplish the following objectives:</p> <ul style="list-style-type: none"> <li>• Alleviate existing and anticipated future congestion along Grove Avenue between 4<sup>th</sup> Street and Airport Drive;</li> <li>• Improve traffic operations and mobility to and from Ontario International Airport, a future cargo hub facility near Grove Avenue and Holt Boulevard, and other planned uses; and</li> <li>• Provide route continuity along Grove Avenue in conformance with the City of Ontario General Plan Circulation Element, which identifies Grove Avenue as a six-lane principal arterial.</li> </ul> <p>Improvements to Grove Avenue are needed to accommodate recent and projected growth in passenger and goods/trucks movement associated with Ontario International Airport and changes in land use since Grove Avenue was originally constructed.</p>		No – Does not alleviate existing or future congestion along Grove Avenue; does not improve traffic operations and mobility; and does not conform with the City of Ontario's General Plan Circulation Element.	Yes – Would alleviate existing and future congestion along Grove Avenue between 4 <sup>th</sup> Street and Airport Drive; would improve traffic operations and mobility to and from Ontario International Airport; and would provide route continuity along Grove Avenue in conformance with the City of Ontario's General Plan Circulation Element.
Traffic and Transportation		None	None
Number of Acquisitions	Acquisitions	0	14
	Partial Acquisitions	0	70
Relocations		0	18 residential, 0 business
Parks and Recreation		None	Permanent impacts to approximately 0.12 acre of park space. 1.2 acres of park space would be temporarily impacted due to TCEs.
Cultural Resources		None	None

**Table 1-6. Key Issues**

<b>Criteria</b>	<b>No Build Alternative</b>	<b>Build Alternative (Proposed Project)</b>
Noise	Without the proposed project, approximately 99 dwelling units will experience noise impacts. Noise levels for design-year no-build conditions are expected to increase up to 2 decibels (dB) over existing noise levels due to projected traffic volume increases over existing conditions. Estimated no-build traffic noise levels were found to approach or exceed the applicable Noise Abatement Criteria (NAC) at representative residential locations.	132 dwelling units are expected to experience noise impacts. Increases in noise levels are due to the addition of the two lanes (one in each direction) within the Grove Avenue corridor. The additional lanes would shift traffic closer to representative receivers within the proposed project area. Under future design-year 2045 build conditions, most of the receiver locations have traffic noise levels that were found to approach or exceed the applicable NAC.
Air Quality	None	Minimal short-term construction impacts are anticipated to be generated from excavation, grading, hauling, and various other activities needed to construct the project; however, reactive organic gas (ROG) and other emissions are expected to be low due to the limited construction activities scheduled for the project. Therefore, the thresholds of significance established for ROG emissions by the South Coast Air Quality Management District (SCAQMD) would not be exceeded during construction of the project.
Natural Communities	None	No impact to communities of concern or regional species on concern.  The project would result in permanent unavoidable impacts to approximately 174 trees (by trimmings and removals).
Floodplain/Hydrology	None	Culvert crossings would be extended to accommodate the roadway widening by 37 feet. The 100-year flood event would still be contained in the channel.

**Table 1-6. Key Issues**

<b>Criteria</b>	<b>No Build Alternative</b>	<b>Build Alternative (Proposed Project)</b>
Water Quality	None	Would add 2.57 acres of additional impervious surface area.
Wetlands and Other Waters	None	The project would result in no permanent impacts and approximately 0.46 acre (795 linear feet) of temporary impacts to nonwetland Waters of the U.S. as a result of improvements to existing, enclosed box culverts for Grove Avenue.
Capital Cost of Alternative	\$0	\$31.8 million

After the public circulation period, all comments will be considered, and the City and Caltrans will select a preferred alternative and make the final determination of the project's effect on the environment. Under CEQA, the City will certify that the project complies with CEQA, prepare findings for all significant impacts identified, prepare a Statement of Overriding Considerations for impacts that will not be mitigated below a level of significance, and certify that the findings and Statement of Overriding Considerations have been considered prior to project approval. The City will then file a Notice of Determination with the State Clearinghouse that will identify whether the project will have significant impacts, if mitigation measures were included as conditions of project approval, that findings were made, and that a Statement of Overriding Considerations was adopted. Similarly, if Caltrans, as assigned by FHWA, determines the NEPA action does not significantly impact the environment, Caltrans will issue a Finding of No Significant Impact (FONSI). If it is determined that the project is likely to have a significant effect on the environment, an Environmental Impact Statement (EIS) will be prepared.

### **1.3.3 Alternatives Considered but Withdrawn from Further Discussion**

Assembly Bill (AB) 2542 requires any state or local automobile capacity-increasing project or a major street or highway lane realignment project sent to the California Transportation Commission for approval consider reversible lanes in the design of the project. The Grove Avenue Corridor Project is not a capacity-increasing or major street realignment project; therefore, AB 2542 does not apply.

During the initial design of this project, two alternatives were considered: widening Grove Avenue to the east and widening Grove Avenue to the west. Both alternatives included three through lanes in each direction along Grove Avenue. The alternative that widened Grove Avenue to the east was chosen as the Build Alternative. The rejected alternative, which widened Grove Avenue to the west, is described below.

### **1.3.3.1 Widen to the West Alternative**

From State Street north to the SPRR crossing, the Widen to the West Alternative matched the Build Alternative configuration. North of the SPRR, Grove Avenue would be widened to the west until north of G Street. North of G Street to 4<sup>th</sup> Street, the alignment matched that of the Build Alternative.

This alternative would have the following ROW impacts:

- 19 property acquisitions
  - 13 single-family residences
  - 3 apartment buildings – 8 units each
  - 2 vacant parcels
- Demolition of one building associated with Sovereign Grace Baptist Church at the southwest corner of Grove Avenue and G Street
- Partial acquisition of 0.06 acre of Grove Memorial Park, located northwest of the Grove Avenue/G Street intersection
- *De Minimis* Section 4(f) impacts to John Galvin Park

Due to the extensive ROW requirements and associated property and park impacts, the Widen to the West Alternative was eliminated from further consideration; therefore, this alternative cannot be considered an environmentally superior alternative to the proposed Build Alternative that is carried through for further analysis in this document.

## **1.4 Permits and Approvals Needed**

Table 1-7 lists the permits, reviews, and approvals that would be required for project construction of the Build Alternative (proposed project).

**Table 1-7. Required Permits, Reviews, and Approvals**

<b>Agency</b>	<b>Permit/Approval</b>	<b>Status</b>
U.S. Army Corps of Engineers	Non-notifying Clean Water Act (CWA) Section 404 Nationwide Permit (NWP) 14 (Linear Transportation Projects), provided all terms and conditions of the NWP permit program (33 CFR 330) are met.	Not yet applied
San Bernardino County Flood/U.S. Army Corps of Engineers	A 408 permit will be required for potential impacts to the Cucamonga Creek.	Not yet applied
Regional Water Quality Control Board	CWA Section 401 Water Quality Certification. It should be noted that although it is anticipated that the project may likely qualify for a non-notifying NWP 14, CWA Section 401 Water Quality Certification must be issued prior to CWA Section 404 authorization for (any) impacts to Waters of the U.S. A fee commensurate with the extent of the activity will be required as part of this permit.	Not yet applied
California Department of Fish and Wildlife	Lake or Streambed Alteration Agreement (SAA). A fee commensurate with the extent of the activity will be required as part of this permit.	Not yet applied
City of Ontario	Pursuant to Section 10-2.06, the City requires approval and removal permits for parkway trees to be removed. To remove a parkway tree, it must meet criteria set forth by the City. No person shall remove or relocate any parkway tree without prior authorization from the City.	Not yet applied
State Water Resources Control Board	Construction General Permit, Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000002.	Not yet applied
State Historic Preservation Officer	Determination of Eligibility.	Letter of Concurrence dated April 25, 2017
FHWA	Air Quality Conformity Determination.	To be obtained prior to environmental document certification

In addition to the permits listed above, a cooperative agreement with Omnitrans will be required to temporarily defer or relocate the five bus stop stations within the limits of the project. Three bus stations on 4<sup>th</sup> Street between N. Virginia Avenue and N. Calaveras Avenue are part of Route 86, and two bus stations located on Holt Boulevard at the intersection of Holt Boulevard and Grove Avenue are part of Routes 61 and 80.

The project anticipates entering into a Service Agreement with SPRR for flaggers and inspection during periods of work along Grove Avenue between Holt Boulevard and

Airport Drive. It is also anticipated that additional agreements, clearances, and clauses will be inserted into the Construction Specifications.

Individual utility agreements are expected with the associated owners of gas, electrical, water, and communication facilities with the Build Alternative. Additional agreements may be required depending on selection of the preferred alternative. For the Build Alternative, an agreement will be needed for the oil companies.

## **Chapter 2** Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

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As part of the scoping and environmental analysis carried out for the project, the following environmental issues were considered, but no adverse impacts were identified:

- Coastal Zone. There will be no effect to Coastal Zones because the project is not located near any coasts.
- Wild and Scenic Rivers. There will be no effect to Wild and Scenic Rivers because there are no rivers near the project footprint.
- Timberland. There are no timberlands located in or near the project footprint.
- This project is located outside of National Marine Fisheries Service (NMFS) jurisdiction; therefore, an NMFS species list is not required, and no effects to NMFS species are anticipated.

As a result, there is no further discussion about these issues in this document.

### **2.1 Human Environment**

#### **2.1.1 Land Use**

This section discusses impacts to land use as a result of implementation of the proposed project. The analysis is based on the results of the *Community Impact Assessment* (October 2016) prepared for this project. The discussions in this section related to land use are provided in the following three subsections:

- Existing and Future Land Use
- Consistency with State, Regional, and Local Plans and Programs
- Parks and Recreational Facilities

##### **2.1.1.1 Existing and Future Land Use**

This section addresses potential impacts to existing and planned land uses in the project area that could result from implementation of the project alternatives.

#### ***Affected Environment***

Existing land uses located immediately adjacent to the proposed project area were identified from west to east. The summary of existing land uses is based on City and

County of San Bernardino (County) planning documents, Google Earth Surveys, and windshield surveys conducted in 2015.

The Grove Avenue Corridor Project is located in the northwest portion of the city of Ontario. Residential neighborhoods dominate the land uses to the west of the project area, with commercial uses clustered at major intersections. Similarly, the eastern side of Grove Avenue is also dominated by residential land uses. To the north of the project area is an area of commercial development and a large drainage basin located adjacent to the southern side of I-10. Immediately south of 4<sup>th</sup> Street, Grove Avenue goes through the center of John Galvin Park. Grove Memorial Park is located along the eastern side of Grove Avenue between I Street and G Street. Business parks and light industrial uses are found on the southern end of the project area, and Ontario International Airport is located adjacent to the southeast corner of the project area. The Grove Avenue corridor is primarily built out, although there are some vacant parcels at the southern end of the corridor. Existing land uses within 0.5 mile of the project area are depicted in Figure 2.1.1-1. As shown in Table 2.1.1-1, medium-high density residential makes up most of the land uses found within 0.5 mile of the Grove Avenue corridor at approximately 45 percent. Ontario International Airport and vacant land are at approximately 12 and 11 percent, respectively.

**Table 2.1.1-1. Land Use within 0.5 Mile of the Project Corridor**

Land Use	Acreage	Percentage
Agriculture	4.48	0.3
Airports	171.79	11.6
Commercial	130.51	8.8
Educational Facilities	57.83	3.9
Industrial	89.10	6.0
Low Density Residential	19.34	1.3
Medium-High Density Residential	667.79	44.9
Office	18.81	1.3
Open Space & Recreation	60.23	4.1
Public Facilities	37.07	2.5
Transportation & Utilities	50.29	3.4
Under Construction	7.92	0.5
Vacant	156.56	10.5
Water & Floodways	14.01	0.9

Source: Parsons, SBCTA Existing Land Use, 2012.



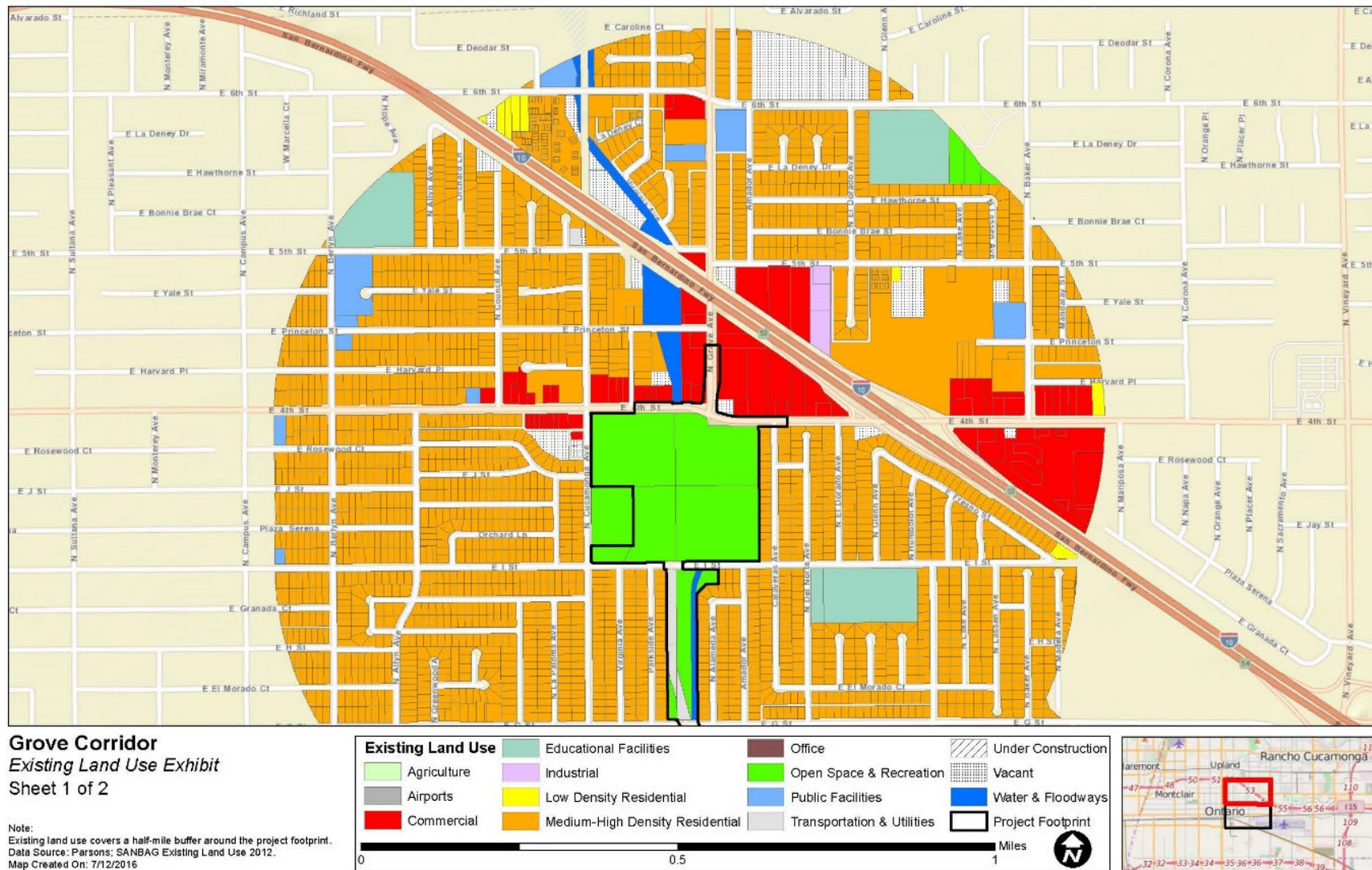


Figure 2.1.1-1. Existing Project Area Land Use (Sheet 1 of 2)

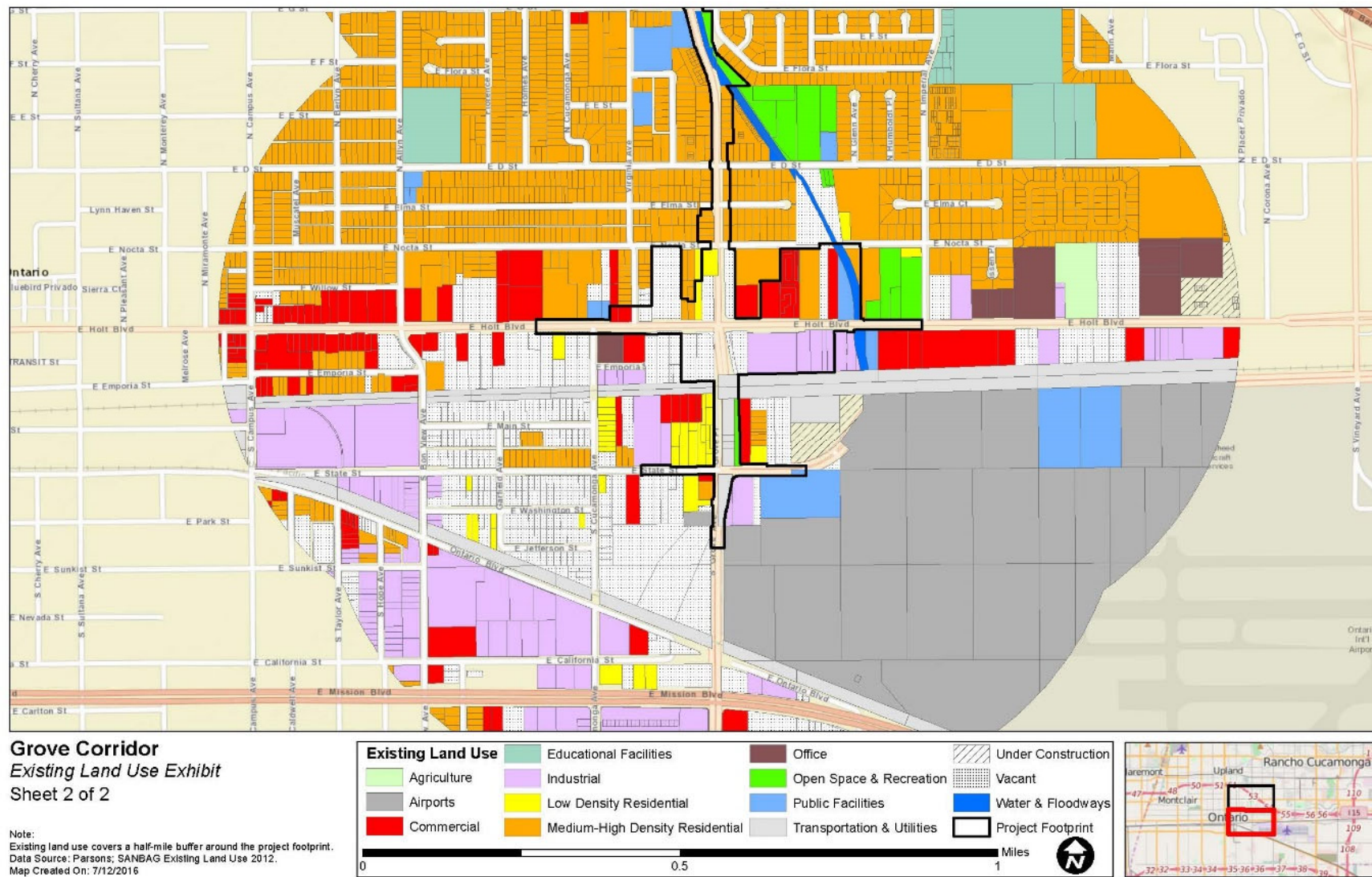


Figure 2.1.1-1. Existing Project Area Land Use (Sheet 2 of 2)



### Development Trends

Recent development trends in the Grove Avenue Corridor Project area have been primarily focused on land development projects. Table 2.1.1-2 and Figure 2.1.1-2 identify transportation and residential projects located within 5 miles of the proposed alignment and all other development located within 2 miles that may occur within 3 years of the proposed project implementation (2025). The search radius includes the cities of La Verne, Pomona, Claremont, Montclair, Chino, Ontario, Upland, Rancho Cucamonga, Fontana, Eastvale, and Jurupa Valley. The identified projects were used to analyze cumulative impacts of the proposed project. See Section 2.4 for the discussion of cumulative impacts.

**Table 2.1.1-2. Related Projects**

<b>Project Name, Type, Status, and ID Number (Refer to Figure 2.1.1-1)</b>	<b>Project Description</b>
<b>I-10 Corridor Project – ID Number 1</b> <ul style="list-style-type: none"> <li>• Transportation project</li> <li>• SBCTA and Caltrans project</li> <li>• Located in the cities of Pomona, Claremont, Montclair, Upland, Ontario, Fontana, Bloomington, Rialto, Colton, San Bernardino, Loma Linda, Redlands, and Yucaipa</li> <li>• Final environmental document approved in May 2017</li> </ul>	<p>The I-10 Corridor Project is proposed to improve safety and relieve traffic congestion on I-10, 0.4 mile west of White Avenue in Pomona at Post Mile 44.9 to just east/west of Live Oak Canyon Road in Yucaipa at Post Mile 37.0.</p>
<b>I-10/Grove Avenue Interchange Project – ID Number 2</b> <ul style="list-style-type: none"> <li>• Transportation project</li> <li>• City of Ontario project</li> <li>• Located in the city of Ontario</li> <li>• Currently in the preliminary engineering and environmental document phase</li> </ul>	<p>The I-10/Grove Avenue Interchange Project proposes to improve upon the operational deficiencies of the existing interchange and relieve traffic congestion to accommodate anticipated increases in automobile and truck traffic in the study area. Two build alternatives and one No Build Alternative are being considered.</p> <p>Build Alternative 1 proposes a new spread diamond interchange at Grove Avenue. Build Alternative 2 proposes a new partial cloverleaf interchange at Grove Avenue. The proposed build alternatives would require closure of the existing I-10/4<sup>th</sup> Street interchange. Improvements along Grove Avenue include widening the local street from four lanes to six lanes between the westbound ramps and 4<sup>th</sup> Street. Grove Avenue would taper back to four lanes north of the westbound ramps and tie in with the existing four-lane cross section before 6<sup>th</sup> Street. Improvements along 4<sup>th</sup> Street include widening the local street from two through lanes to four through lanes under I-10. Caltrans has jurisdiction of the development.</p>

**Table 2.1.1-2. Related Projects**

<b>Project Name, Type, Status, and ID Number (Refer to Figure 2.1.1-1)</b>	<b>Project Description</b>
<p><b>Omnitrans West Valley Connector – ID Number 19 – ID Number 3</b></p> <ul style="list-style-type: none"> <li>• Transportation project</li> <li>• Located in the cities of Fontana, Rancho Cucamonga, Ontario, Montclair, and Pomona</li> <li>• Omnitrans project</li> <li>• Currently in the preliminary engineering and environmental document phase</li> </ul>	<p>Omnitrans' West Valley Connector Corridor would provide mobility with a state-of-the-art bus transit system to accommodate the growing population and bus ridership demand and aim at connecting all major activity centers in the area. The transit system would focus on two transit services on the Holt Boulevard/Route 61 and Foothill Boulevard/Route 66 corridors. The build alternatives, Rapid Bus and Bus Rapid Transit, would decrease the wait time and increase effectiveness. Alternative 2, Rapid Bus, would limit stop service on mixed-flow lanes, and Bus Rapid Transit would limit stop service on 3.5 or 6.5 miles of dedicated lanes.</p>
<p><b>I-15 Corridor Improvement Project – ID Number 4</b></p> <ul style="list-style-type: none"> <li>• Transportation project</li> <li>• Located in the cities of Jurupa Valley, Eastvale, Norco, Corona, and Riverside</li> <li>• Riverside County Transportation Commission (RCTC) and Caltrans project</li> <li>• Environmental approval was obtained in May 2016</li> </ul>	<p>RCTC, in partnership with Caltrans District 8, is exploring improvements on a 14.6-mile-long segment of the I-15 corridor. The proposed project would include the addition of one to two Tolle Express Lanes in each direction from Cajalco Road, where it crosses I-15 in Corona, to just south of the I-15 and SR-60 interchange at Riverside Drive. This project has an estimated construction cost of \$415 million.</p>
<p><b>San Bernardino County Flood Control District's Master Stormwater System Maintenance Program (MSWMP)</b></p> <ul style="list-style-type: none"> <li>• Located within the San Bernardino County Flood Control District (SBCFCD) Jurisdiction</li> <li>• SBCFCD project</li> <li>• A Notice of Preparation of a Draft Environmental Impact Report (EIR) was circulated on June 30, 2014</li> </ul> <p>(The project is located throughout San Bernardino County and will apply to all Flood Control District Facilities. It is not shown in the Related Projects map.)</p>	<p>SBCFCD is proposing to implement a comprehensive program to prepare and implement a Maintenance Plan for maintenance of flood facilities throughout San Bernardino County. Types of routine operations and maintenance activities include, but are not limited to, removing excess sediment, debris, and vegetation; stockpiling excess material and debris following removal; maintaining sufficient flow paths; grooming/repairing earthen and improved channel slopes and bottoms; and maintaining culverts and bridges to ensure proper drainage and structural integrity.</p>
<p><b>Metro Gold Line Foothill Extension Construction Activity: Ontario Airport Extension – ID Number 5</b></p> <ul style="list-style-type: none"> <li>• Transportation project</li> <li>• Located in the cities of Montclair, Upland, and Ontario</li> <li>• Metro project</li> <li>• Funding for the Ontario Airport Extension has not been identified; project timeline is uncertain</li> <li>• Groundbreaking occurred in December 2017.</li> </ul>	<p>The Ontario Airport Extension would extend the Gold Line approximately 8 miles – from the TransCenter in Montclair, located just east of Monte Vista Avenue and north of Arrow Highway, to Ontario – and terminate the line at Ontario International Airport. Although not formally part of the Foothill Extension Project, the Construction Authority completed a study to understand the feasibility of extending the line from Montclair to the airport in 2008. The initial study concluded that extending the line was feasible and provided many potential route options.</p>

**Table 2.1.1-2. Related Projects**

<b>Project Name, Type, Status, and ID Number (Refer to Figure 2.1.1-1)</b>	<b>Project Description</b>
<b>College Park Specific Plan – ID Number 6</b> <ul style="list-style-type: none"> <li>• Land development project</li> <li>• Located in the city of Upland</li> <li>• City of Upland Housing Element – Specific Plan</li> <li>• To be implemented between 2013 and 2021</li> </ul>	<p>In 2004, the City of Upland adopted the College Park Specific Plan to encourage mixed-use development in southwest Upland and provide housing opportunities for the Claremont Colleges. The planning area includes 25 acres of residential land that can accommodate approximately 500 housing units. A total of 450 apartment units have been built. An additional 92 small-lot, detached single-family units are planned at a density of 10 units per acre. This Specific Plan area is composed of a residential development with a small commercial-retail component. The Specific Plan proposes 355 multi-family attached and 14 detached residential units. The area is bounded by Foothill Boulevard, Monte Vista Avenue, and west Arrow Route, just below Central Avenue.</p>
<b>Ontario Center Specific Plan – ID Number 7</b> <ul style="list-style-type: none"> <li>• Land development project</li> <li>• Located in the city of Ontario</li> <li>• City of Ontario Specific Plan</li> <li>• An amendment to the Ontario Specific Plan was approved in 2006</li> </ul>	<p>The Ontario Center site consists of approximately 88 acres of vacant land located at the northerly boundary of the eastern portion of Ontario, south of 4<sup>th</sup> Street, between Haven Avenue and Milliken Avenue, and less than 0.25 mile north of I-10. The Ontario Center will include urban commercial, urban residential, garden commercial, and open space elements.</p>
<b>Ontario Festival Specific Plan – ID Number 8</b> <ul style="list-style-type: none"> <li>• Land development project</li> <li>• Located in the city of Ontario</li> <li>• City of Ontario Specific Plan</li> <li>• Approved in 2012</li> </ul>	<p>The Ontario Festival Specific Plan is a comprehensive plan for the development of a planned residential site that could accommodate up to 472 dwelling units on approximately 37.6 acres. This project will be located along Inland Empire Boulevard between Archibald Avenue and Turner Avenue, just below Guasti Regional Park.</p>
<b>Meredith International Centre Specific Plan – ID Number 9</b> <ul style="list-style-type: none"> <li>• Land development project</li> <li>• Located in the city of Ontario</li> <li>• City of Ontario Specific Plan</li> <li>• An Initial Study was prepared for the project in 2014</li> </ul>	<p>The Meredith International Centre Specific Plan Amendment Project proposes a mix of industrial, commercial, and residential land uses on approximately 257 acres located in the southeast portion of Ontario within San Bernardino County. The site is generally located north of I-10, south of 4<sup>th</sup> Street, between Vineyard Avenue and Archibald Avenue. The project area is located in between the Southern Pacific Trail and west Arrow Route.</p>

**Table 2.1.1-2. Related Projects**

<b>Project Name, Type, Status, and ID Number (Refer to Figure 2.1.1-1)</b>	<b>Project Description</b>
<b>Guasti Plaza Specific Plan – ID Number 10</b> <ul style="list-style-type: none"> <li>• Land development project</li> <li>• Located in city of Ontario</li> <li>• City of Ontario Specific Plan</li> <li>• Updated in 2011</li> </ul>	<p>The Guasti Specific Plan (approved in 1997) was updated in 2011 with the addition of the Guasti Major Amendment No. 1 (GMA-1). The amendment would allow construction of residential units as an alternative to office use, called the Residential Overlay Zone. The Residential Overlay Zone is within the Guasti Specific Plan boundaries and, more specifically, bounded by Guasti Road in the north with Turner Avenue to the east and the proposed road, Via Biane, on the west. Pepper Tree Lane is south of the Residential Overlay Zone where the smaller historic buildings will be retained and/or relocated. The Residential Overlay Zone will consist of 7.6 acres. The residential units may be constructed at a density of 25 to 60 units per acre.</p>
<b>Omnitrans Route 290 – ID Number 11</b> <ul style="list-style-type: none"> <li>• Transportation project</li> <li>• Located in the cities of San Bernardino, Montclair, Colton, Ontario</li> <li>• Omnitrans project began in September 2015</li> </ul>	<p>Omnitrans is proposing to offer a second freeway express route that will connect Downtown San Bernardino with Arrowhead Regional Medical Center, Ontario Mills, and the Montclair Transit Center. The service is proposed to run as a peak morning and evening service. The proposed schedule for Route 290 is designed to maximize transfer potential to Foothill Transit's SilverStreak in Montclair, Metrolink trains, and other Omnitrans routes.</p>
<b>SBCTA Ontario Airport Rail Access – ID Number 12</b> <ul style="list-style-type: none"> <li>• Transportation project</li> <li>• Located in the cities of Ontario, Rancho Cucamonga, and Upland</li> </ul>	<p>The Ontario Airport Rail Access project is designed to improve passenger access to public transportation, such as the three Metrolink stations within 5 miles from the airport. This project also aims to assist with anticipated future population growth in the area. An Ontario Airport Rail Access Study Report was completed in November 2014.</p>
<b>Mountain Village – ID Number 13</b> <ul style="list-style-type: none"> <li>• Land development project</li> <li>• Located in the city of Ontario</li> <li>• City of Ontario Specific Plan</li> <li>• Approved in 1997</li> </ul>	<p>The purpose of the Mountain Village Specific Plan is to use blighted parcels to build residential and commercial development consisting of four Development Districts: Entertainment District, Main Street District, Sixth Street District, and Residential District. The Residential District will contain single-family homes.</p> <p>The area is bound by I-10 and the city of Upland to the north, Colony Park to the south, single-family residences to the east, and single- and multi-family residences to the west.</p>
<b>Pomona Corridors SP – ID Number 14</b> <ul style="list-style-type: none"> <li>• Land development project</li> <li>• Located in the city of Pomona</li> <li>• City of Pomona Specific Plan</li> <li>• Public review draft issued in June 2013</li> </ul>	<p>The Pomona Corridors SP is designed to develop private and public investment activities along Garvey Avenue, Holt Avenue, Mission Boulevard, and Foothill Boulevard to promote the type of investment that will enhance the beauty and vitality of the city's primary commercial corridors. The specific plan is composed of portions of Garey Avenue, Holt Avenue, Mission Boulevard, and Foothill Boulevard corridors.</p>

Note: Information was collected from each project's Web site in 2015.



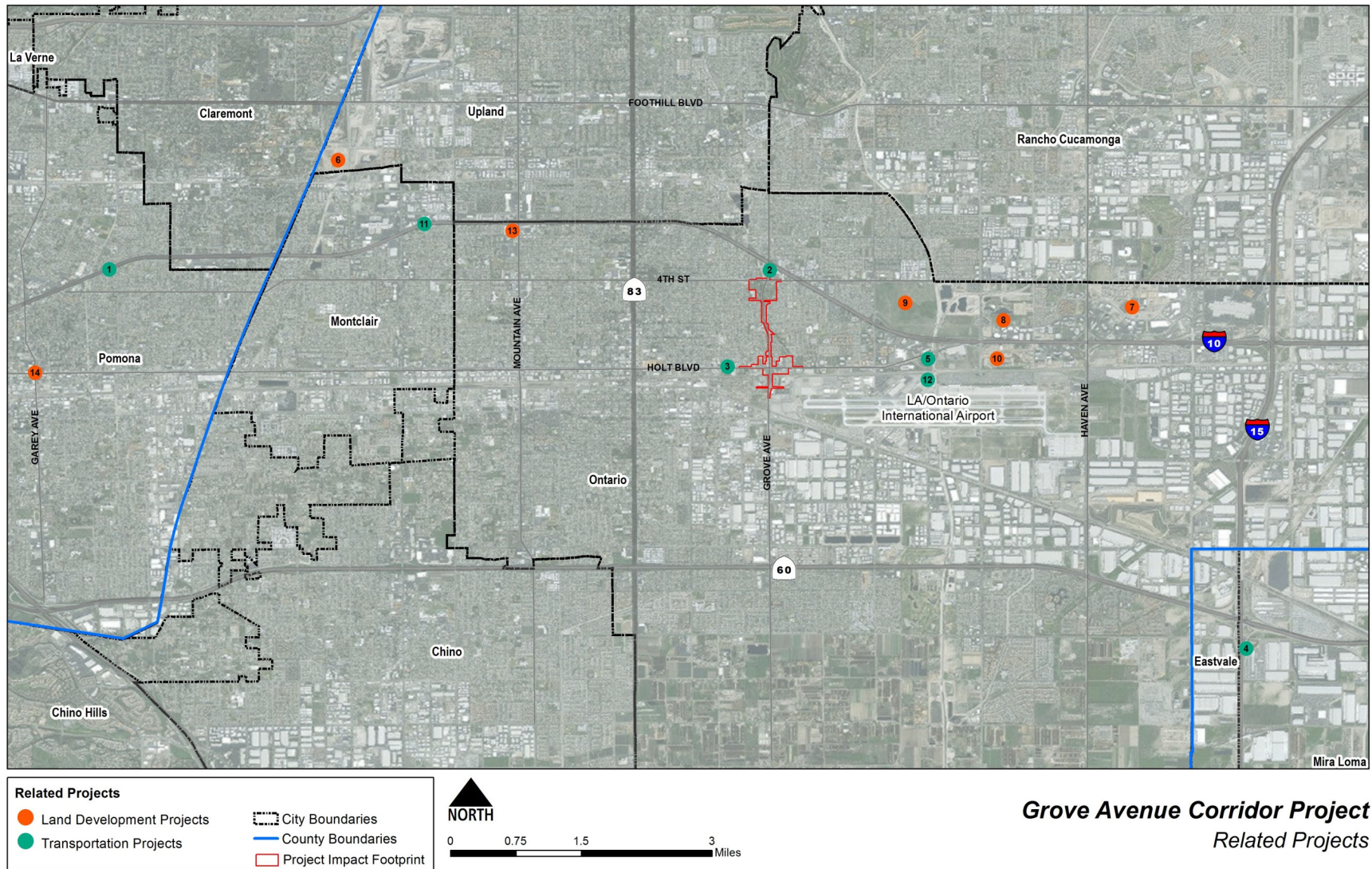


Figure 2.1.1-2. Related Projects

## Environmental Consequences

### ***No Build Alternative***

The No Build Alternative would maintain the current configuration of Grove Avenue. Under the No Build Alternative, the project would not be constructed, and no temporary or permanent impacts to existing land use would occur.

### ***Build Alternative (Proposed Project)***

#### ***Permanent Impacts***

The Build Alternative would result in permanent impacts to 87 parcels, including 84 acquisitions and 3 permanent easements. Property acquisitions associated with the Build Alternative would result in the conversion of 4.06 acres of existing land uses, such as residential, industrial, and public land, to transportation-related uses. See Section 2.1.4.2 for further discussion of parcel acquisitions and relocations. Table 2.1.1-3 shows the Build Alternative impacts to existing land use types.

**Table 2.1.1-3. Build Alternative Existing Land Use Impacts**

Land Use	Permanent Impacts (acres)	Temporary Construction Easement Impacts (acres)
Residential	2.03	0.34
Commercial/Office	0.01	0.11
Industrial	0.03	0.05
Vacant	1.25	0.25
Public Land	0.66	0.36
Railroad	0.00	0.08
Park or Recreational Facility	0.08	1.22
<b>Total</b>	<b>4.06</b>	<b>2.41</b>

Implementation of the Build Alternative would require permanent easements on three parcels: one parcel owned by Southern Pacific Transportation and two owned by the San Bernardino County Flood Control District (SBCFCD).

The conversion of 4.06 acres of various land uses, including just over 2 acres of residential uses, for transportation-related uses would not change the overall land use patterns in the area or influence or inhibit future land use development in the area. Grove Avenue would continue to function as a major transportation corridor surrounded by the same land uses as currently exist.



Permanent indirect impacts to land use patterns, such as changes to regional development and growth-related changes, are not anticipated with implementation of the Build Alternative. The area subject to ROW acquisition is urbanized, containing few vacant parcels that are available and/or entitled for development. The Build Alternative would not remove large tracts of land available for future development nor result in major land use changes; therefore, it would have a negligible effect on regional development patterns. Potential growth-related changes associated with the project are discussed in Section 2.1.3, Growth.

### ***Temporary Impacts***

Forty-seven (47) TCEs, totaling 2.41 acres, would be required to construct the proposed Build Alternative. Properties used as TCEs would maintain their existing land use during and after project construction.

In addition, access to businesses along Grove Avenue, 4<sup>th</sup> Street, and Holt Boulevard in the project area may be temporarily restricted or modified during construction due to TCEs. Access to businesses would be maintained at all times during construction, consistent with Section 7-1.03, Public Convenience of Caltrans' Standard Specifications (2018). Temporary impacts to access and circulation are discussed in further detail in Section 2.1.6, Traffic and Transportation/Pedestrian and Bicycle Facilities.

## **Avoidance, Minimization, and/or Mitigation Measures**

The project is generally consistent with current and future planned land uses as discussed in this section. The Build Alternative has been designed to avoid existing built land uses to the extent practicable while adhering to design and operational criteria to maintain a safe roadway. During final design, additional efforts will be explored to reduce the required project footprint and further minimize any construction and operational impacts to existing and planned land uses.

### **2.1.1.2 Consistency with State, Regional, and Local Plans and Programs**

The following discussion describes the adopted plans within the project area and the goals, policies, or objectives of those plans that are applicable to this project. To ensure project consistency with local transportation and residential projects, the *Community Impact Assessment* (Chapter 2.1.1.1) reviewed transportation and residential projects located within 5 miles of the proposed alignment and all other development located within 2 miles. The search radius includes the cities of La Verne, Pomona, Claremont, Montclair, Chino, Ontario, Upland, Rancho Cucamonga, Fontana, Eastvale, and Jurupa

Valley. The list of related projects includes projects that may occur within 3 years of the proposed project implementation (2025). The identified projects were used to analyze cumulative impacts of the proposed project.

State law is the foundation for local planning in California. The California Government Code (Sections 65000 *et seq.*) contains many of the laws pertaining to the regulation of land uses by local governments, including the general plan requirement, specific plans, subdivisions, and zoning. However, the State is seldom involved in local land use and development decisions; these have been delegated to the city councils and boards of supervisors of the individual cities and counties. Local decision makers adopt their own set of land use policies and regulations based on State laws.

SCAG is the largest Metropolitan Planning Organization (MPO) in the nation. The SCAG region includes six counties (Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura) and 191 cities. As the designated MPO, SCAG is mandated by federal and State law to research and develop an RTP, which now incorporates a Sustainable Communities Strategy (SCS) as well. SCAG is currently undertaking a variety of planning and policy initiatives to foster a more sustainable southern California.

SCAG develops long-term solutions for regional challenges such as transportation, air quality, housing, growth, hazardous waste, and water quality. Because these issues cross city and county boundaries, SCAG works with cities, counties, and public agencies in the six-county region to develop plans and strategies. SCAG has developed strategies that specifically address the growth and transportation issues facing southern California. These plans include the Regional Comprehensive Plan (RCP) and the RTP/SCS, as mentioned above. The RCP presents the full body of planning and policy work produced by SCAG and ties it together.

The RTP/SCS is a comprehensive long-term transportation plan that provides a vision for the future of the SCAG region's multimodal transportation system and specifies how that vision can be achieved for the region. The RTP/SCS identifies major challenges, as well as potential opportunities associated with growth, transportation finances, the future of airports in the region, and impending transportation system deficiencies that could result from growth projections for the region.

In addition to the regional plans, State law requires that each city and county adopt a general plan containing the following seven components or elements: land use, circulation, housing, conservation, open space, noise, and safety (Government Code Sections 65300 *et seq.*). At the same time, each jurisdiction is free to adopt a wide variety of additional elements covering subjects of particular interest to that

jurisdiction, such as recreation, urban design, or public facilities. The local general plan can be described as the city or county's "blueprint" for future development.

Community plans and specific plans are often used by cities and counties to plan the future of a particular area at a finer level of detail than that provided by the general plan. A community plan is a portion of the local general plan focusing on the issues pertinent to a particular area or community within the city or county. It supplements the policies of the general plan. Specific plans describe allowable land uses, identify open space, and detail the availability of facilities and financing for a portion of the community. Specific plans must be consistent with the local general plan. A specific plan implements, but is not technically part of, the general plan.

The County and the City's General Plans were reviewed to understand the development trends, land use related goals, and specific policies of the local jurisdictions that could be affected by the proposed project. The land use, community design, open space, and/or mobility elements for each plan provided most of the goals or policies relevant to the proposed project.

The following sections discuss the regional, local, and General Plan policies relevant to the Grove Avenue Corridor Project.

## **Affected Environment**

### ***Regional Plans***

#### ***SCAG 2008 Regional Comprehensive Plan***

The SCAG RCP, adopted in 2008, provides a vision for the southern California region that addresses future needs while recognizing the interrelationship between economic prosperity, natural resource sustainability, and quality of life. Through measured performance, the RCP serves as a voluntary action plan with short-term guidance and strategic, long-term initiatives. The RCP complements SCAG's RTP/SCS, which is discussed in detail below.

#### ***SCAG Regional Transportation Plan/Sustainable Communities Strategy***

The 2012 RTP contains goals and policies that are pertinent to the proposed project, and the SCS is incorporated into the RTP, per Senate Bill (SB) 375. The SCS will demonstrate how the region will meet its greenhouse gas (GHG) reduction targets. The RTP/SCS's vision encompasses three principles that motivate southern California planning: mobility, economy, and sustainability.

### ***General Plans***

#### ***San Bernardino County General Plan (Adopted 2007, Amended 2014)***

San Bernardino County is bordered by Los Angeles County, Orange County, and Kern County on the west; the Colorado River and the states of Arizona and Nevada on the east; Riverside County on the south; and Inyo County and the southwest corner of Clark County, Nevada, on the north. San Bernardino County includes the following cities located within the proposed project area: Montclair, Upland, Ontario, and Rancho Cucamonga.

San Bernardino County, with a land area of 20,106 square miles, is the largest county in the continental United States. Although San Bernardino County is the largest county in the contiguous United States, the span of control of the Board of Supervisors over the entire county is limited. Federal and State agencies own and control most of the County lands, and only 15 percent of the total land area in San Bernardino County is regulated by the County Board of Supervisors.

The County identifies itself as a crossroads of global, multimodal transportation, and commerce, with an abundance of affordable land and a skilled workforce. It also recognizes its rural and urban amenities.

#### ***City of Ontario General Plan (2010)***

Ontario is comprised of approximately 50 square miles. It is bordered by unincorporated San Bernardino County, Montclair, Upland, Rancho Cucamonga, and Fontana to the north, and Chino and Riverside County to the south. Several highways run through the city limits, including I-10, I-15, and SR-60.

The vision of the Ontario General Plan, or the Ontario Policy Plan, includes goals and policies to create and maintain distinct neighborhoods and activity centers; encourage diverse residential uses; a mix of employment, retail, entertainment, community, and recreational services; and a world-class airport, which are connected through a unified mobility system.

### ***Specific Plans***

No Specific Plans were found to be located within or immediately adjacent to the proposed project alignment.

### **Environmental Consequences**

An evaluation of the proposed project's consistency with related plans and policies is presented in Table 2.1.1-4.

**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
SCAG 2008 Regional Comprehensive Plan			
<b>Land Use and Housing Chapter:</b> Focusing growth in existing and emerging centers and along major transportation corridors.	Consistent	Consistent	The Build Alternative would not induce growth because the proposed project would be built along an existing corridor and is consistent with existing and future plans.  The No Build Alternative would not induce growth because there would be no change to the existing land use development.
<b>Land Use and Housing Chapter:</b> Protecting important open space, environmentally sensitive areas (ESAs), and agricultural lands from development.	Consistent	<b>Inconsistent</b>	The Build Alternative would require acquisition of 0.06 acre of park space from Grove Memorial Park and John Galvin Park. The acquisitions make up less than 2.5 percent of each park. While acquisition of this space is not consistent with SCAG's goal of protecting open space, it is not anticipated to impair the use of recreational facilities and activities within this park. In addition, the Build Alternative would require temporary use of 0.68 acre through TCEs. Although TCEs would temporarily reduce the overall park areas during construction, it would not affect existing recreational activities, features, or attributes in the parks.  No open space, ESAs, or agricultural lands would be affected as a result of the No Build Alternative.
<b>Open Space and Habitat Chapter:</b> Conserving natural lands that are necessary to preserve the ecological function and value of the region's ecosystems.	Consistent	<b>Inconsistent</b>	No natural communities of concern were identified within the project area; however, trees and shrubs within the Biological Study Area (BSA) provide suitable habitat for nesting birds, including raptors, protected under the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFG Code). The Build Alternative would result in permanent unavoidable impacts to 174 trees. (Permanent impacts were determined if at least 50 percent of the tree occurred within the permanent impact area.) The Build Alternative is not consistent with this goal.

**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
			No natural lands would be affected as a result of the No Build Alternative.
<b>Open Space and Habitat Chapter:</b> Conserving wildlife linkages as critical components of the region's open space infrastructure.	Consistent	Consistent	No wildlife linkages would be affected by either of the alternatives.
<b>Open Space and Habitat Chapter:</b> Coordinating transportation and open space to reduce transportation impacts to natural lands.	Consistent	<b>Inconsistent</b>	No natural communities of concern were identified within the project area; however, trees and shrubs within the BSA provide suitable habitat for nesting birds, including raptors, protected under the federal MBTA and CFG Code. The Build Alternative would result in permanent unavoidable impacts to 174 trees. (Permanent impacts were determined if at least 50 percent of the tree occurred within the permanent impact area.) The Build Alternative is not consistent with this goal.  No natural lands would be affected as a result of the No Build Alternative.
<b>Transportation Chapter:</b> A more efficient transportation system that reduces and better manages vehicle activity.	<b>Inconsistent</b>	Consistent	Proposed project improvements associated with the Build Alternative would result in a more efficient transportation system.  Under the No Build Alternative, traffic conditions would continue to worsen along Grove Avenue without implementation of the proposed improvements.
<b>Transportation Chapter:</b> A cleaner transportation system that minimizes air quality impacts and is energy efficient.	<b>Inconsistent</b>	Consistent	The Build Alternative would improve traffic flow along Grove Avenue, especially for trucks travelling from I-10 to Ontario International Airport. Increased throughput resulting from the proposed project would minimize air quality impacts and increase energy efficiency.  Under the No Build Alternative, traffic conditions would continue to worsen along Grove Avenue, thereby increasing air quality impacts and decreasing energy efficiency.

**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
SCAG Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS)			
<b>Goal:</b> Maximize mobility and accessibility for all people and goods in the region.	<b>Inconsistent</b>	Consistent	The Build Alternative would improve traffic flow and decrease congestion along Grove Avenue, thereby improving mobility and enhancing goods movement capabilities; therefore, it is consistent with this goal.  Under the No Build Alternative, traffic conditions would continue to worsen along Grove Avenue without implementation of the proposed improvements.
<b>Goal:</b> Ensure travel safety and reliability for all people and goods in the region.	<b>Inconsistent</b>	Consistent	The Build Alternative is anticipated to create a safer transportation corridor for automobile, truck, transit, or nonmotorized travel modes. In addition, the Build Alternative proposes improvements to pedestrian and bicycle facilities in the project area. Therefore, the Build Alternative is considered consistent with this goal  Under the No Build Alternative, no improvements for automobile, truck, transit, or nonmotorized travel modes would be constructed, thereby worsening safety and traffic conditions along Grove Avenue and the intersections within the project area. Therefore, the No Build Alternative is inconsistent with this policy.
<b>Goal:</b> Preserve and ensure a sustainable regional transportation system.	<b>Inconsistent</b>	Consistent	The proposed Build Alternative would improve operations on Grove Avenue and surrounding local streets. The proposed project is also anticipated to improve the regional transportation system by facilitating improved access between I-10 and Ontario International Airport. Traffic conditions on the existing Grove Avenue would continue to worsen without implementation of the Build Alternative; therefore, the Build Alternative is consistent with this goal.  Under the No Build Alternative, traffic conditions would continue to worsen without implementation of the proposed improvements.

**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
<b>Goal:</b> Maximize the productivity of our transportation system.	Inconsistent	Consistent	The proposed Build Alternative would improve traffic flow along Grove Avenue between I-10 and Ontario International Airport, thereby maximizing the productivity of the existing transportation system.  Traffic conditions would continue to worsen under the No Build Alternative.
<b>Goal:</b> Actively encourage and create incentives for energy efficiency, where possible.	Inconsistent	Consistent	The proposed Build Alternative would improve traffic flow along Grove Avenue between I-10 and Ontario International Airport, thereby maximizing the productivity of the existing transportation system.  Traffic conditions would continue to worsen under the No Build Alternative.
<b>Policy 2:</b> Ensuring safety, adequate maintenance, and efficiency of operations on the existing multimodal transportation system should be the highest RTP/SCS priorities for any incremental funding in the region.	Inconsistent	Consistent	The existing multimodal transportation system would continue to degrade without proposed project improvements, thereby diminishing safety, adequate maintenance, and efficiency.
<b>San Bernardino County General Plan</b>			
<b>Goal CI 1.</b> The County will provide a transportation system, including public transit, which is safe, functional, and convenient; meets the public's needs; and enhances the lifestyles of county residents.	Consistent	Consistent	The Build Alternative would not result in any permanent impacts to the County's public transportation system, but it would result in improved conditions within the project area.  The No Build Alternative would not result in changes to the County's transportation system.
<b>Goal CI 2.</b> The County's comprehensive transportation system will operate at regional, countywide, community, and neighborhood scales to provide connectors between communities and mobility between jobs, residences, and recreational opportunities.	Inconsistent	Consistent	Coordination is ongoing between regional and local government agencies involved in the proposed project to improve traffic conditions on Grove Avenue and throughout the jurisdictions located near the project area.  The No Build Alternative would not result in any traffic improvements to the corridor.



**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
<b>Policy CI 2.1.</b> Work with adjacent jurisdictions to minimize inconsistencies in existing and ultimate ROW and roadway capacity across jurisdictional boundaries.			
<b>Policy CI 2.2.</b> Coordinate financial plans for transportation system improvements with other agencies and jurisdictions in the county.			
<b>Policy CI 2.3.</b> Where appropriate, jointly fund studies and improvements to the transportation system, with cities and other public agencies and developers.	Inconsistent	Consistent	Study of the proposed Build Alternative is being conducted as part of a jointly funded project development approach using State and local funds.  The No Build Alternative would not result in jointly funded improvements; therefore, the No Build Alternative is not consistent with this policy.
<b>Policy CI 2.7.</b> Coordinate with Caltrans, SBCTA, SCAG, and other agencies regarding transportation system improvements in the County's Measure I and other adopted Capital Improvement Programs.	Consistent	Consistent	Coordination is ongoing between the City of Ontario, SBCTA, SCAG, and Caltrans to improve traffic conditions on Grove Avenue throughout the jurisdictions located in the project area.  If selected, the No Build Alternative would not result in any traffic improvements to Grove Avenue.
<b>Policy CI 2.8.</b> Continue to participate in SBCTA, which is the County's Transportation Commission and transportation planning coordinator for all local agencies in the County, and regularly attend meetings of SBCTA Plans and Programs Committee and Comprehensive Transportation Plan Technical Advisory Committee meetings to discuss planning items of mutual concern.			

**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
<b>Policy CI 2.10.</b> Identify important long-range transportation corridors, in conjunction with plans of regional transportation agencies (e.g., SCAG and SBCTA) to protect sufficient ROW for the development of long-range corridors.	Consistent	Consistent	The intent of this policy is to provide ROW for, and minimize ROW impacts of, transportation corridor projects planned by agencies. The Build Alternative is shown in circulation plans for the City of Ontario. As such, the proposed project is consistent with this policy.
<b>Goal CI 3.</b> The County will have a balance between different types of transportation modes, reducing dependency on the automobile and promoting public transit and alternate modes of transportation, in order to minimize the adverse impacts of automobile use on the environment.	Inconsistent	Consistent	The Build Alternative would improve bicycle and pedestrian connections through the project area along Grove Avenue. As such, the Build Alternative would incentivize nonmotorized trips.  The No Build Alternative would not construct nonmotorized improvements; therefore, it is inconsistent with this policy.
<b>Policy CI 3.1.</b> Encourage the reduction of automobile usage through various incentive programs.			
<b>Policy CI 4.5.</b> Coordinate with local and regional transportation agencies and cities to plan and construct new multi-modal transportation facilities on the basis of this General Plan that are consistent throughout the neighboring jurisdictions.	Inconsistent	Consistent	Coordination is ongoing between the City of Ontario, SBCTA, SCAG, and Caltrans to improve traffic conditions on Grove Avenue throughout the jurisdictions located in the project area.  If selected, the No Build Alternative would not result in any traffic improvements to Grove Avenue.
<b>Goal CI 5.</b> The County's road standards for major thoroughfares will complement the surrounding environment appropriate to each geographic region.	Inconsistent	Consistent	The Build Alternative would result in increased roadway capacity, as well as offer alternative travel options.  The No Build Alternative would not result in increased roadway capacity.
<b>Policy CI 5.2.</b> Protect and increase the designed roadway capacity of all vehicular thoroughfares and highways.			

**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
<p><b>Goal CI 6.</b> The County will encourage and promote greater use of nonmotorized means of personal transportation. The County will maintain and expand a system of trails for bicycles, pedestrians, and equestrians that will preserve and enhance the quality of life for residents and visitors.</p>	Inconsistent	Consistent	<p>New Americans with Disabilities Act (ADA)-compliant sidewalks would be constructed in Ontario as a result of the Build Alternative, thereby increasing opportunities for walking.</p> <p>The No Build Alternative would not construct new sidewalks.</p>
<p><b>Policy CI 6.1.</b> Require safe and efficient pedestrian and bicycle facilities in residential, commercial, industrial, and institutional developments to facilitate access to public and private facilities and to reduce vehicular trips. Install bicycle lanes and sidewalks on existing and future roadways, where appropriate and as funding is available.</p>			
<p><b>Goal CI 13.</b> The County will minimize impacts to stormwater quality in a manner that contributes to improvement of water quality and enhances environmental quality.</p>	Consistent	Consistent	<p>Best Management Practices (BMPs) would be incorporated into the Build Alternative design to comply with the County Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit.</p> <p>No changes to stormwater would result from the No Build Alternative.</p>
<p><b>Policy CI 13.1.</b> Utilize site-design, source-control, and treatment control Best Management Practices (BMPs) on applicable projects, to achieve compliance with the County Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) Permit.</p>			

**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
City of Ontario General Plan			
<b>Goal M 2.</b> A system of trails and corridors that facilitates and encourages bicycling and walking.	Inconsistent	Consistent	<p>The Build Alternative would retain and improve upon existing pedestrian circulation routes. Currently, there is no pedestrian sidewalk on the west side of Grove Avenue between I Street and G Street. The Build Alternative would improve nonmotorized transportation by constructing a new sidewalk that connects an existing walkway with Grove Memorial Park. Additionally, pedestrian sidewalks along the project corridor would include a landscaped median between traffic and pedestrians to enhance safety. There would also be a design element that provides a pedestrian connection across the West Cucamonga Channel to an existing trail leading to James Galanis Park. All sidewalks constructed under the Build Alternative would be ADA-compliant. The project would also design Grove Avenue to include a new Class III bikeway in conformance with SBCTA's Non-Motorized Transportation Plan 2014. The Build Alternative is consistent with these goals and policies.</p> <p>The No Build Alternative would not result in improved sidewalks or bikeways; therefore, it is inconsistent with this goal.</p>
<b>Policy M 2-1. Bikeway Plan.</b> We maintain our Multipurpose Trails & Bikeway Corridor Plan to create a comprehensive system of on- and off-street bikeways that connects residential areas, businesses, schools, parks, and other key destination points.			
<b>Policy M 2-2. Bicycle System.</b> We provide off-street multipurpose trails and Class II bikeways as our primary paths of travel and use the Class III for connectivity in constrained circumstances.			
<b>Policy M 2-3. Pedestrian Walkways.</b> We require walkways that promote safe and convenient travel between residential areas, businesses, schools, parks, recreation areas, and other key destination points.			
<b>Goal M 4-2. Regional Participation.</b> We work with regional and subregional transportation agencies to plan and implement goods movement strategies, including those that improve mobility, deliver goods efficiently and minimize negative environmental impacts.	Inconsistent	Consistent	<p>The Build Alternative would improve traffic flow and decrease congestion along the corridor, thereby improving mobility and enhancing goods movement capabilities. Coordination is ongoing between the multiple regional and local government agencies involved in the proposed project.</p> <p>The No Build Alternative would not improve mobility or goods movement capabilities.</p>

**Table 2.1.1-4. Consistency with Plans and Policies**

Goal/Policy	Project Consistent with Plan, Goal, Objective or Policy		Consistency Analysis
	No Build Alternative	Build Alternative	
<b>Goal CD 1-4. Transportation Corridors.</b> We will enhance our major transportation corridors within the city through landscape, hardscape, signage, and lighting.	Consistent	Consistent	The Build Alternative would include landscaping that would be included in the project design to minimize visual impacts (e.g., replacement tree plantings; pavers). Adequate street lighting and signage would be maintained or enhanced.  No changes to the aesthetic quality of the city would result from the No Build Alternative.

Sources: SCAG; County of San Bernardino; City of Ontario, and Parsons, 2015.

### ***No Build Alternative***

The No Build Alternative would maintain the current configuration of Grove Avenue. Under the No Build Alternative, no improvements would be constructed. As identified in Table 2.1.1-4, the No Build Alternative is inconsistent with various goals and policies of the local and regional plans. Some of the goals and policies the No Build Alternative is inconsistent with include improving travel safety and reliability for all people and goods; accommodating pedestrians and motorists; and improving intersection capacity. The No Build Alternative would not create a more efficient transportation system. Under the No Build Alternative, traffic conditions would continue to worsen along the existing Grove Avenue. This continual degradation of the transportation network would result in increased air quality impacts, energy usage, and other negative externalities that are not consistent with the goals to improve to mobility, economy, and sustainability.

### ***Build Alternative (Proposed Project)***

This section summarizes the consistency of the Build Alternative with existing plans and policies.

**SCAG.** The Build Alternative is consistent with SCAG's 2008 RCP because it does not induce additional growth; rather, the Build Alternative would include roadway improvements along an existing transportation corridor and is consistent with existing and future plans. The Build Alternative would also improve the efficiency of the current transportation system, subsequently leading to improved traffic flow and increased energy efficiency. However, the Build Alternative would require permanent removal of 0.12 acre of open space parkland and removal of approximately 174 trees, actions

that are not consistent with the SCAG RCP policies promoting the protection of open space and natural resources. These minor inconsistencies are less than significant.

The Build Alternative is consistent with the SCAG RTP/SCS. The Build Alternative would help decrease congestion, improve safety, and maximize the productivity of the transportation system. The project would support land use and growth patterns that facilitate transit and nonmotorized transportation, further contributing to a more sustainable community and region.

Consistent with the SCAG Sustainability Planning Program growth management framework, the Build Alternative would improve mobility and sustainability in the project area through transportation investments.

**City and County General Plans.** The purpose of the proposed project is to alleviate existing and anticipated future congestion along Grove Avenue between 4<sup>th</sup> Street and Airport Drive; improve traffic operations and mobility to and from Ontario International Airport and the existing and future cargo hub facilities near Grove Avenue and Holt Boulevard; and provide route continuity along Grove Avenue to conform with the City's General Plan Circulation Element, which identifies Grove Avenue as a six-lane principal arterial. The Build Alternative is generally consistent with the County General Plan and City General Plan described above. These plans anticipate growth within the project area and have adopted goals and policies to reduce congestion.

The Build Alternative would support continued economic vitality of the surrounding communities by improving conditions for the movement of goods and people. In addition, the Build Alternative would enhance public safety through improved driving conditions and enhanced environmental conditions through an improvement in traffic mobility and accessibility.

### ***Avoidance, Minimization, and/or Mitigation Measures***

Avoidance and minimization measures for the proposed project to reduce impacts associated with inconsistencies to SCAG's 2008 RCP have been identified for other resource areas. Minimization Measure LU-3 reduces the impacts to parks, and Minimization Measures VA-2 and NC-1 reduce the impacts associated with the loss of trees.

#### **2.1.1.3 Parks and Recreational Facilities**

The information in this section is from the *Community Impact Assessment* (October 2016) and the *De Minimis* Impact Determination (September 2016) prepared for this

project. The project area for parks and recreational facilities includes those resources within a 0.5-mile radius of the project.

### ***Regulatory Setting***

This project would affect facilities that are protected by the Park Preservation Act (California Public Resources Code [PRC] Sections 5400-5409). The Park Preservation Act prohibits local and State agencies from acquiring any property that is in use as a public park at the time of acquisition unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the parkland and any park facilities on that land.

### ***Affected Environment***

Five public parks and recreational areas are located within 0.5 mile of the existing Grove Avenue corridor and are considered Section 4(f) resources. Section 4(f) resources include any publicly owned public park, recreational area, or wildlife or waterfowl refuge or any publicly or privately owned historic site. See Appendix A for further evaluation of Section 4(f) resources.

Table 2.1.1-5 lists the parks and recreational areas within the project area, and Figure 2.1.1-3 displays their locations in relation to the proposed project.

**Table 2.1.1-5. Parks and Recreational Resources  
within the Study Area**

<b>Property Name</b>	<b>Location</b>	<b>Current Ownership</b>	<b>Facilities</b>
James Galanis Park	1259 E. D Street Ontario, CA 91764	City of Ontario	5.10 acres; turf area – multiuse
Veterans Memorial Park	1259 E. D Street Ontario, CA 91764	City of Ontario	8.90 acres; community center; restrooms; tot lot; basketball courts; picnic tables; barbecues; soccer, football, softball fields; pedestrian/bike paths; drinking fountains
Grove Memorial Park	800 Block of Grove Avenue Ontario, CA 91764	City of Ontario	<u>Western Portion:</u> 0.48 acre; two benches; horseshoe-shaped walking path <u>Eastern Portion:</u> 3.84 acres; standard curb for pedestrians
John Galvin Park	900 Block of Grove Avenue Ontario, CA 91764	City of Ontario	<u>Western Portion:</u> 19.71 acres; baseball field; tennis courts; playgrounds; horseshoe pits; picnic shelters and BBQs <u>Eastern Portion:</u> 15.23 acres; Jay Littleton Ballpark; two additional baseball fields; picnic shelters and BBQs; basketball courts
Vineyard Neighborhood Park	1530 E. 6 <sup>th</sup> Street Ontario, CA 91764	City of Ontario	9.60 acres; pool; restrooms; tot lot; basketball courts; picnic tables; barbecues; turf area/ multiuse; benches; drinking fountains

Source: Section 4(f) Evaluation Grove Avenue Corridor Project, Parsons, 2016.



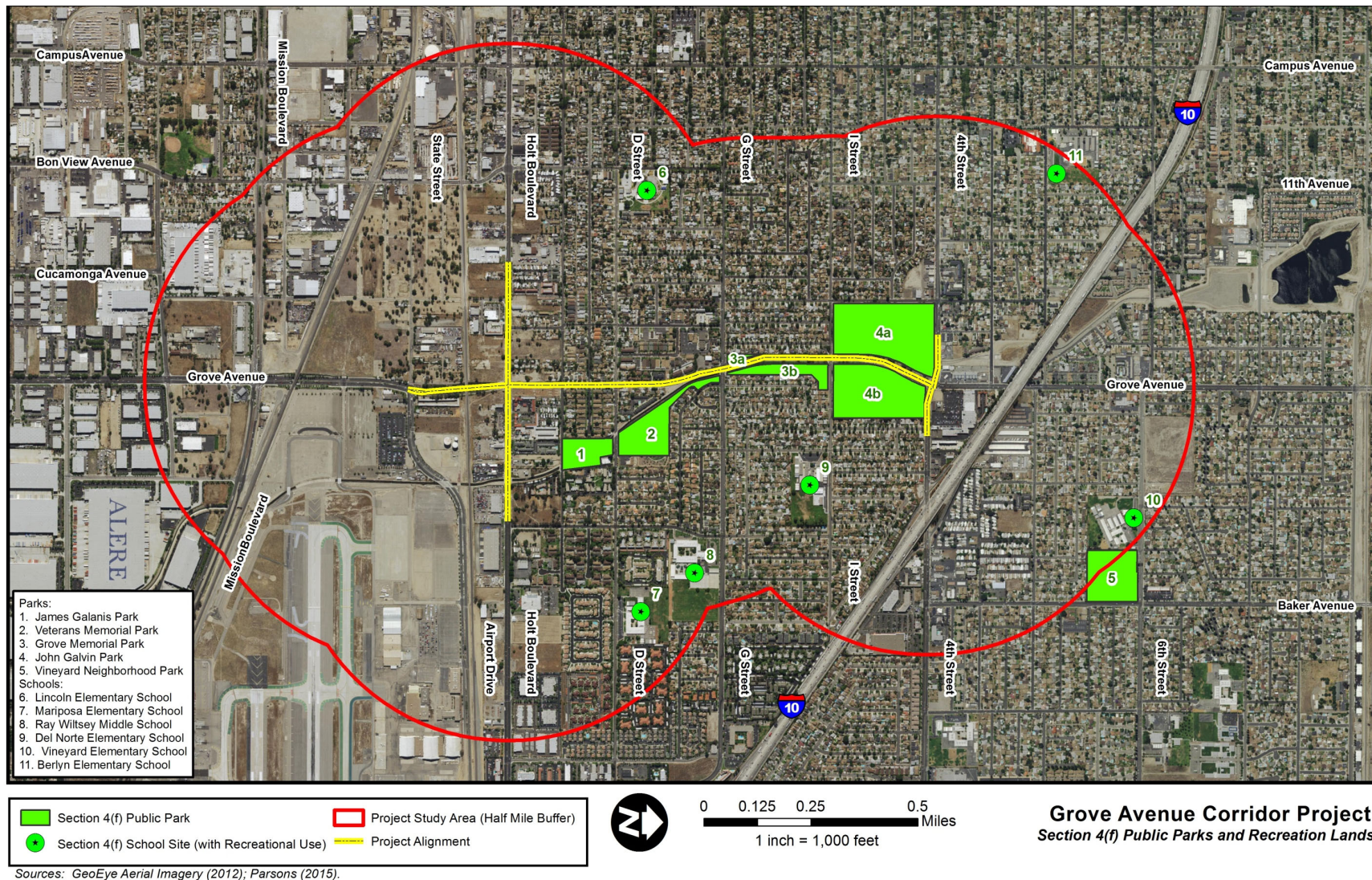


Figure 2.1.1-3. Section 4(f) Public Parks and Recreation Lands



## **Environmental Consequences**

An evaluation of potential impacts to recreational resources associated with each alternative is presented below.

### ***No Build Alternative***

The No Build Alternative would maintain the current configuration of Grove Avenue in the project area. Under the No Build Alternative, the project would not be constructed, and no impacts to parks and recreational facilities would occur.

### ***Build Alternative (Proposed Project)***

#### ***Permanent Impacts***

**Grove Memorial Park.** The Build Alternative would require acquisition of 0.06 acre (2,393 square feet) of Grove Memorial Park on both sides of Grove Avenue, which represents approximately 1.3 percent of the park's pre-project acreage.

Along the western portion of Grove Memorial Park, acquisition would be necessary to accommodate a modified curb return and a connection with the proposed new sidewalk, which would connect this side of the park with John Galvin Park 0.2 mile to the north. With construction of a new sidewalk connection between I Street and G Street, the Build Alternative would help increase access to this section of the park and would provide improved pedestrian connectivity between Grove Memorial Park and John Galvin Park.

Along the eastern portion of Grove Memorial Park, partial acquisition would be necessary to extend the covered portion of the existing West Cucamonga Creek concrete channel. Given that this park has no active use areas, this minor acquisition of parkland is not anticipated to impair recreational values of the park.

The permanent acquisitions described above would not adversely affect any of the recreational activities, features, or attributes within either portion of Grove Memorial Park and are considered less than significant. Although the acquisition area would minimally reduce the overall size of the park, it would not inhibit existing recreational activities within the park. In fact, given that this park is primarily used by walkers and joggers, improving pedestrian connectivity along the western side of Grove Avenue with a new sidewalk would help to increase its utility for neighborhood residents.

**John Galvin Park.** The Build Alternative would require acquisition of 0.06 acre (2,304 square feet) of John Galvin Park. This area of acquisition makes up 0.2 percent of the park's pre-project acreage.

On the western portion of John Galvin Park, partial acquisition would be necessary to accommodate two curb returns and widening of the 4<sup>th</sup> Street Culvert. In addition, the Build Alternative proposes permanent removal of approximately 40 parking spaces that are currently available for users of the western portion of John Galvin Park in the Grove Avenue and 4<sup>th</sup> Street parking lot. Although these parking spaces are within the Grove Avenue ROW and not technically within the John Galvin Park boundaries, the impacted parking spaces are currently accessible to park users and are perceived as belonging to the park. As part of the project, the remnant parking lot would be reconfigured to maintain as many parking spots at this location as possible. A secondary parking lot in the eastern portion of the park and ample on-street parking are available in the immediate vicinity of the western portion of John Galvin Park. In addition, many users of this portion of the park are local residents who generally walk to the park, as observed during field studies at the site. Finally, given that the western section of John Galvin Park does not have facilities for organized sports or other large events, it is highly unlikely that the proposed permanent removal of parking spaces would impair usage of this section of the park.

At the eastern portion of John Galvin Park, partial acquisition would be necessary to accommodate two curb returns at 4<sup>th</sup> Street and I Street.

No permanent impacts to the parking lot in the eastern portion of John Galvin Park are proposed. Access to the parking lot and the total number of parking spaces available would remain the same after project construction. Implementation of the Build Alternative would not result in a significant increase in use of the existing parks in the corridor, nor would it necessitate the need for construction of new parks.

### *Temporary Impacts*

**Grove Memorial Park.** Under the Build Alternative, a 0.46-acre TCE would be required at Grove Memorial Park to allow construction of curb returns and new sidewalks on both sides of Grove Avenue, and to extend the covered portion of the existing West Cucamonga Creek concrete channel. Although this TCE would temporarily reduce the overall park area during construction, it would not affect existing recreational activities, features, or attributes in the park. Pedestrian connectivity along Grove Avenue through Grove Memorial Park would be maintained at all times during project construction.

Vehicular and pedestrian access to Grove Memorial Park would be maintained at all times during construction and operation of the Build Alternative.

**John Galvin Park.** Under the Build Alternative, a 0.20-acre TCE would be required at John Galvin Park to allow construction of curb returns and sidewalks. Although the temporary TCEs would temporarily reduce the overall park area available to users during construction, the proposed TCEs would not affect existing recreational activities, features, or attributes in the park. The areas proposed as TCEs are landscaped areas at the edge of the western and eastern sections of John Galvin Park and, as such, are not used for recreational purposes. Furthermore, pedestrian access along Grove Avenue through John Galvin Park would be maintained at all times during project construction.

Visual impacts at both parks during construction would be typical of roadway construction projects, including construction fencing, construction equipment, material stockpiles, and vegetation removal, which would collectively temporarily disturb the park's existing landscape aesthetic. Temporarily disturbed areas would be returned to pre-project conditions once construction is completed.

#### ***Indirect Impacts***

Street closures and slower travel times due to construction on Grove Avenue near John Galvin Park and Grove Memorial Park are not anticipated to inhibit existing recreational activities within the parks; therefore, the project would not result in any indirect impacts.

#### ***Avoidance, Minimization, and/or Mitigation Measures***

The following minimization measures were identified for the proposed project. Further details are identified in the Section 4(f) *De Minimis* Impact Determination report (see Appendix A).

- LU-1:** Turf grass and rock curbs will be replaced in TCE areas within Grove Memorial Park to match pre-project conditions in consultation with the property owner (City) during and at completion of construction.
- LU-2:** Turf grass and rock curbs will be replaced in TCE areas within John Galvin Park to match pre-project conditions in consultation with the property owner (City) during and at completion of construction.
- LU-3:** The remnant parking lot on the west side of John Galvin Park will be reconfigured to maintain as many parking spots at this location as possible.

## **2.1.2 Farmlands**

Within the project corridor, agriculture land faces continuing conversion pressures from urbanization, foreign competition, and rising production costs for agricultural producers; therefore, the conversion of agricultural land to nonagricultural uses represents an important environmental concern requiring appropriate consideration as part of this environmental analysis. This section identifies applicable federal, State, and local policies regarding agricultural resources, summarizes existing agricultural conditions in the study area, and identifies potential impacts for the Build Alternative.

### **2.1.2.1 Regulatory Setting**

NEPA and the Farmland Protection Policy Act (FPPA) (7 U.S.C. 4201-4209; and its regulations, 7 CFR Part 658) require federal agencies, such as FHWA, to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

CEQA requires the review of projects that would convert Williamson Act contract land to nonagricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

### **2.1.2.2 Affected Environment**

This section provides a summary of existing agricultural conditions in the study area and identifies applicable federal, State, and local policies regarding agricultural resources. The study area for farmlands for the Grove Avenue Corridor Project is a 1-mile buffer from the project limits. This study area is consistent with the study area requirements for the NRCS analysis of farmland impacts.

### ***Farmland Designations and Existing Agricultural Uses***

#### ***Farmland Mapping and Monitoring Program Agricultural Land Designations***

Pursuant to California Government Code, Section 65570, the California Department of Conservation (DOC) Farmland Mapping and Monitoring Program (FMMP) reports biannually on the conversion of farmland and grazing land, and it compiles important farmland maps and datasets for each county in the state. The farmland maps incorporate data from the United States Department of Agriculture (USDA) NRCS soil survey and current county land use information. Maps and statistics are produced every 2 years

using a process that integrates aerial photo interpretation, field mapping, computerized mapping, and public review. The FMMP maps and datasets categorize land use into nine different mapping categories to describe farmland and nonagricultural uses, as described below:

1. **Prime Farmland:** Prime Farmland is land that has the best combination of physical and chemical characteristics for the production of crops. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops when treated and managed, including water management, according to current farming methods. Prime Farmland must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.
2. **Farmland of Statewide Importance:** Farmland of Statewide Importance is land other than Prime Farmland that has a good combination of physical and chemical characteristics for the production of crops. It must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.
3. **Unique Farmland:** Unique Farmland is land that does not meet the criteria for Prime Farmland or Farmland of Statewide Importance that has been used for the production of specific high-economic-value crops at some time during the 4 years prior to the mapping date. It has the special combination of soil quality, location, growing season, and moisture supply needed to produce sustained high quality and/or high yields of a specific crop when treated and managed according to current farming methods. Examples of such crops may include oranges, olives, avocados, rice, grapes, and cut flowers. It does not include publicly owned lands for which there is an adopted policy preventing agriculture use.
4. **Farmland of Local Importance:** Farmland of Local Importance is either currently producing crops, has the capability of production, or is used for the production of confined livestock. Farmland of Local Importance is land other than Prime Farmland, Farmland of Statewide Importance, or Unique Farmland. This land may be important to the local economy due to its productivity or value. It does not include publicly owned lands for which there is an adopted policy preventing agricultural use.
5. **Grazing Land:** Grazing Land is land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock. The minimum mapping unit for Grazing Land is 40 acres. Grazing Land

does not include land previously designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. It also does not include heavily brushed, timbered, excessively steep, or rocky lands that restrict the access and movement of livestock, rural residential land, or publicly owned land for which there is an adopted policy preventing agricultural use.

6. **Urban and Built-Up Land:** Urban and Built-Up Land is used for residential, industrial, commercial, construction, institutional, public administrative process, railroad yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment plants, water control structures, and other development purposes. Highways, railroads, and other transportation facilities are mapped as part of Urban and Built-Up Land if they are part of the surrounding urban area.
7. **Other Land:** Land that does not meet the criteria of any other category is designated as Other Land. Typical uses include low-density rural development, heavily forested land, mined land, or government land with restrictions on use.
8. **Water:** Water areas with an extent of at least 40 acres are designated Water.
9. **Area Not Mapped:** Areas that fall outside of the NRCS soil survey are designated Area Not Mapped.

### *Existing Agricultural Uses*

Agricultural production in the study area is extremely limited due to existing and proposed dense urban and suburban development.

As shown in Table 2.1.2-1, 4.3 acres (0.1 percent of the total study area) of Farmland of Statewide Importance are located within 1 mile of the Grove Avenue Corridor Project. The remaining 99.9 percent of land in the study area is comprised of urban and built-up land, and other nonagricultural land use categories. No other farmland categories were found within the study area. Per correspondence with the City of Ontario Planning Department, there are no parcels with Williamson Act contracts located within the study area.<sup>3</sup>

**Table 2.1.2-1. FMMP Lands in the Project Study Area**

Land Mapping Category	Total Acres within the Study Area	% of Total Study Area Acres
Prime Farmland	0	0
Farmland of Statewide Importance	4.30	0.11
Unique Farmland	0	0

<sup>3</sup> Based on correspondence with Richard Ayala, Senior Planner for the City of Ontario in May 2015.

**Table 2.1.2-1. FMMP Lands in the Project Study Area**

Land Mapping Category	Total Acres within the Study Area	% of Total Study Area Acres
Farmland of Local Importance	0	0
Grazing Land	0	0
Urban and Built-Up Land	3,920.78	99.04
Other Land	33.54	0.85
Outside of Survey Boundary/Data not Available	0	0
Total Acres within the Study Area	3,958.62	100

Source: Farmland Mapping and Monitoring Program, State of California DOC, 2010.

### 2.1.2.3 Environmental Consequences

An evaluation of potential impacts to farmlands for each alternative is presented below.

#### **No Build Alternative**

The No Build Alternative would maintain the current configuration of Grove Avenue in the study area. Under the No Build Alternative, the project would not be constructed, and no impacts to farmlands or timberlands would occur.

#### **Build Alternative (Proposed Project)**

##### *Permanent Impacts*

While 4.3 acres of Farmland of Statewide Importance exist within the 1-mile study area, this land is located approximately 1 mile south of the southern project limits. Additionally, this land is not currently used for agricultural purposes. No farmlands occur within or immediately adjacent to the proposed improvements along the Grove Avenue corridor; therefore, no permanent impacts to farmlands would occur as a result of the Build Alternative.

##### *Temporary Impacts*

While 4.3 acres of Farmland of Statewide Importance exist within 1 mile of the study area, no farmlands occur within or immediately adjacent to the proposed improvements along the Grove Avenue corridor; therefore, no temporary impacts to farmlands would occur as a result of the Build Alternative.

### 2.1.2.4 Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, or mitigation measures are warranted because there are no impacts to farmlands or timberlands.

### **2.1.3 Growth**

Analysis of the potential growth-inducing impacts of the proposed project is based on demographic information from the 2010 United States Census data and the SCAG 2012–2035 RTP growth forecasts for the city of Ontario and San Bernardino County.

#### **2.1.3.1 Regulatory Setting**

The Council on Environmental Quality (CEQ) regulations, which established the steps necessary to comply with NEPA, require evaluation of the potential environmental effects of all proposed federal activities and programs. This includes a requirement to examine indirect effects that may occur in areas beyond the immediate influence of a proposed action and at some time in the future. The CEQ regulations (40 CFR 1508.8) refer to these consequences as indirect impacts. Indirect impacts may include changes in land use, economic vitality, and population density, which are all elements of growth.

CEQA also requires the analysis of a project’s potential to induce growth. The CEQA guidelines (Section 15126.2[d]) require that environmental documents “...discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment...”

#### **2.1.3.2 Affected Environment**

Under NEPA and CEQA, growth inducement is not necessarily considered detrimental, beneficial, or environmentally significant. Typically, the growth-inducing potential of a project is considered significant if it fosters growth or a concentration of population in excess of what is assumed in relevant master plans, land use plans, or projections made by regional planning agencies. Significant growth impacts could be manifested through the provision of infrastructure or service capacity to accommodate growth beyond the levels currently permitted by local or regional plans and policies. In general, growth induced by a project is considered a significant impact if it directly or indirectly affects the ability of agencies to provide needed public services, or if it can be demonstrated that the potential growth significantly affects the environment in some other way.

Different transportation projects influence growth to different degrees and in different ways, and the guidance for evaluation of growth-related impacts uses a two-phase approach. The first phase, called “first-cut screening,” is designed to figure out the likely growth potential effect and whether further analysis of the issue is necessary.



The first-cut screening involves examining a variety of interrelated factors to answer the following questions:

- To what extent would travel times, travel cost, or accessibility to employment, shopping, or other destinations be changed? Would this change affect travel behavior, trip patterns, or the attractiveness of some areas to development over others?
- To what extent would change in accessibility affect growth or land use change—its location, rate, type, or amount?
- To what extent would resources of concern be affected by this growth or land use change?

This section discusses whether the proposed Grove Avenue Corridor Project improvements would result in unforeseen direct, indirect, or secondary growth, or would otherwise influence population growth. This discussion is based on guidance from the Caltrans Standard Environmental Reference (SER) and the Guidance for Growth-Related Indirect Impact Analyses (May 2006). There are many factors that may affect the amount, location, and rate of growth in the region of a project. Such factors include:

- Market demand for housing, employment, and commercial services;
- Desirability of the climate and living or working environment;
- Strength of the local employment and commercial economy;
- Availability of other roadway improvements;
- Availability of other services and infrastructure (e.g., schools, water); and
- Land use and growth management policies of the local jurisdictions.

Factors affecting growth and its effects tend to be regional and specific in nature; therefore, this analysis presents information about the larger region (San Bernardino County) and the jurisdiction containing the study area (City of Ontario).

The project area, as well as all of southern California, has experienced dramatic growth in the last 30 years, and this trend is expected to continue. During the past several decades, the SCAG region, including Orange, Imperial, Riverside, San Bernardino, Los Angeles, and Ventura counties, has been one of the fastest-growing regions in the nation. Between 1950 and 1970, the population doubled in size, growing at a rate of 5 percent per year. Between 1980 and 1990, the region's population grew by more than 25 percent, to 14.6 million. Between 1990 and 2000, the region's population grew by

nearly 15 percent, to 16.5 million. Additional population and employment growth within the study area is expected to take place through the natural increase and redevelopment of existing land uses or infill development of vacant parcels. Land uses within the project area are already established, with limited opportunity for new unplanned large-scale development.

A comparison of the SCAG population, household, and employment estimates and the annual average growth rates between 2008 and 2035 for the City of Ontario; San Bernardino and Los Angeles counties; and the SCAG region is provided in Table 2.1.3-1.

**Table 2.1.3-1. Annual Average Growth Rate**

Jurisdiction	Population 2008-2035	Households 2008-2035	Employment 2008-2035
SCAG	0.9	1.0	0.8
San Bernardino County	1.3	1.5	1.9
City of Ontario	3.3	3.5	3.2

Source: SCAG, *Regional Growth Forecasts, 2012-2035*  
<http://www.scaq.ca.gov/DataAndTools/Pages/GrowthForecasting.aspx>.

According to the SCAG forecasts, the city of Ontario is projected to increase at a faster rate than San Bernardino County and the overall SCAG region. The projected growth shown includes future approved development as discussed in Section 2.1.1, Land Use. Due to the lack of undeveloped private vacant land in the project area, there are limited opportunities for large-scale new development to occur.

### **2.1.3.3 Environmental Consequences**

An evaluation of potential growth-related impacts associated with each alternative is presented below.

#### ***No Build Alternative***

Under the No Build Alternative, no modifications to the existing Grove Avenue corridor would occur. By not providing any improvements along the existing corridor, the No Build Alternative is not consistent with the regional mobility goals of the City, nor would it meet the goals and objectives of the SCAG RTP. These regional planning documents anticipate the growth planned within the local jurisdictions within San Bernardino County and respond to this projected growth. Implementation of the No Build Alternative would have no influence on the level of growth within the city of Ontario. Ontario is predominantly built out, with limited area available for development

or redevelopment; and because the No Build Alternative is making no changes to existing land use patterns or transportation infrastructure, it would not influence the amount, location, and/or distribution of growth or housing and jobs in the local cities and unincorporated areas within the project area. Existing congestion and traffic conditions would remain along Grove Avenue and would continue in the future under the No Build Alternative.

### ***Build Alternative (Proposed Project)***

The “first-cut screening” was conducted to determine what influence construction of the Build Alternative might have on growth and development in the project area. This screening evaluated the following:

- The project’s potential to change accessibility;
- How, if at all, the project type and location, as well as growth pressure, could influence growth in the area; and
- Whether resources of concern would be affected by project growth or land use change.

### ***Potential Change to Accessibility***

The Build Alternative proposes to widen Grove Avenue to alleviate existing congestion and accommodate future traffic; improve mobility to and from Ontario International Airport; and provide route continuity along Grove Avenue to conform with the City of Ontario General Plan Circulation Element. Because Grove Avenue is already utilized as an established north-south travel route in the cities of Ontario and Rancho Cucamonga, the Build Alternative is not anticipated to significantly alter travel patterns, locally or regionally. The proposed Build Alternative would not change points of accessibility to undeveloped land or provide new access to the area.

The Build Alternative is intended to facilitate improved connectivity to the I-10 corridor from the local transportation network and Ontario International Airport. The Build Alternative is not anticipated to accommodate additional traffic beyond what is currently projected with or without the project.

### ***Project Factors’ Influence on Growth***

The Build Alternative is not a trip generator and would not influence growth. The proposed improvements along Grove Avenue would accommodate existing and future growth associated with the development identified in the regional and local plans, including the SCAG RCP, SCAG RTP, and City of Ontario General Plan. The location, timing, and level of future growth in the area would depend on the availability of certain

types of infrastructure/services (e.g., water, sanitary sewers, and schools). Accommodating critical future infrastructure is addressed by individual jurisdictions and agencies providing these services to existing and future development, and their availability would affect the location, level, and timing of future development regardless of the proposed project. Because the proposed transportation improvements accommodate existing and planned future development, the proposed project would not have potential for stimulating the location, rate, timing, or amount of growth locally or regionally. Furthermore, because the project area and immediate vicinity is generally built-out, there are very few open areas available to create new housing.

In addition, the Build Alternative would not remove an impediment to growth because the proposed project would not provide an entirely new public facility; rather, the Build Alternative includes capacity improvements along an existing corridor to respond to expected traffic demand and to improve operations. The proposed project is a response to address the existing and future development trends near Grove Avenue and Holt Boulevard. A primary purpose of the proposed project would be to accommodate the anticipated growth in automobile and truck traffic along Grove Avenue between I-10 and Ontario International Airport. As discussed in Section 2.1.6, Traffic and Transportation/Pedestrian and Bicycle Facilities, the average growth of traffic volumes at the study area intersections between existing and opening year 2025 is approximately 2 percent per year. Between opening year 2025 and horizon year 2045, the average traffic volume at the study area intersections is anticipated to grow approximately 1 percent per year.

### ***Reasonable Foreseeable Growth Potential***

As noted above, the Build Alternative would facilitate the improved mobility for future conditions and would not directly or indirectly result in project-related growth or influence growth locally or regionally. In terms of foreseeable impacts to resources of concern, the proposed Build Alternative would not affect resources of concern (e.g., utilities, population, and housing) because land use development within the project area is controlled by local jurisdictions. Service providers also regularly evaluate growth trends and provide required infrastructure upgrades as needed.

### ***Conclusion***

This “first-cut screening” analysis demonstrates that the Build Alternative would not change access or influence growth but would instead facilitate improved mobility to the regional transportation system from the local transportation network. The Build Alternative would provide improved mobility and safety along the existing Grove

Avenue corridor. Resources of concern would not be affected because the Build Alternative is not growth inducing and would not result in reasonably foreseeable growth. Based on the analysis above, the proposed project would not require further analysis of growth-related impacts.

#### **2.1.3.4 Avoidance, Minimization, and/or Mitigation Measures**

The proposed project is not growth-inducing, and no further analysis of growth-related impacts is required. The potential for unplanned development is limited given the built-out nature of the project area and entitlement status of existing vacant land. Therefore, no avoidance, minimization, and/or mitigation measures are required.

#### **2.1.4 Community Impacts**

This section discusses impacts to the community as a result of implementation of the proposed project. The analysis is based on the results of the *Community Impact Assessment* (October 2016) prepared for the project. This Community Impacts section is divided into three subsections: Community Character and Cohesion, Relocations and Real Property Acquisition, and Environmental Justice.

##### **2.1.4.1 Community Character and Cohesion**

Community cohesion is the degree to which residents feel a sense of belonging to their neighborhood, their level of commitment to the community, or a strong attachment to neighbors, groups, and institutions, usually as a result of continued association over time.

##### ***Regulatory Setting***

NEPA, as amended, established that the federal government use all practicable means to ensure that all Americans have safe, healthful, productive, and aesthetically and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). FHWA, in its implementation of NEPA (23 U.S.C. 109[h]), directs that final decisions on projects are to be made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment; however, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Since this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

##### ***Affected Environment***

Figure 2.1.4-1 identifies the census tracts within 0.25 mile of the Grove Avenue corridor. The 0.25-mile study area consists of six U.S. Census Bureau census tracts. The study area includes a larger area than that directly affected by project construction and ROW acquisitions to provide a broader picture of the area affected by the project. City of Ontario and County of San Bernardino (County) demographic data were analyzed to present the general population and housing characteristics for the study area.

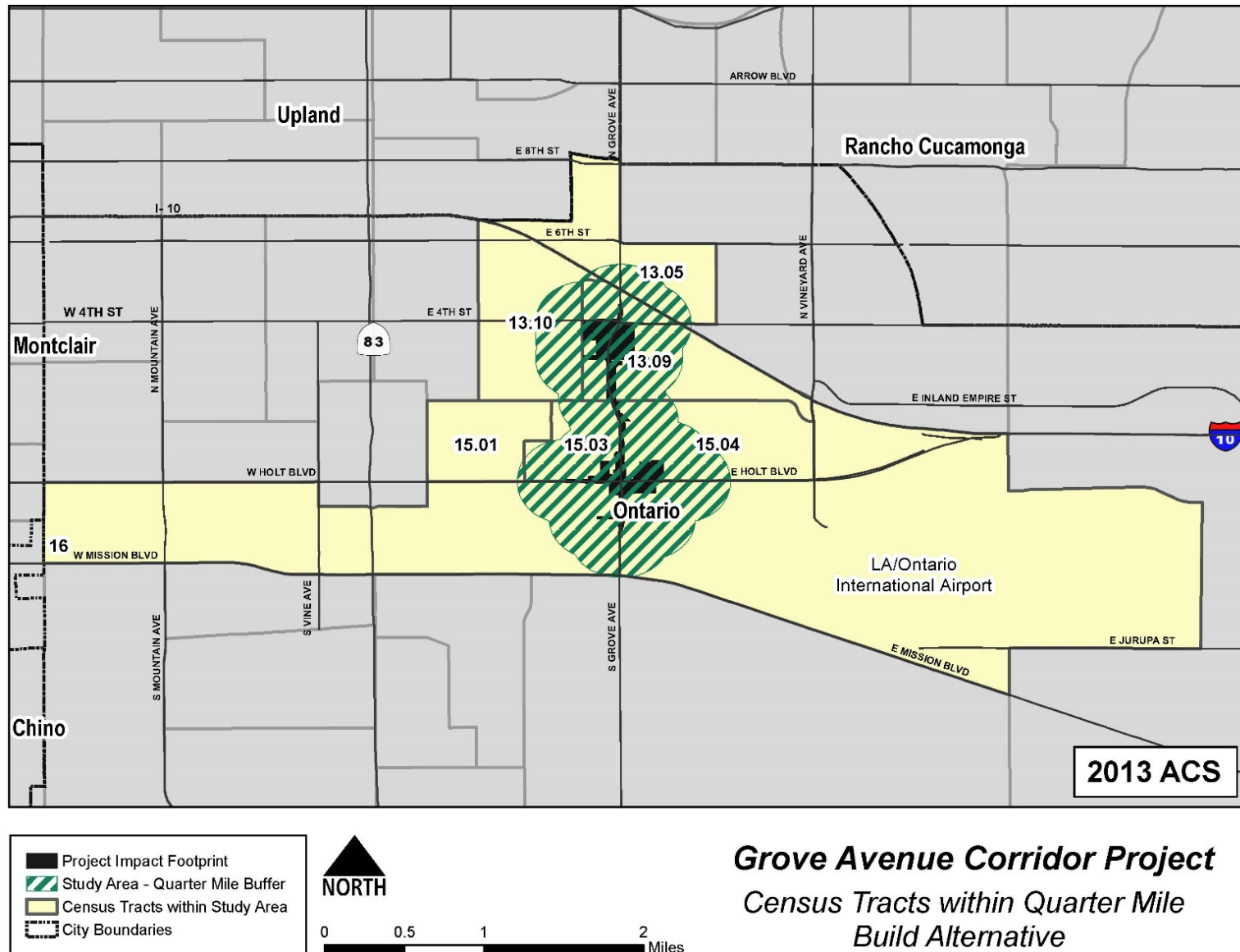


Figure 2.1.4-1. Census Tracts within 0.25 Mile (Build Alternative)

Census tracts were used for the environmental justice analysis because they are the most complete dataset for the level of detail required for this analysis. In addition, census tracts incorporate populations that may not be directly affected by the project but may be indirectly affected by project construction and operation.

### ***Neighborhoods***

Five neighborhoods were delineated within the study area based on census tract boundaries, common land use types, and distinct physical boundaries generally based on major roads. These five neighborhoods are described below.

**Southwest of I-10 and West of Grove Avenue:** This neighborhood is generally located south of I-10, north of 4<sup>th</sup> Street, west of Grove Avenue, and east of Campus Avenue. Land use in the neighborhood generally consists of single-family residences built in the 1950s on lots ranging from approximately 6,500 to 9,000 square feet.

**West of Grove Avenue:** This neighborhood is generally located south of 4<sup>th</sup> Street, north of D Street, east of Allyn Avenue, and west of Grove Avenue. Several community facilities are located within this neighborhood. The western portion of John Galvin Park is located in the northeast corner of the neighborhood. Lincoln Elementary School is located in the southwest corner of this neighborhood. Two churches, Sovereign Grace Baptist Church and Bible Baptist Church International, are also located in this neighborhood. Land use in the neighborhood primarily consists of single-family residences, with several multi-family residences near Grove Avenue between D Street and G Street. Most of the homes contained in this neighborhood were constructed between 1945 and 1960, with a handful that were built in the early 1920s and early 1980s. Lot sizes in this neighborhood generally range from approximately 6,000 to 8,000 square feet.

**South of I-10 and East of Grove Avenue:** This neighborhood is generally located south of 4<sup>th</sup> Street and I-10, north of D Street, east of Grove Avenue, and west of Corona Avenue. Three parks run along the western border of this neighborhood: John Galvin Park, Grove Memorial Park, and D Street Park. Del Norte Elementary School, Ray Wiltsey Middle School, and Mariposa Middle School are all located within 0.5 mile between D Street and I Street. Land use in the neighborhood primarily consists of single-family residences, with several multi-family residences in the eastern part of this neighborhood. One senior living community, Palm Terrace I Co-op Apartments, is bordered by Ray Wiltsey Middle School and Mariposa Elementary. Single-family residences contained in the northern part of this neighborhood were constructed



between 1950 and 1963, with lot sizes ranging from approximately 6,000 to 8,000 square feet. Homes south of G Street and north of D Street were generally constructed between 1978 and 2005. Lot sizes in this southern portion of the neighborhood vary widely, ranging from 1,500 to 8,000 square feet.

**Southwest of East D Street and Grove Avenue:** This neighborhood is generally located south of D Street, north of Holt Boulevard, east of Allyn Avenue, and west of Grove Avenue. Residential land use in this neighborhood is a mixture of single-family and multi-family residences. The Korean Church of Pomona Valley is located on the northwest corner of this neighborhood. Homes contained in this neighborhood were constructed between 1930 and 1982, with lot sizes ranging from approximately 6,000 to 8,000 square feet. Land uses along the southern border of this neighborhood (Holt Boulevard) are commercial or industrial, with several vacant lots near Grove Avenue and Holt Boulevard.

**James Galanis Park:** This neighborhood is generally located south of D Street, north of Holt Boulevard, east of Grove Avenue, and west of Imperial Avenue. This neighborhood is made up of several multi-family residential developments, with a handful of single-family homes, and one mobile home community. James Galanis Park is located at the center of this neighborhood. The southwest corner of this neighborhood has one vacant parcel that is adjacent to commercial land uses along Holt Boulevard. Homes contained in this neighborhood were constructed in various phases between 1979 and 2005, with lot sizes generally ranging from approximately 1,500 to 5,500 square feet, except for several homes located in the center of this neighborhood that have lot sizes ranging from 11,000 to 20,000 square feet.

### ***Demographic Data***

Elements of community cohesion can be found in U.S. Census demographic data used to profile communities. Some specific indicators of community cohesion are as follows (and discussed later in this chapter):

- **Age:** Elderly and stay-at-home parents tend to be more active in their community. They have time to become involved. The transit-dependent population is comprised of the population under age 18 and age 65 and older.
- **Ethnicity:** Ethnic homogeneity is associated with a higher degree of community cohesion.
- **Household Size:** Households of two or more people tend to correlate with a higher degree of community cohesion.

- **Home Ownership:** Prevalence of owner-occupied units is also associated with a high degree of community cohesion.

### Age

Table 2.1.4-1 shows the distribution of the population by age in the state, county, and in the study area city based on 2000 and 2010 Census data, as well as 2013 American Community Survey (ACS) data for census tracts within a 0.25-mile buffer of the Build Alternative. Three age groups are identified as most descriptive of the overall population. Those residents younger than 18 and older than 64 represent the transit-dependent population. The age range of 18 to 64 represents the working-class population. San Bernardino County and the City of Ontario exhibit similar age distribution patterns as the state average.

**Table 2.1.4-1. Age Distribution**

Geography	Year	Total (Percentage)		
		Population < 18	Population 18-64	Population > 64
State				
California	2000	9,249,829 (27.3%)	21,026,161 (62.1%)	3,595,658 (10.6%)
	2010	9,295,040 (25.0%)	23,712,402 (63.6%)	4,246,514 (11.4%)
County				
San Bernardino	2000	552,047 (32.3%)	1,010,928 (59.1%)	146,459 (8.6%)
	2010	594,588 (29.2%)	1,259,274 (61.9%)	181,348 (8.9%)
City/Community				
Ontario	2000	54,304 (34.4%)	94,381 (59.7%)	9,322 (5.9%)
	2010	49,443 (30.2%)	103,427 (63.1%)	11,054 (6.7%)
Census Tracts				
13.05 (Ontario)	2013	1,821 (36.3%)	2,879 (57.4%)	312 (6.2%)
13.09 (Ontario)	2013	1,397 (28.4%)	2,969 (60.3%)	561 (11.4%)
13.10 (Ontario)	2013	1,511 (26.7%)	3,637 (64.2%)	520 (9.2%)
15.01 (Ontario)	2013	1,353 (34.9%)	2,383 (61.4%)	144 (3.7%)
15.03 (Ontario)	2013	1,257 (37.4%)	1,942 (57.8%)	160 (4.8%)
15.04 (Ontario)	2013	1,833 (33.0%)	3,380 (60.9%)	340 (6.1%)
16 (Ontario)	2013	2,131 (36.8%)	3,387 (58.6%)	265 (4.6%)

Source: U.S. Census, 2000, 2010, and 2009-2013 American Community Survey.

All seven census tracts within the study area featured 57.4 to 64.2 percent of residents between the ages of 18 and 64. On average, the age composition of each census tract consists of 33.4 percent below 18 years old, 60.1 percent between 18 and 64 years old, and 6.6 percent older than 64 years old.

### ***Ethnicity***

Table 2.1.4-2 shows the 2000 and 2010 ethnic composition of the study area county and city populations. ACS data from 2013 were also collected for the study area census tracts. Based on the 2010 Census, the largest ethnic group in San Bernardino County and the study area census tracts was Hispanic or Latino.

In Ontario, the white population decreased between 2000 and 2010, which coincided with an increase in the Hispanic or Latino population. The census tracts within the study area had an average Hispanic or Latino population of 82.4 percent, representing the majority. There is a wide distribution of white populations within the census tracts, ranging from 5.8 to 21.2 percent. The black populations ranged from 0.0 to 13.6 percent of residents.

The census tracts with the highest percentage of white populations were Tracts 13.10 and 13.09, with 21.2 and 13.3 percent, respectively. All other census tracts had white population percentages less than 9.3 percent. Most of the project area census tracts are comprised of less than 2.1 percent African Americans, except for Census Tracts 13.09 and 15.04, where African Americans represent 13.6 and 9 percent of the population, respectively. Six out of the seven census tracts in the study area had Asian populations 2.1 percent or below, while 6.8 percent of residents in Census Tract 15.04 identified as Asian. The other racial categories did not represent a large proportion of the population, ranging from zero to 3 percent.

### ***Housing***

Table 2.1.4-3 shows the census tracts in the Grove Avenue Corridor Project area, except for Tract 13.10, have lower home ownership rates and higher rental rates than the San Bernardino County averages; and only two tracts (Tract 13.05 and Tract 13.10) have equal or higher home ownership rates than the city of Ontario as a whole.

**Table 2.1.4-2. Ethnic Composition**

Geography	Year	Total (Percentage)							
		White	Black	American Indian/ Native Alaskan	Asian	Hawaiian/ Pacific Islanders	Other	Two or More Races	Hispanic or Latino
State									
California	2000	20,170,059	2,263,882	333,346	3,697,513	116,961	5,682,241	1,607,646	10,966,556
California	2010	21,453,934	2,299,072	362,801	4,861,007	144,386	6,317,372	1,815,384	1,4013,719
County									
San Bernardino	2000	752,222 (44.0%)	150,201 (8.8%)	9,804 (0.6%)	78,154 (4.6%)	4,387 (0.3%)	3,039 (0.2%)	42,240 (2.5%)	669,387 (39.2%)
	2010	677,598 (33.3%)	170,700 (8.4%)	8,523 (0.4%)	123,978 (6.1%)	5,845 (0.3%)	4,055 (0.2%)	43,366 (2.1%)	1,001,145 (49.2%)
City/Community									
Ontario	2000	42,048 (26.6%)	11,317 (7.2%)	475 (0.3%)	5,914 (3.7%)	519 (0.3%)	284 (0.2%)	2,840 (1.8%)	94,610 (59.9%)
	2010	29,898 (18.2%)	9,598 (5.9%)	361 (0.2%)	8,078 (4.9%)	448 (0.3%)	386 (0.2%)	2,070 (1.3%)	113,085 (69.0%)
Census Tracts									
13.05 (Ontario)	2013	466 (9.3%)	105 (2.1%)	0 (0.0%)	103 (2.1%)	0 (0.0%)	0 (0.0%)	61 (1.2%)	4,277 (85.3%)
13.09 (Ontario)	2013	654 (13.3%)	669 (13.6%)	0 (0.0%)	87 (1.8%)	0 (0.0%)	20 (0.4%)	0 (0.0%)	3,497 (71.0%)
13.10 (Ontario)	2013	1,203 (21.2%)	84 (1.5%)	0 (0.0%)	21 (0.4%)	0 (0.0%)	0 (0.0%)	170 (3.0%)	4,190 (73.9%)
15.01 (Ontario)	2013	229 (5.9%)	59 (1.5%)	0 (0.0%)	4 (0.1%)	0 (0.0%)	0 (0.0%)	13 (0.3%)	3,575 (92.1%)
15.03 (Ontario)	2013	225 (6.7%)	0 (0.0%)	25 (0.7%)	57 (1.7%)	0 (0.0%)	0 (0.0%)	92 (2.7%)	2,960 (88.1%)
15.04 (Ontario)	2013	474 (8.5%)	501 (9.0%)	0 (0.0%)	378 (6.8%)	0 (0.0%)	14 (0.3%)	79 (1.4%)	4,107 (74.0%)
16 (Ontario)	2013	337 (5.8%)	38 (0.7%)	16 (0.3%)	25 (0.4%)	14 (0.2%)	0 (0.0%)	0 (0.0%)	5,353 (92.6%)

Source: U.S. Census, 2000, 2010, 2013.

**Table 2.1.4-3. Housing Profile**

Geography	Year	Total (Percentage)					
		Total Housing Units	Housing Units, Occupied	Housing Units, Vacant	Owner-Occupied Units	Renter-Occupied Units	Average Household Size
County							
San Bernardino	2013	701,332	603,879 (86.1%)	97,453 (13.9%)	373,813 (61.9%)	230,066 (38.1%)	3.33
City							
Ontario	2013	48,849	45,270 (92.7%)	3,579 (7.3%)	25,584 (56.5%)	19,686 (43.5%)	3.64
Census Tracts							
13.05 (Ontario)	2013	1,415	1,195 (84.5%)	220 (15.5%)	675 (56.5%)	520 (43.5%)	4.15
13.09 (Ontario)	2013	1,218	1,150 (94.4%)	68 (5.6%)	590 (51.3%)	560 (48.7%)	4.27
13.10 (Ontario)	2013	1,573	1,521 (96.7%)	52 (3.3%)	1,161 (76.3%)	360 (23.7%)	3.61
15.01 (Ontario)	2013	1,037	902 (87.0%)	135 (13.0%)	415 (46.0%)	487 (54.0%)	4.39
15.03 (Ontario)	2013	881	744 (84.4%)	137 (15.6%)	185 (24.9%)	559 (75.1%)	4.47
15.04 (Ontario)	2013	1,718	1,525 (88.8%)	193 (11.2%)	315 (20.7%)	1,210 (79.3%)	3.62
16 (Ontario)	2013	1,480	1,396 (94.3%)	84 (5.7%)	574 (41.1%)	822 (58.9%)	4.08

In the project area census tracts, there is generally an above county-average level of occupied units, with census tracts reporting an average home occupation rate of 90 percent. The percentile range of owner-occupied units and renter-occupied units varies greatly. Tract 13.10 has the highest percentage of owner-occupied units at 76.3 percent and the corresponding lowest percentage of renter-occupied units at 23.7 percent. Likewise, Tract 15.04 reported the highest percentage of renter-occupied units at 79.3 percent and the lowest percentage of owner-occupied at 20.7 percent. The average household size in the study area is 4.1, above both county and city averages. Census Tract 15.03 in Ontario has the largest average household size of 4.47 people, and Census Tract 13.10 has the lowest at 3.61 people.

According to the key indicators of community cohesion described above, it can be determined that there is only a moderate degree of community cohesion in the study area. While there is high ethnic homogeneity, low homeownership rates and lack of a large elderly population presence suggest a more transient population and lack of strong community cohesion.

### ***Environmental Consequences***

An evaluation of potential impacts to community character and cohesion associated with each alternative is presented below.

#### ***No Build Alternative***

The No Build Alternative would maintain the current configuration of Grove Avenue in the study area. Under the No Build Alternative, the project would not be constructed, and congestion would continue to worsen for adjacent neighborhood residents without the proposed project improvements. There would be no changes to the community cohesion as it currently exists.

#### ***Build Alternative (Proposed Project)***

##### ***Permanent Impacts***

The Build Alternative would result in physical changes along the Grove Avenue corridor. The project would result in a wider roadway than currently exists and would provide improved accessibility for motorists, pedestrians, and bicyclists. In addition, there would be improved sidewalks, crosswalks, lighting, and landscaping. While several residential properties (eight single-family units and four multi-family units) located along the east side of Grove Avenue would be acquired for construction of the Build Alternative, it is not expected that the loss of these units would affect the overall community character or cohesion of the largely residential use project area. See Section 2.1.4.2, Relocations and Real Property Acquisition for the discussion of residential

displacements. There are adequate resources currently existing within the area vicinity to relocate residents (i.e., a sufficient number of comparable replacement dwellings meeting the decent, safe, and sanitary standards exist within the study area or in neighboring communities).

Aside from relocation impacts, the project is not anticipated to have any impact on existing age distribution, ethnic composition, or household characteristics within the project study area. On streets affected by the project, sidewalks, crosswalks, lighting, and landscaping familiar to the residents would be replaced with improved facilities.

Construction of the project improvements would not divide an existing community or create a barrier between communities because Grove Avenue is an existing transportation corridor; therefore, no adverse permanent impacts to community character and cohesion would occur.

### ***Temporary Impacts***

Construction of the Build Alternative has the potential to result in short-term effects to neighborhoods (e.g., temporary road closures and detours). Construction activities include grading, excavation, road detours, and temporary road closures. As discussed in Section 2.1.6, implementation of the project's Final Transportation Management Plan (TMP) would reduce project-related temporary impacts to community character and cohesion. In addition, during the construction period local residents and businesses would experience temporary visual changes associated with the construction activities and equipment in the area. There would also likely be temporary increases in noise and dust associated with the construction activities, although these impacts would be for a limited duration and, with the implementation of appropriate BMPs, would be minimized.

### ***Avoidance, Minimization, and/or Mitigation Measures***

Community disruption during project construction would be temporary and minimized by developing and implementing a Final TMP and incorporating the following minimization measures:

- T-1:** Final TMP – A TMP (July 2015) was prepared during development of the preliminary engineering for the project. During final design, a Final TMP will be prepared. At a minimum, the Final TMP will include the detailing of any projected temporary street closures or expected traffic delays due to project construction activities. The Final TMP will include a public awareness program that will use an appropriate combination of the Highway

Advisory Radio (HAR), local media, newsletters, and/or flyers. The following elements will be major components of the Final TMP: Public Awareness Campaign, particularly related to the scheduling of work; Construction Zone Enhanced Enforcement Program (COZEEP); utilization of portable changeable message signs (CMSs); and notification to be sent to local cities and emergency responders, if applicable.

**COM-1:** Where acquisition and relocation are unavoidable, provisions of the Uniform Act and the 1987 Amendments, as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by the United States Department of Transportation (USDOT) (March 2, 1989) and, where applicable, the California Public Park Preservation Act of 1971, will be followed. An appraisal of the affected property will be obtained, and an offer for the full appraisal will be made.

**COM-2:** Outreach activities targeted to low-income residents will be conducted during the planning, design, and construction phases of the Build Alternative.

#### **2.1.4.2 Relocations and Real Property Acquisition**

##### ***Regulatory Setting***

Caltrans' Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and Title 49 CFR Part 24. The purpose of the RAP is to ensure that persons displaced as a result of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole. Please see Appendix C for a summary of the RAP.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix B for a copy of the Caltrans Title VI Policy Statement.

##### ***Affected Environment***

This section summarizes information from the *Relocation Impact Statement* (RIS) (October 2016). The RIS provides more-precise estimates of the residential and nonresidential displacements by the Grove Avenue Corridor Project.



The affected environment is identical to the area described in Section 2.1.4.1, Community Character and Cohesion.

### ***Environmental Consequences***

An evaluation of potential relocation impacts associated with each alternative is presented below.

#### ***No Build Alternative***

The No Build Alternative would maintain the current configuration of Grove Avenue in the study area. Under the No Build Alternative, the project would not be constructed, and no impacts or relocations would occur.

#### ***Build Alternative (Proposed Project)***

##### ***Permanent Impacts***

As shown in Table 2.1.4-4, the Build Alternative would displace 12 residential units. Of the 12 residential units to be acquired for construction of the Build Alternative, 8 are single-family residences and 4 are multi-family units. Total residential household displacements are estimated at 47, based on an average of 2.73 residents per unit calculated by the 2010 U.S Census.

**Table 2.1.4-4. Estimated Residential Displacement Units**

<b>Unit Type</b>	<b>Build Alternative</b>
Single-Family Units	8
Mobile Homes	0
Multi-Family Units	4
<b>Total Residential Units</b>	12
<b>Total Persons (average number/household)</b>	2.73 / 47

Source: RIS prepared for the Grove Avenue Corridor Project (October 2016).

To the extent feasible, during the final design phase of the project, ROW impacts to these parcels would be minimized and some may be avoided. The property owners would be entitled to compensation to the extent provided by law in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended.

As identified in the RIS, there are ample single-family residential and commercial replacement properties on the market similar to the displacement properties; therefore, the construction of new replacement housing would not be necessary. There is a high probability that comparable decent, safe, and sanitary relocation sites can be found for

all affected residents within the replacement area of the cities of Ontario, Upland, Rancho Cucamonga, and Montclair. Additional detail on the adequacy of relocation resources is provided in the project's RIS.

### ***Temporary Impacts***

As discussed in Section 2.1.1, 47 TCEs would be required to construct the Build Alternative. The properties affected by TCEs would maintain their existing use during and after project construction. All areas disturbed as part of the TCEs would be restored.

### ***Avoidance, Minimization, and/or Mitigation Measures***

To minimize potential relocation impacts, the following minimization measure will be implemented prior to construction.

**COM-1:** Where acquisition and relocation are unavoidable, provisions of the Uniform Act and the 1987 Amendments, as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by USDOT (March 2, 1989) and, where applicable, the California Public Park Preservation Act of 1971, will be followed. An appraisal of the affected property will be obtained, and an offer for the full appraisal will be made.

#### **2.1.4.3 Environmental Justice**

Executive Order (EO) 12898 requires each federal agency (or its designee) to take the appropriate and necessary steps to identify and address “disproportionately high and adverse” effects of federal proposed projects on the health or environment of minority and low-income populations, known as environmental justice populations.

### ***Regulatory Setting***

All projects involving a federal action (funding, permit, or land) must comply with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, signed by President William J. Clinton on February 11, 1994. This EO directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2015, this was \$24,250 for a family of four.

All considerations under Title VI and related statutes have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is demonstrated by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

### ***Affected Environment***

The environmental justice analysis was conducted using census information from the U.S. Census Bureau 2013 ACS dataset for the referenced population of San Bernardino County and the census tracts located within 0.25 mile of the proposed Build Alternative, as shown in Table 2.1.4-5. The following analysis provides a comparison of four measures with which to evaluate impacts to environmental justice populations:

- Percentage of Non-White residents in the study area census tracts, as shown in Figure 2.1.4-2 (Build Alternative)
- Percentage of Hispanic or Latino residents in the study area census tracts, as shown in Figure 2.1.4-3 (Build Alternative)
- Percentage of population below poverty level in the study area census tracts, as shown in Figure 2.1.4-4 (Build Alternative)
- Median household income in the study area census tracts, as shown in Figure 2.1.4-5 (Build Alternative)

**Table 2.1.4-5. Minority and Low-income Populations**

Census Tract	Year	Non-White (%)	Hispanic or Latino (%)	Persons below Poverty Level (%)	Median Household Income
<b>County</b>					
San Bernardino	2013	67.5	49.9	18.7	\$54,090
<b>City</b>					
Ontario	2013	81.9	69.6	18.1	\$54,249
<b>Census Tracts (City of Ontario)</b>					
13.05	2013	90.7	85.3	26.0	\$44,244
13.09	2013	86.7	71.0	32.0	\$49,097
13.10	2013	78.8	73.9	14.7	\$51,719
15.01	2013	94.1	92.1	42.9	\$30,263
15.03	2013	93.3	88.1	39.4	\$31,611
15.04	2013	91.5	74.0	38.2	\$39,736
16	2013	94.1	92.6	44.6	\$30,464

Source: U.S. Census, American Community Survey, 5-year estimates, 2013.

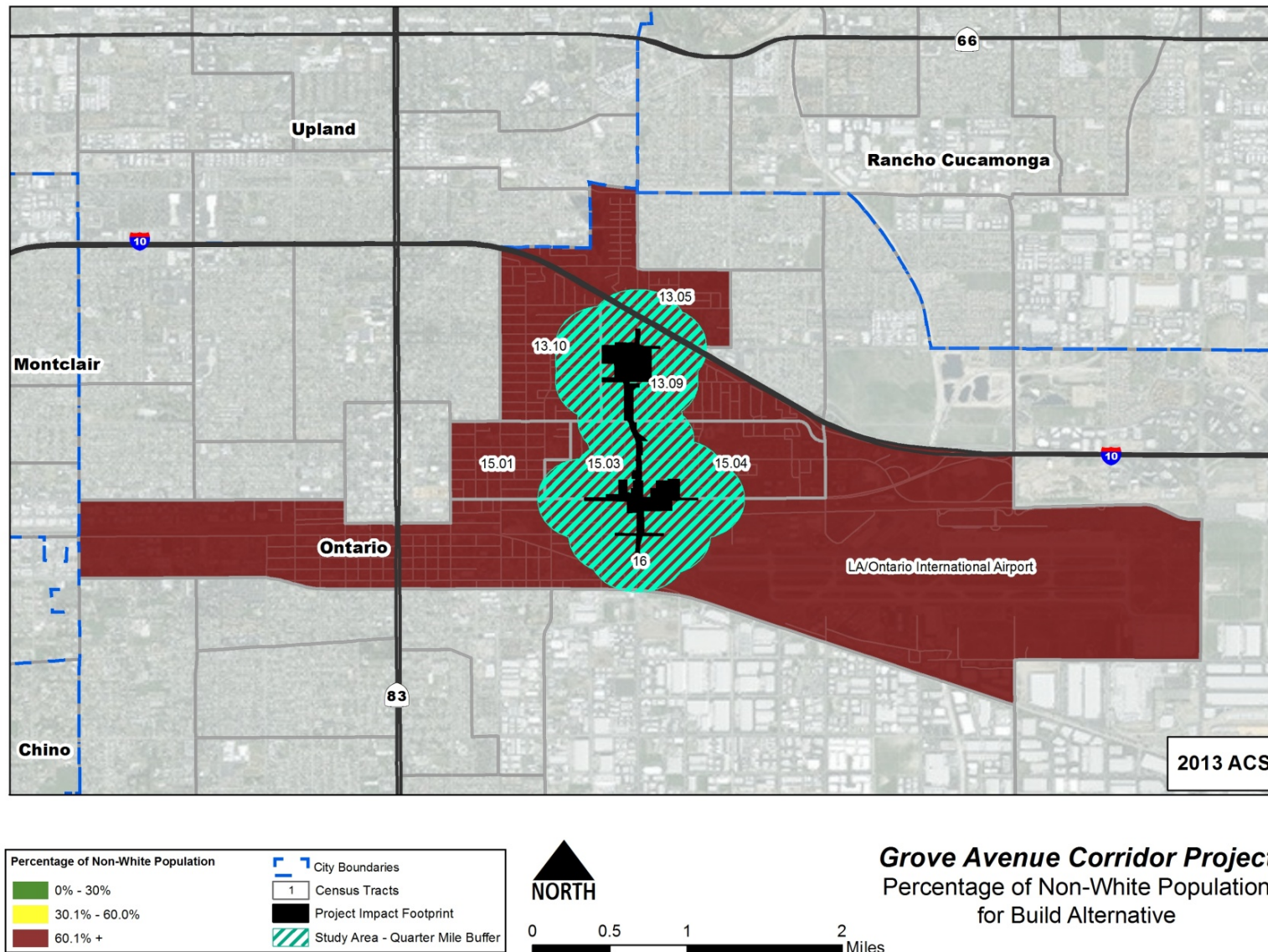
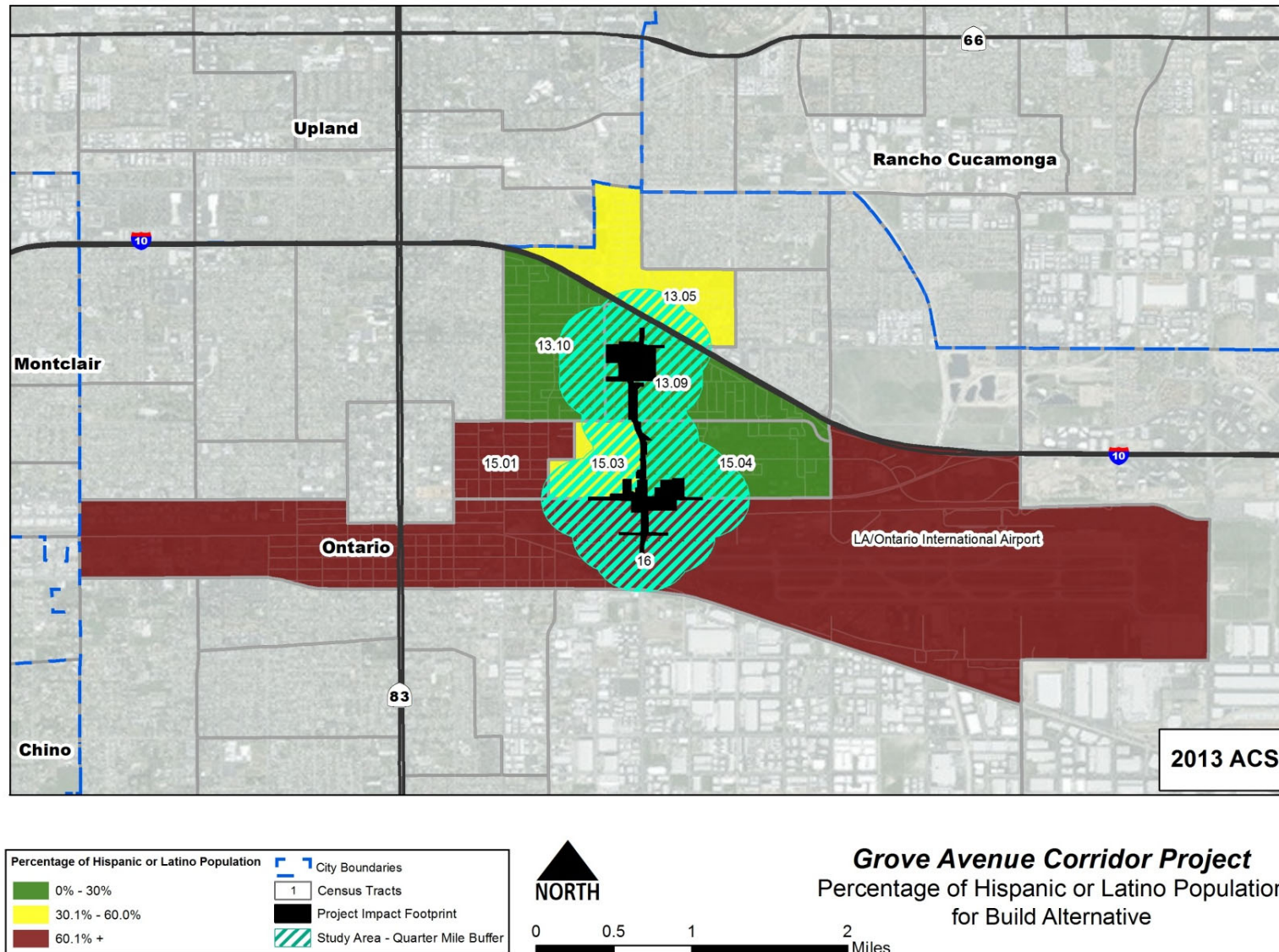


Figure 2.1.4-2. Percentage of Non-White Population (Build Alternative)





Source: US Census Bureau 2013; Parsons 2015

Figure 2.1.4-3. Percentage of Hispanic or Latino Population (Build Alternative)

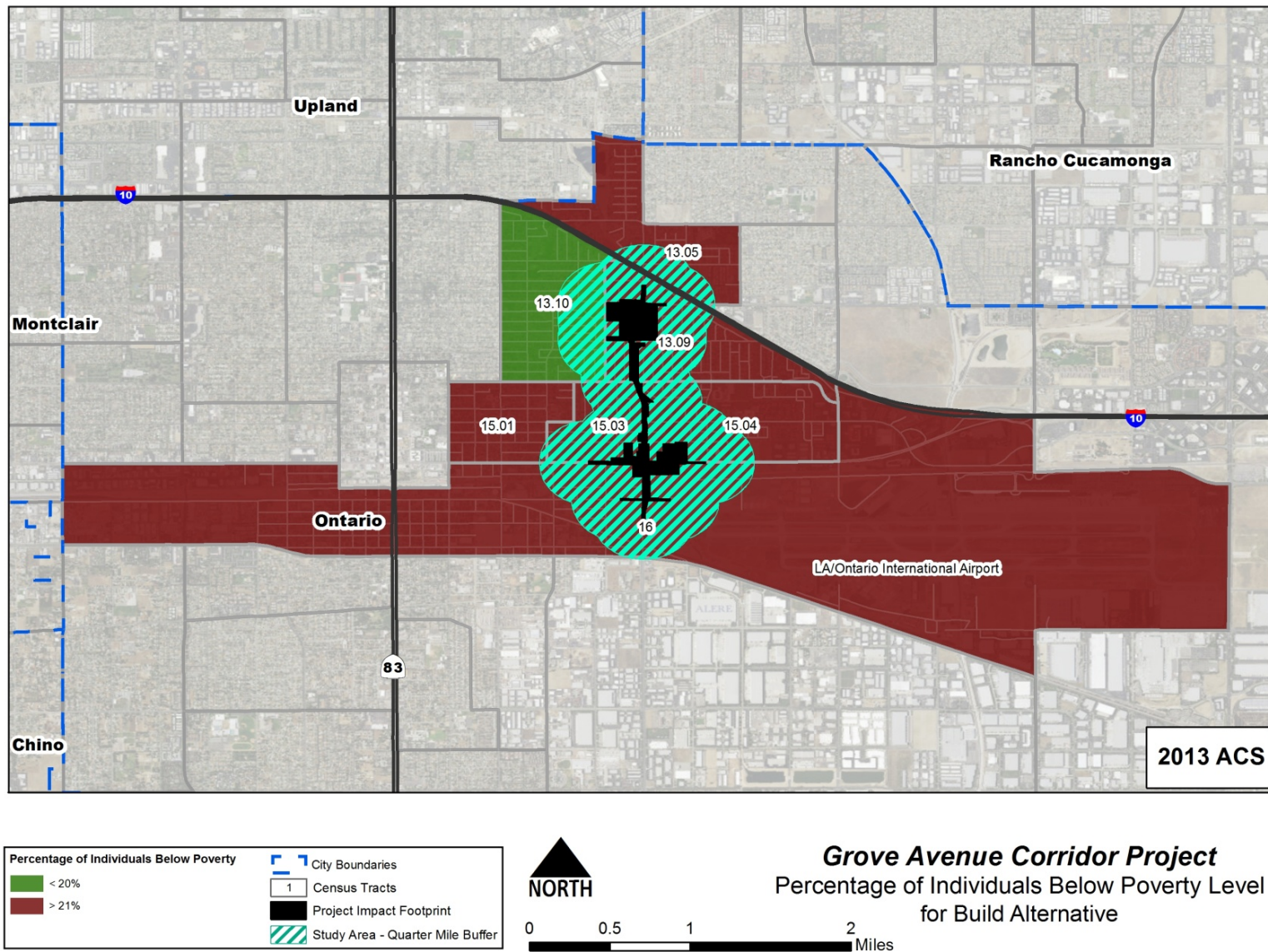


Figure 2.1.4-4. Percentage of Individuals below Poverty Level (Build Alternative)



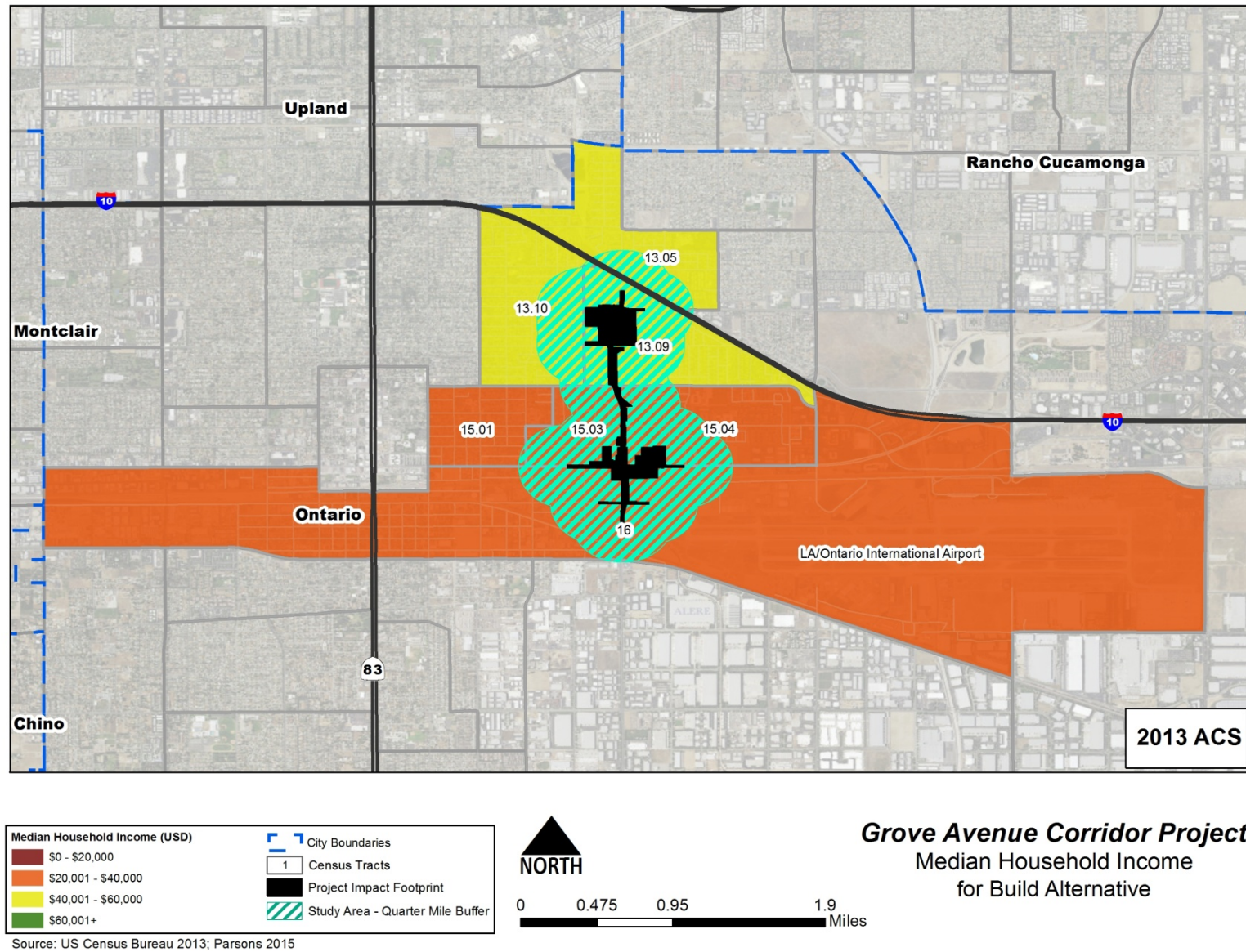


Figure 2.1.4-5. Median Household Income (Build Alternative)

## ***Environmental Consequences***

### ***No Build Alternative***

The No Build Alternative would maintain the current configuration of Grove Avenue in the study area. No project improvements would be constructed; therefore; no impacts to environmental justice populations would occur under the No Build Alternative.

### ***Build Alternative (Proposed Project)***

#### ***Permanent Impacts***

With implementation of the Build Alternative, minority and low-income populations could potentially be affected in several ways. The most evident potential effect is that the proposed project could result in the direct displacement and relocation of environmental justice populations. Other potential effects include temporary construction impacts to an ethnic or low-income neighborhood. However, the project also could provide benefits to minority and low-income populations if transportation efficiency improves and/or transit services are made more reliable, accessible, or convenient. The Build Alternative would improve transportation efficiency along Grove Avenue and would increase pedestrian connectivity to John Galvin Park.

In the Caltrans Desk Guide, *Environmental Justice in Transportation Planning and Investments* (January 2003), no definitive guidelines are given for determining what impacts should be considered disproportionately high or adverse; however, two general issues are weighed for environmental justice analysis for transportation projects:

- Whether the adverse impact(s) of the proposed project will be predominantly borne by a minority or low-income population group; or
- Whether the adverse impact(s) of the proposed project will be appreciably more severe or greater in magnitude than the adverse impacts to nonminority and/or non-low-income population groups even after mitigation measures and offsetting project benefits are considered.

“Low-income” and “minority populations” are defined as any readily identifiable group of low-income or minority persons who live in geographically adjacent areas, or groups of geographically dispersed or transient persons who would be similarly affected by a proposed FHWA program, policy, or activity. Transportation agencies such as Caltrans and SBCTA must collect and evaluate data on minority and income characteristics, increase public participation in decision-making, and provide mitigation measures to avoid or minimize the adverse effects of the federal action.



The following four measures are used as the basis to evaluate disproportionate impacts to environmental justice populations:

- Percentage of Non-White residents
- Percentage of Hispanic or Latino residents
- Percentage of population below poverty level
- Median household income

As shown in Table 2.1.4-5 and Figure 2.1.4-2, all tracts within the project area have Non-White populations above 78 percent. In addition, poverty levels are higher and median income is lower than county and city averages for multiple census tracts in the study area. The Non-White population in these seven census tracts ranges from 78.8 to 94.1 percent. Census Tract 16 has the highest percentage of Hispanic or Latino residents (92.6 percent). The tract with the least amount of Hispanic or Latino residents, Census Tract 13.09 (71.0 percent), is located on the east side of the project corridor. The lowest percentage of residents living below poverty is in Census Tract 13.10 at 14.7 percent, and the highest percentage is Census Tract 16 at 44.6 percent. Census Tract 15.01 has the lowest median household income (\$30,263), and Census Tract 13.10 has the highest (\$51,719).

For the purposes of this analysis, the approach for identifying environmental justice communities published in *Promising Practices for EJ Methodologies in NEPA Reviews* (NEPA Committee, 2016) was adopted to identify minority and low-income populations within the study area. To identify minority populations, the first step was to analyze and identify census tracts with minority populations that meet or exceed 50 percent of the total tract population for heightened focus. Step two determined whether the percentage of minority residents in those tracts identified in step one were “meaningfully greater” than the minority population percentage of the city of Ontario, the reference community. Though what constitutes “meaningfully greater” varies by agency, it has become acceptable in planning studies that “meaningfully greater” is represented by 10 percent or greater. To identify low-income populations, the Department of Health and Human Services (HHS) discloses the poverty threshold for identifying low-income populations in the affected environment. For 2015, this is \$24,250 for a family of four.

After conducting the “meaningfully greater” analysis described above, three census tracts within the Build Alternative footprint, Census Tracts 15.01, 15.03, and 16.00, were identified as having a meaningfully greater minority non-white population

compared to its reference municipality. The median household income for the reference community and individual census tracts studied are above the HHS poverty threshold for an average family size of four of \$24,250, which indicates the study area as a whole and each individual census tract studied is not considered to be a low-income population; therefore, no census tracts were identified as environmental justice communities based on income. None of the relocations identified in the RIS (October 2016) for the Build Alternative would take place in any of the environmental justice communities identified above.

Overall, environmental justice populations exist within the study area, particularly dominating the southern portion of the proposed project area, while the northern portion consists of fewer minorities.

While the Build Alternative would provide a benefit to most study area residents, including minority and low-income populations, by improving mobility and circulation throughout the study area, it would have a direct effect on communities that have a higher number of Non-White persons, larger Hispanic or Latino populations, higher numbers of persons living below the poverty line (\$24,250 for a family of four), and lower median incomes than the counties and cities within the study area.

The transportation benefits would be equally available to all residents of the area. For example, all users, including transit users, pedestrians, and bicyclists, would benefit from less-congested streets and improved connectivity. Private vehicles, public transportation, and freight vehicles would benefit from the increased capacity and decreased traffic delays on Grove Avenue. The Build Alternative would affect minority and low-income populations, as well as non-minority and higher-income populations, resulting primarily from residential acquisitions and temporary impacts. There would not be disproportionately high or adverse impacts, per EO 12898, to Non-White, Hispanic or Latino, or low-income populations within the referenced populations because the adverse impacts would not be predominantly borne by a minority or low-income population, nor would adverse impacts be appreciably more severe to these environmental justice populations.

Community outreach and participation have been integrated into the project development process from the outset, including public mailers, newspaper advertisements, and a public hearing. Given the large percentage of Non-White residents within the study area, particularly Hispanic or Latino residents, a concerted effort was placed into providing Spanish translators and materials at public meetings

to encourage participation of Spanish-speaking populations. To the greatest extent possible, an atmosphere of equal participation was fostered, thus encouraging Non-White minority populations to freely voice any questions or concerns they may have with the project. More detail of the project outreach efforts is provided in Chapter 4.

### ***Temporary Impacts***

Relocated residents who are considered part of the identified environmental justice populations may experience temporary impacts; however, relocation assistance would be provided per the Uniform Relocation Assistance and Real Property Acquisition Policies Act.

The proposed project would have a prolonged period for construction of the Build Alternative. Area residents would endure greater impacts resulting from construction activities compared to the surrounding population. Once construction is complete, traffic circulation would soon return to normal.

### ***Avoidance, Minimization, and/or Mitigation Measures***

Based on the environmental justice analysis, the Build Alternative would not cause disproportionately high and adverse effects on minority or low-income populations as per EO 12898. No further environmental justice analysis is required. However, implementation of Minimization Measure COM-2 would minimize the impacts associated with required property relocations.

**COM-2:** Outreach activities targeted to low-income residents will be conducted during the planning, design, and construction phases of the Build Alternative.

## 2.1.5 Utilities/Emergency Services

Many public utilities are located within the project area (i.e., the area disturbed during construction or within the proposed ROW of the Build Alternative). These include telecommunication, electrical, natural gas, water, and solid waste/sewer lines. Most of the existing utility lines are located within public ROW. Local jurisdictions along the project corridor provide public services. Additionally, there are also private service providers. Descriptions of utilities, emergency service providers, and the project's potential operational effects are also described in this section.

### 2.1.5.1 Affected Environment

This section is based on a review of the existing utility and emergency service providers and facilities in the study area, the *Project Report* (March 2017), and the *Community Impact Assessment* (October 2016).

This subsection summarizes major utilities found within the project area. There are approximately 253 underground and aerial utilities within the project area, including storm drain, sewer, water, traffic signal, street light, petroleum, natural gas, electrical, cable television, fiber optic, and telecommunication. Grove Avenue and local roads have parallel encroachments that include utilities such as cable television, telecommunications, electrical, fiber optic, natural gas, water, storm drain, and sewer. Significant intersecting encroachments include petroleum and fiber optics. Utilities in the project area are shown in Table 2.1.5-1. There are no landfills or wastewater treatment facilities within the project area.

**Table 2.1.5-1. Utilities**

Agency/Utility	Service Provided
City of Ontario	Water, Traffic, Storm Drain, Sewer, Electric
City of Upland	Sewer
Inland Empire Utility Agency (IEUA)	Sewer
San Antonio Water Company (SAWCO)	Water
SBCFCD	Storm Drain
Southern California Edison	Electric
Southern California Gas	Gas
Time Warner Cable (Spectrum)	Television Cable
Verizon	Telecommunications
Kinder Morgan	Petroleum
Level 3	Fiber Optic

Note: Information was collected from each affected jurisdiction's website in 2014.

### ***Emergency Services***

Fire protection and emergency services are jointly provided by the respective jurisdictions and County, depending on the location of the emergency. In addition, each municipality contracts its emergency service transportation services to private ambulance companies. The nearest hospital providing 24-hour emergency services is the San Antonio Regional Hospital in the city of Upland, located approximately 3 miles west of Grove Avenue.

### ***Law Enforcement Services***

Law enforcement services in the project study area are provided by the City of Ontario Police Department. The closest police station to the project study area is at 2500 South Archibald Avenue, approximately 3 miles southeast of the Grove Avenue corridor.

#### **2.1.5.2 Environmental Consequences**

An evaluation of potential impacts to utilities and emergency services associated with each alternative is presented below.

### ***Permanent Impacts***

#### ***Utilities***

Utility facilities (e.g., water lines, sewer laterals, electrical connections/lines/poles, natural gas service lines, streetlights, fire hydrants, and cable television lines and utility boxes) in the Grove Avenue ROW would be subject to abandonment, removal, and relocation or replacement as a result of project construction. Utility companies would be given enough notice to relocate their facilities before construction or at a later stage of construction, as appropriate.

Such coordination is standard during the design phase of the project. Utility relocations would be done using standard engineering practices, so substantial service disruption is not expected and impacts are minimized.

### ***No Build Alternative***

The No Build Alternative would maintain the current configuration of the Grove Avenue corridor in the study area. Under the No Build Alternative, the project would not be constructed, and no impacts to utilities would occur.

### ***Build Alternative (Proposed Project)***

The proposed improvements under the Build Alternative would result in the relocation of some major electrical and water utilities, but they would not adversely affect the long-term operations of these utilities. As a road widening project, the Build

Alternative would not require construction of new water, wastewater, electrical, or solid waste facilities to accommodate the project.

Up to 136 of the 253 utilities within the project area, including 5 cable television, 2 fiber-optic utilities, 2 petroleum lines, 11 power/electrical utilities, 4 power transformers, 21 sewer utilities, 16 storm drain utilities, 9 telephone utilities, 14 water utilities, 8 fire hydrants, 17 traffic signals, and 27 street lights, have the potential to be affected by the proposed improvements. Up to 28 of these potentially affected utilities would require minor to moderate work, such as extending the utility, constructing a structure or encasement around the utility, pouring a slurry mixture over the utility, or requiring a hand digging method when performing excavation around the utility. Up to 108 utilities would need to be removed and completely relocated to accommodate the proposed project improvements.

Utility facility relocations, removals, and/or protection in-place would be necessary in areas where project construction would occur. As a result, utility services could be temporarily interrupted or facilities damaged. The decision on relocation, removal, and/or protection in-place would be made during final design in consultation with the owner of each affected utility.

### ***Law Enforcement, Fire, and Emergency Medical Services***

#### ***No Build Alternative***

The No Build Alternative does not propose any project improvements and would not provide benefits of improved transportation operations along Grove Avenue to police, fire, and emergency services. Continued deterioration of traffic conditions within the project area under the No Build Alternative would potentially result in increased delays and increased response times for emergency service providers in the future.

#### ***Build Alternative (Proposed Project)***

Implementation of the Build Alternative would improve traffic throughput and travel times along the Grove Avenue corridor, and it would correct deficiencies in the existing roadway system. The improved traffic conditions along the corridor would have beneficial effects for law enforcement protection and emergency service access and response times. As such, no permanent police protection or emergency service impacts are expected.

### ***Temporary Impacts***

Utility relocations, removals, and/or protection in-place would be necessary in areas where project construction would occur. As a result, utility services could be temporarily interrupted or facilities damaged. The decision on relocation, removal, and/or protection in-place would be made during final design in consultation with the owner of each affected utility.

The proposed project would have a prolonged period of construction for the Build Alternative. Once construction is complete, traffic circulation would return to normal. A TMP would be implemented to ensure any potential temporary effects to utilities are minimized.

Construction of the Build Alternative could result in temporary traffic delays, road closures, lane closures, or detours that may impair the ability of law enforcement, fire, and other emergency service providers to meet response time goals.

Non-fire-related medical emergencies could temporarily increase during project construction with the presence of construction workers and heavy machinery in the construction area.

During construction of the Build Alternative, motorists and emergency service providers can expect to experience typical construction-related temporary changes in access, with intermittent delays on adjacent local roadways; however, as stated in Measure COM-1 in Section 2.1.4, Community Impacts, implementation of a TMP would be required. During final design, a TMP would be developed for implementation during project construction. Known temporary and long-term closures for the Build Alternative are discussed in detail in Section 2.1.4.

As described in the TMP, alternate emergency service routes and traffic handling plans must be coordinated with local jurisdictions and emergency service providers (e.g., California Highway Patrol [CHP], local police, fire, paramedics) during final design. The TMP would include emergency service routes that serve hospitals, fire/police stations, emergency shelters, emergency command centers, and other facilities that provide essential services in times of emergencies within the study area. These emergency service routes would be maintained during construction or alternate routes would be provided. Construction contract documents would require that emergency service providers be notified in advance prior to any lane closures, interruptions on emergency service routes, or changes in traffic control.

Although construction-related delays and detours may temporarily affect the response times of emergency service providers, measures identified in the TMP would minimize project effects on emergency service providers. The Build Alternative would not result in any substantial effects on emergency service providers and/or response times.

#### **2.1.5.3 Avoidance, Minimization, and/or Mitigation Measures**

Adverse impacts to utilities or emergency services would not occur as a result of operation of the proposed project. The following minimization measures were identified for impacts to emergency services and utilities during construction of the proposed project. Additional avoidance, minimization, and/or mitigation measures for impacts to utilities and emergency services will be considered upon completion of coordination with utility companies and emergency service providers.

**UT-1:** During final design, the Project Engineer will prepare utility relocation plans in consultation with the affected utility providers/owners for those utility facilities that will need to be relocated, removed, or protected in-place.

**UT-2:** During final design, the Project Engineer will prepare utility relocation plans in consultation with the affected utility providers/owners for those utility facilities that will need to be relocated, removed, or protected in place. If relocation is necessary, the final design will focus on relocating utilities within the State ROW or other existing public ROWs and/or easements. If relocation outside of existing or the additional public ROWs and/or easements required for the project is necessary, the final design will focus on relocating those facilities in adjacent public ROWs and in a manner so as to not result in significant community, land use, or natural resource impacts.

**UT-3:** Close coordination with utility service providers and implementation of a public outreach program will be conducted, as needed, to minimize impacts to surrounding communities.

**UES-1:** Prior to and during any construction activities, the City will coordinate with emergency service providers to ensure that all providers are aware of temporary road closures and detours.

**UES-2:** Emergency service phone numbers (i.e., fire, emergency medical, police) will be posted in visible locations in all active construction areas.



**UES-3:** To avoid conflicts during construction, the project's Resident Engineer will notify all emergency and other essential service providers no less than 2 weeks prior to the start of construction. Agencies to be notified include:

- City of Ontario Police Department
- City of Ontario Fire Department
- San Bernardino County Sheriff's Department
- San Bernardino County Fire Department

### 2.1.6 Traffic and Transportation/Pedestrian and Bicycle Facilities

This section addresses the potential effects to traffic and circulation associated with construction of the proposed project and compares the relative benefits of each alternative. The traffic circulation analysis is based on the results of the *Traffic Operations Analysis* (January 2015). The *Traffic Operations Analysis* evaluates the existing and future traffic flow conditions within the traffic study area of San Bernardino County (defined below in Section 2.1.6.2, Affected Environment).

The *Traffic Operations Analysis* evaluation includes demand, capacity, and LOS for study area intersections. LOS analysis was conducted for the a.m. and p.m. peak hours (7:00 to 9:00 a.m. and 4:00 to 6:00 p.m.) based on the HCM 2000, which states:

LOS is a quality of measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. Six LOS are defined for each type of facility that has analysis procedures available (see Table 2.1.6-1). Letters designate each level, from A to F, with LOS A representing the best operating conditions and LOS F the worst. Each LOS represents a range of operating conditions and the driver's perception of those conditions. (HCM, page 2-2)

**Table 2.1.6-1. Intersection Level of Service Definitions**

Level of Service	Description	Signalized Intersection Delay (seconds per vehicle)	Unsignalized Intersection Delay (seconds per vehicle)
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	$\leq 10$	$\leq 10$
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	$>10$ and $\leq 20$	$>10$ and $\leq 15$
C	Good operation. Occasionally drivers may have to wait more than 60 seconds, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	$>20$ and $\leq 35$	$>15$ and $\leq 25$

**Table 2.1.6-1. Intersection Level of Service Definitions**

Level of Service	Description	Signalized Intersection Delay (seconds per vehicle)	Unsignalized Intersection Delay (seconds per vehicle)
D	Fair operation. Cars are sometimes required to wait more than 60 seconds during short peaks. There are no long-standing traffic queues.	>35 and ≤ 55	>25 and ≤ 35
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	>55 and ≤ 80	>35 and ≤ 50
F	Forced flow. Represents jammed conditions. Backups form locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	> 80	> 50

Source: Highway Capacity Manual, Special Report 209, Transportation Research Board, Washington, DC, 2000.

The City maintains a standard of LOS E or better as acceptable operating LOS at its intersections. At freeway ramp intersections, which fall under Caltrans' jurisdiction, a standard of LOS D or better is considered acceptable in this analysis.

The analysis was conducted for the following scenarios:

- Existing (2013);
- Opening Year 2025 No Build Alternative;
- Opening Year 2025 Build Alternative;
- Horizon Year 2045 No Build Alternative; and
- Horizon Year 2045 Build Alternative.

#### **2.1.6.1 Regulatory Setting**

Caltrans, as assigned by FHWA, directs that full consideration should be given to the safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 CFR 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, USDOT issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the USDOT regulations (49 CFR Part 27) implementing Section 504 of the Rehabilitation Act (29 U.S.C. 794). FHWA has enacted regulations for implementation of the 1990 Americans with Disabilities Act (ADA), including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the ADA requirements to federal-aid projects, including Transportation Enhancement Activities.

#### **2.1.6.2 Affected Environment**

The existing lane configuration, traffic volumes, LOS, and other operational characteristics within the traffic study area are presented in this subsection.

##### ***Traffic Study Area***

Within the project area, Grove Avenue is a collector street that runs in the north-south direction through Ontario. The existing Grove Avenue corridor is a critical arterial in the region's transportation network connecting automobile and truck traffic between I-10 and Ontario International Airport. Much of the project area is characterized by typical highway-adjacent urban residential neighborhoods, commercial, and light industrial properties with on-street and off-street parking in residential areas and usually plentiful off-street surface parking at commercial lots. The traffic study area, as shown in Figure 2.1.6-1, includes Grove Avenue interchanges between Mission Boulevard and 4<sup>th</sup> Street. The area for analysis includes the following seven intersections:

1. Grove Avenue/4<sup>th</sup> Street
2. Grove Avenue/I Street
3. Grove Avenue/G Street
4. Grove Avenue/D Street
5. Grove Avenue/Holt Boulevard
6. Grove Avenue/State Street-Airport Drive
7. Grove Avenue/Mission Boulevard



Figure 2.1.6-1. Grove Avenue Corridor Project Study Intersections

### **Existing Traffic Conditions**

Existing traffic data for the traffic study area are for the year 2013. Existing conditions traffic data and the results of operational analysis are presented below for the Grove Avenue corridor intersections.

The existing a.m. and p.m. peak period (7:00 to 9:00 a.m., 4:00 to 6:00 p.m.) intersection turning movement counts were collected at the study intersections near the existing I-10/4<sup>th</sup> Street interchange in February 2013. All intersection traffic counts were collected while local schools were in session. As part of the volume development, trucks were converted into their respective passenger car equivalents (PCE). PCE factors of 1.5, 2, and 3 were used for light-duty trucks, medium-duty trucks with three axles, and heavy-duty trucks with four axles, respectively. The peak hour was determined by taking the peak 1-hour interval within the peak period. Existing a.m. and p.m. peak-hour intersection volumes are shown in Figure 2.1.6-2. All study intersections are currently operating at LOS D or better and are at sufficient capacity to accommodate existing travel demands within the project limits, as shown in Table 2.1.6-2.

**Table 2.1.6-2. Existing (2013) Peak-Hour Intersection LOS Summary**

Intersection	AM Peak Hour 2013		PM Peak Hour 2013	
	Delay (sec)	LOS	Delay (sec)	LOS
1) Grove Avenue/4 <sup>th</sup> Street	35.0	D	34.5	C
2) Grove Avenue/I Street	5.7	A	3.8	A
3) Grove Avenue/G Street	7.1	A	5.5	A
4) Grove Avenue/D Street	5.4	A	4.4	A
5) Grove Avenue/Holt Boulevard	33.7	C	31.8	C
6) Grove Avenue/State Street	20.4	C	29.9	C
7) Grove Avenue/Mission Boulevard	44.4	D	36.5	D
Note: sec = seconds;				

Source: *Traffic Operations Analysis, 2015.*

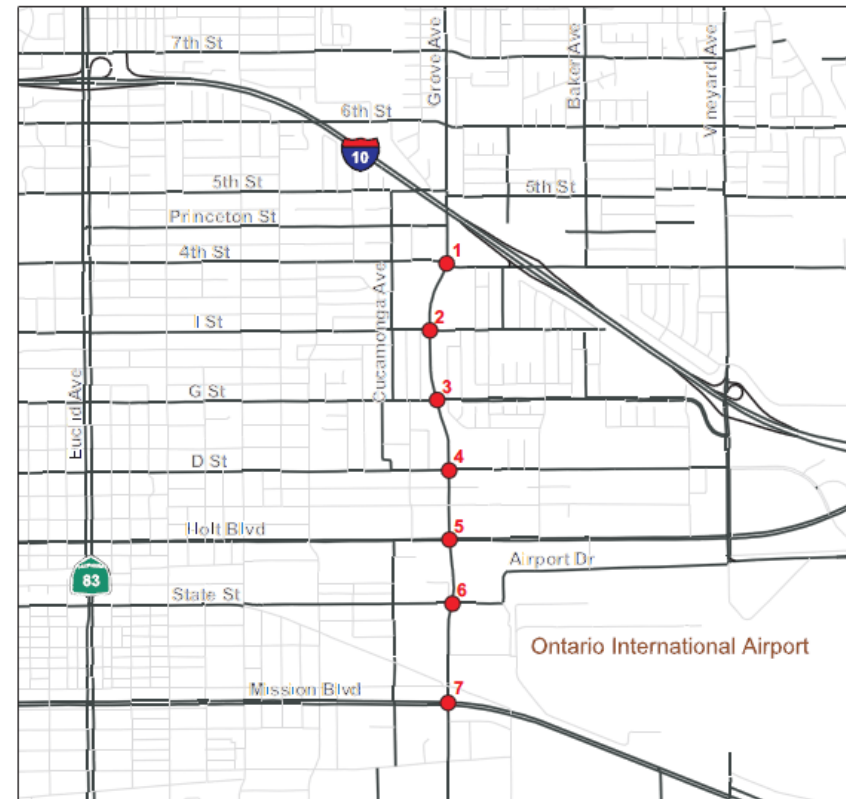
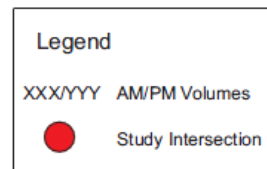
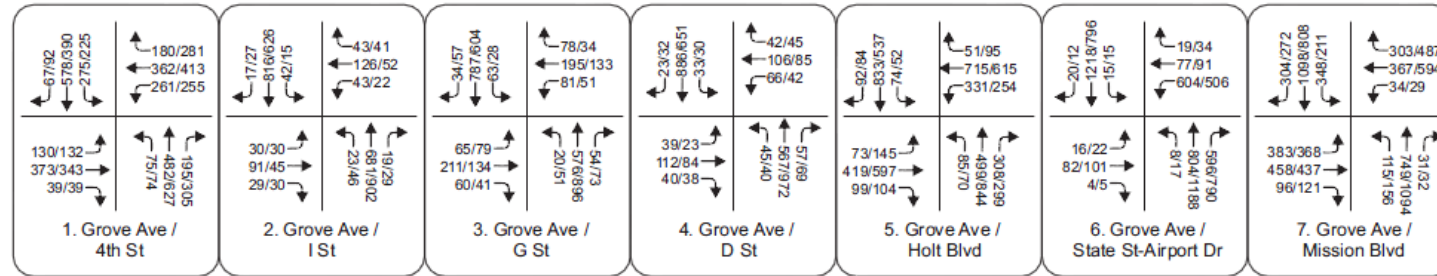


Figure 2.1.6-2. Existing Peak-Hour Intersection Volumes

### ***Pedestrian and Bicycle Facilities***

SBCTA's Non-Motorized Transportation Plan (2014) identifies existing and planned bikeways that run below or adjacent to the proposed project area, as shown in Figure 2.1.6-3. There are three classes of bikeways: Class I, Class II, and Class III. A Class I bikeway, or shared-used path or bike path, is a bikeway physically separated from any street or highway and used by a variety of users. Class II bikeways, or bike lane, is a portion of a roadway that is designated by striping, signaling, and pavement markings for the preferential or exclusive use of bicyclists. Class III bikeways, or bike routes, are any road, street, path, or way that in some manner is specifically designed for bicycle travel regardless of whether such facilities are designated for the exclusive use of bicycles or shared with other transportation modes.

#### **2.1.6.3 Environmental Consequences**

An evaluation of the traffic and transportation impacts associated with each alternative is presented below.

#### ***Permanent Impacts***

Year 2025 is the year in which the proposed project is scheduled to open to traffic if the Build Alternative is implemented. Year 2045 is the design horizon year for the proposed Build Alternative; therefore, traffic analyses were conducted for the following five future conditions:

- Existing (2013)
- Opening Year 2025 No Build Alternative
- Opening Year 2025 Build Alternative
- Design Year 2045 No Build Alternative
- Design Year 2045 Build Alternative

The traffic modeling effort sought to maintain consistency with the traffic forecasts developed for the recently completed *I-10 Corridor Study – PA/ED HOV and Express Lanes Project by SBCTA*. The SBTAM in that study was utilized for the I-10/Grove Avenue Interchange PA/ED, including all roadway network and demographic data assumptions.



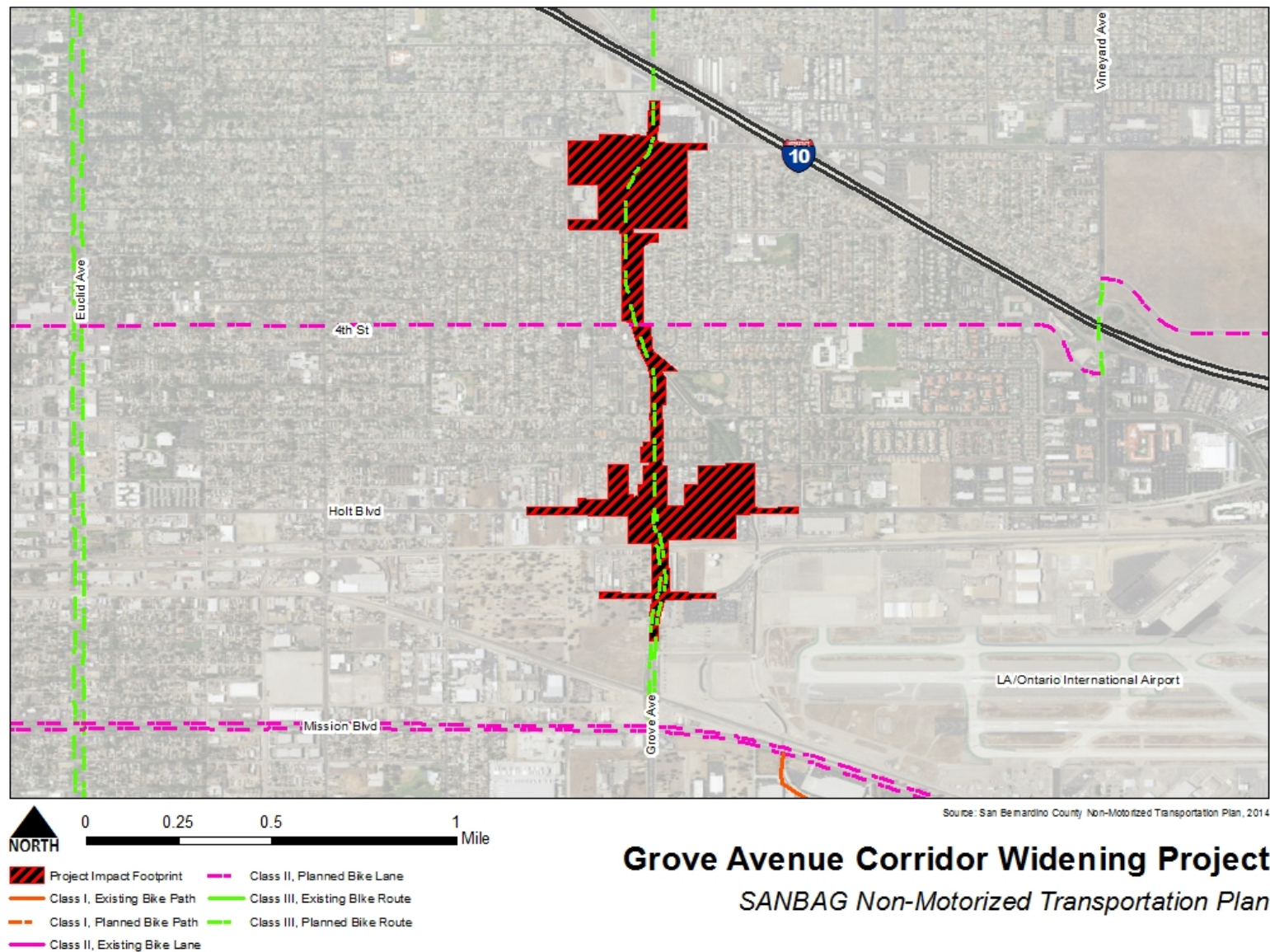


Figure 2.1.6-3. San Bernardino County Bikeways in Project Area

The two alternatives are generally described as follows:

### **No Build Alternative**

The No Build Alternative would maintain four through lanes along Grove Avenue within the project limits and the existing configuration at the Grove Avenue/Holt Boulevard intersection. Figures 2.1.6-4 and 2.1.6-5 show forecasted intersection traffic volumes under the No Build Alternative in opening year (2025) and design year (2045), respectively.

In Table 2.1.6-3, the length of delay and LOS at each study area intersection under no-build conditions for opening year (2025) and design year (2045) are shown.

**Table 2.1.6-3. 2025 and 2045 No-Build Peak-Hour  
Intersection LOS Summary**

Intersection	AM Peak Hour				PM Peak Hour			
	2025		2045		2025		2045	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1) Grove Avenue/4 <sup>th</sup> Street	44.7	D	51.2	D	63.8	E	<b>117.4</b>	<b>F</b>
2) Grove Avenue/I Street	6.7	A	8.0	A	6.3	A	7.5	A
3) Grove Avenue/G Street	9.0	A	11.1	B	9.0	A	20.6	C
4) Grove Avenue/D Street	6.4	A	18.3	B	9.2	A	14.8	B
5) Grove Avenue/Holt Boulevard	<b>82.8</b>	<b>F</b>	<b>213.8</b>	<b>F</b>	134.7	F	<b>352.9</b>	<b>F</b>
6) Grove Avenue/State Street	25.1	C	<b>88.3</b>	<b>F</b>	29.3	C	<b>83.2</b>	<b>F</b>
7) Grove Avenue/Mission Boulevard	<b>60.9</b>	<b>E</b>	<b>117.1</b>	<b>F</b>	<b>102.8</b>	<b>F</b>	<b>265.6</b>	<b>F</b>
Note: sec = seconds; <b>BOLD</b> indicates unsatisfactory								

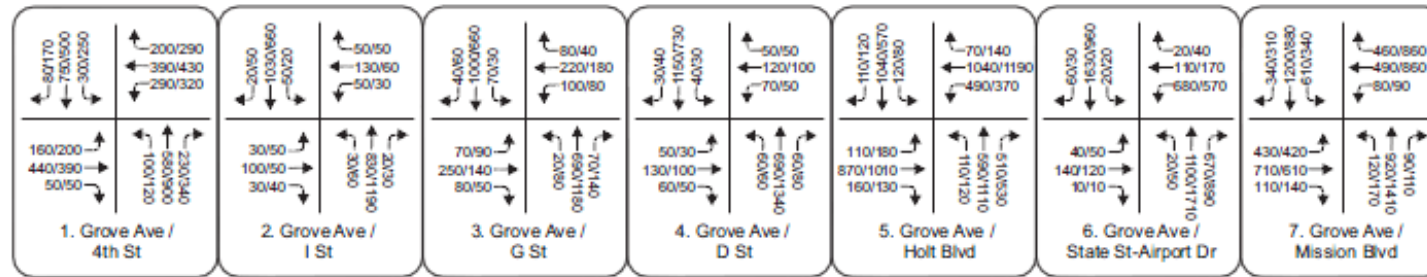
Source: *Traffic Operations Analysis, 2015.*

The following intersections are forecast to operate at unsatisfactory LOS in opening year (2025) No Build conditions:

- Grove Avenue/Holt Boulevard (a.m. and p.m. peak hour); and
- Grove Avenue/Mission Boulevard (p.m. peak hour).

By 2045, the following intersections are forecast to operate at unsatisfactory LOS in opening year (2045) no-build conditions:

- Grove Avenue/4<sup>th</sup> Street (p.m. peak hour);
- Grove Avenue/Holt Boulevard (a.m. and p.m. peak hour);
- Grove Avenue/State Street-Airport Drive (a.m. and p.m. peak hour); and
- Grove Avenue/Mission Boulevard (a.m. and p.m. peak hour).



Note: Volumes have been rounded to the nearest 10 trips

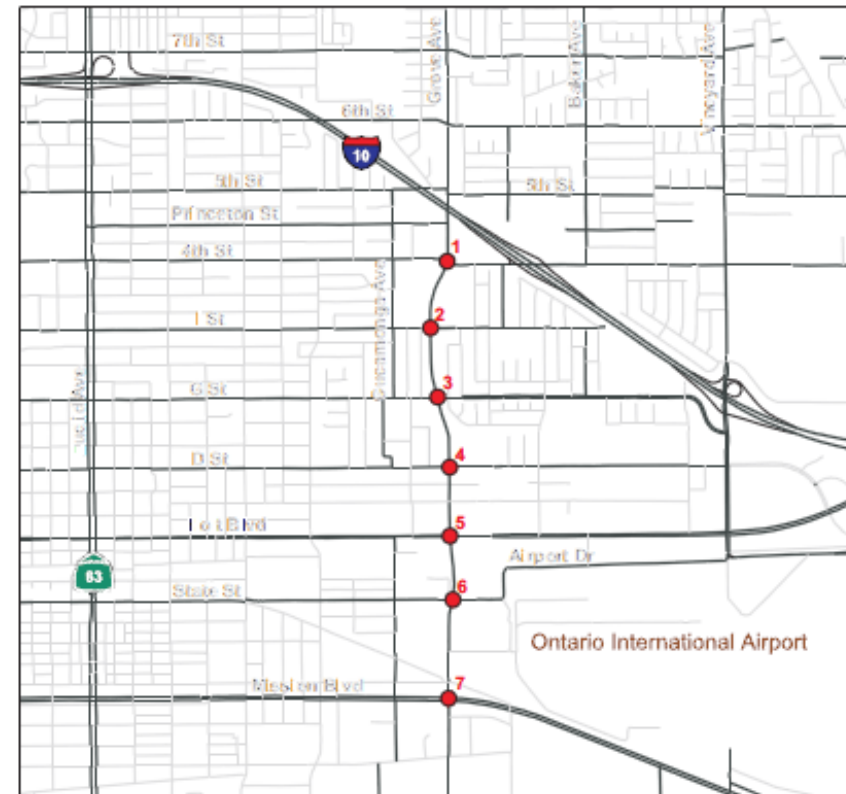
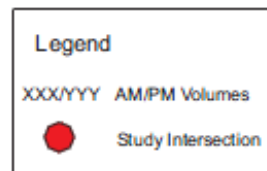
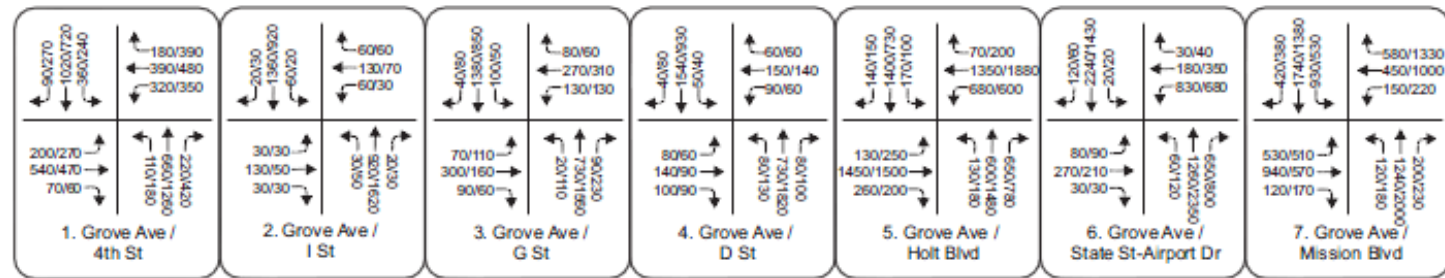


Figure 2.1.6-4. Opening Year 2025 No-Build AM/PM Peak-Hour Intersection Volumes



Note: Volumes have been rounded to the nearest 10 trips

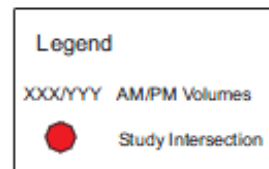


Figure 2.1.6-5. Design Year 2045 No-Build AM/PM Peak-Hour Intersection Volumes



Direct effects of the No Build Alternative would include continued deterioration of vehicle miles traveled (VMT), LOS, and congestion of freeway and local interchange operations. Indirect and cumulative effects of the No Build Alternative are projected to increase effects on the communities related to increased commute times and traffic diversion through adjacent neighborhoods as drivers seek alternate routes. Additionally, the No Build Alternative would increase the amount of time the users/ travelers have to endure construction-related effects associated with addressing the corridor needs through many smaller projects completed over an extended period of time.

### ***Build Alternative (Proposed Project)***

The Build Alternative includes widening Grove Avenue from four lanes to six lanes between 4<sup>th</sup> Street and State Street/Airport Drive in accordance with the City of Ontario Master Plan. The proposed widening would not conflict with congestion management plans or applicable transportation-related plans, policies, or programs. The roadway improvements would be designed to meet all applicable roadway design standards.

South of 4<sup>th</sup> Street, Grove Avenue would be widened to the west to avoid impacts to the historic Jay Littleton Ballpark. Between I Street and Holt Boulevard, Grove Avenue would be widened to the east, and between Holt Boulevard and State Street/ Airport Drive, Grove Avenue would be widened on both sides.

In addition, Holt Boulevard would be widened at the Grove Avenue intersection from two through lanes, two through-right lanes, and one left-turn lane to four through lanes, two through-right lanes, and two left-turn lanes. Figure 2.1.6-6 shows the future lane configurations at the study intersections with implementation of the proposed widening along Grove Avenue and the additional project improvements described.

Figures 2.1.6-7 and 2.1.6-8 show forecasted intersection traffic volumes under the Build Alternative in opening year (2025) and design year (2045), respectively.

As shown in Table 2.1.6-4, under the Build Alternative the Grove Avenue/Mission Boulevard intersection, which is located outside of the project limits, is forecasted to operate at unsatisfactory LOS in opening year 2025 build conditions in the p.m. peak hour. By 2045, the intersection would operate at unsatisfactory LOS levels for both the a.m. and p.m. peak periods.

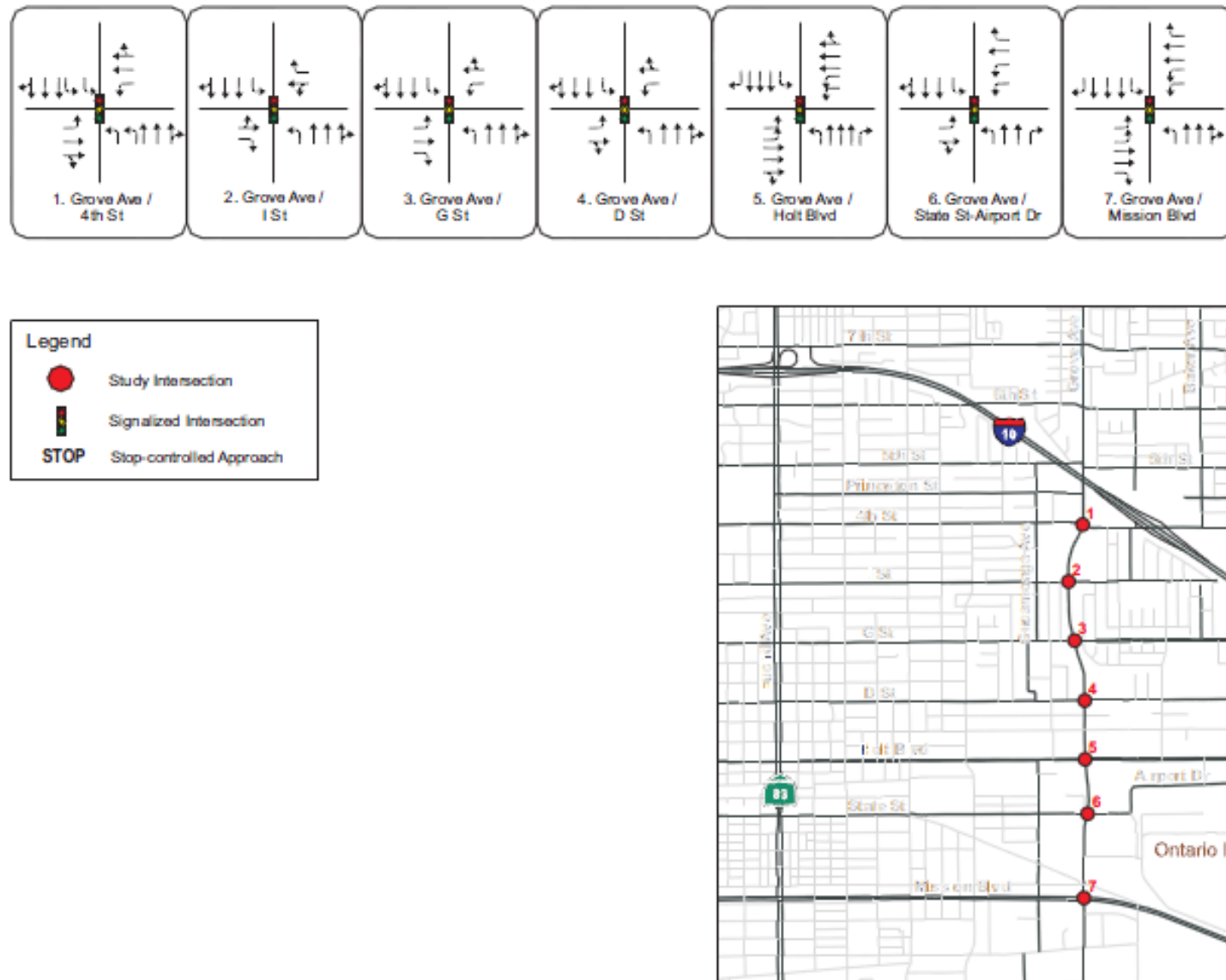
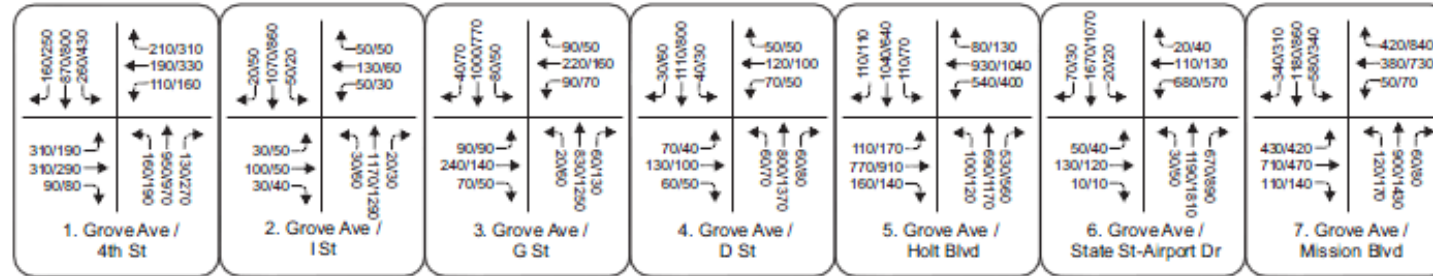


Figure 2.1.6-6. Build Alternative Intersection Lane Configurations



Note: Volumes have been rounded to the nearest 10 trips

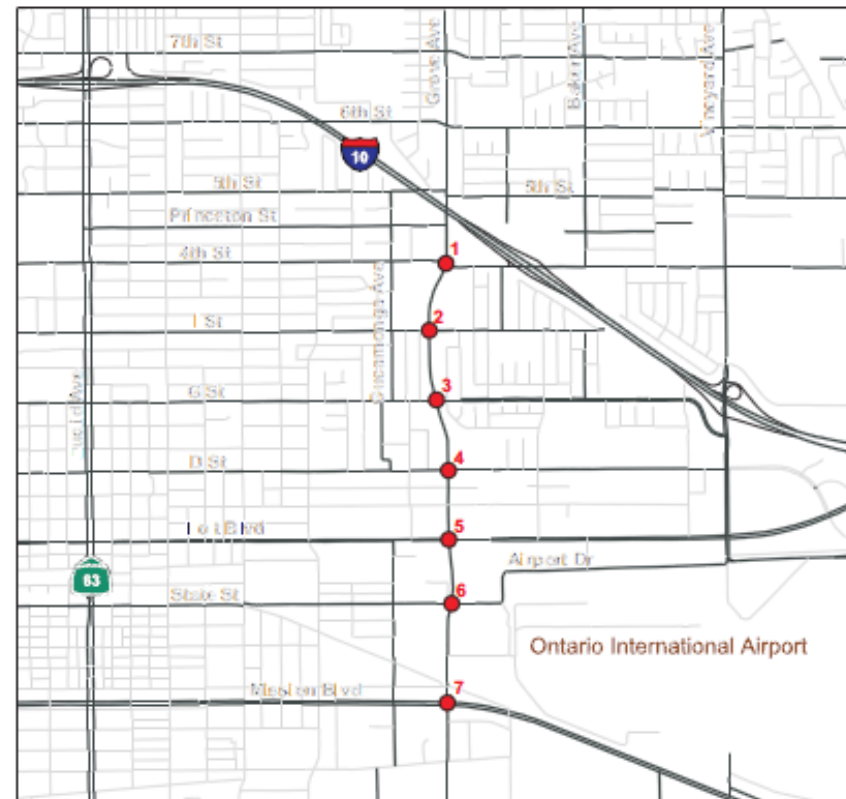
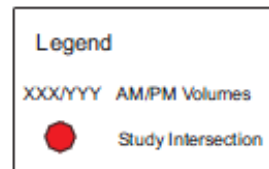
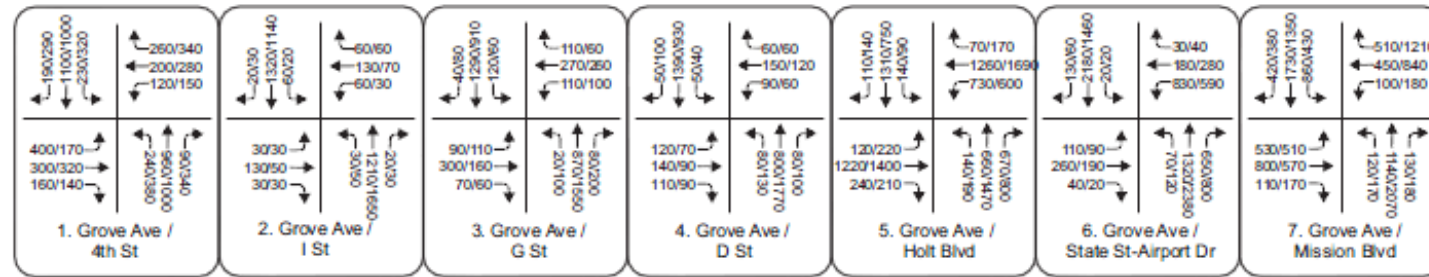


Figure 2.1.6-7. Opening Year 2025 Build Alternative AM/PM Peak-Hour Intersection Volumes



Note: Volumes have been rounded to the nearest 10 trips

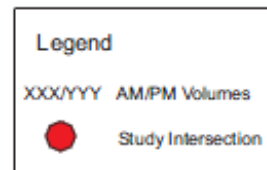


Figure 2.1.6-8. Design Year 2025 Build Alternative AM/PM Peak-Hour Intersection Volumes



**Table 2.1.6-4. 2025 and 2045 Build Alternative Peak-Hour  
Intersection LOS Summary**

Intersection	AM Peak Hour				PM Peak Hour			
	2025		2045		2013		2025	
	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS	Delay (sec)	LOS
1) Grove Avenue/4 <sup>th</sup> Street	39.0	D	49.4	D	46.4	D	47.8	D
2) Grove Avenue/I Street	6.4	A	5.9	A	5.4	A	5.0	A
3) Grove Avenue/G Street	8.8	A	11.5	B	8.4	A	10.9	B
4) Grove Avenue/D Street	8.3	A	7.6	A	5.9	A	6.9	A
5) Grove Avenue/ Holt Boulevard	38.7	D	61.3	E	37.9	D	59.5	E
6) Grove Avenue/State Street	27.0	C	39.2	D	30.4	C	71.8	E
7) Grove Avenue/Mission Boulevard	52.3	D	<b>95.5</b>	<b>F</b>	<b>101.5</b>	<b>F</b>	<b>233.7</b>	<b>F</b>
Note: sec = seconds; <b>BOLD</b> indicates unsatisfactory								

Source: Traffic Operations Analysis, 2015

While the Grove Avenue/Holt Boulevard, Grove Avenue/State Street-Airport Drive, and Grove Avenue/Mission Boulevard intersections are forecast to continue to operate at LOS E or F in horizon year 2045 build conditions, the average delays are forecast to significantly improve with implementation of the Build Alternative compared to the No Build Alternative.

Because no arterial roadways would be permanently closed, there are no permanent impacts to access or circulation, and no indirect impacts are anticipated with implementation of the Build Alternative.

### ***Nonmotorized and Pedestrian Features***

Grove Avenue is designated as a Bicycle Corridor by the City of Ontario Multipurpose Trails and Bikeway Corridor Plan. The project would include a new Class III bikeway along Grove Avenue in conformance with SBCTA's Non-Motorized Transportation Plan 2014. The Build Alternative would be designed to retain and improve the existing pedestrian sidewalk on the west side of Grove Avenue between I Street and G Street. The Build Alternative would improve pedestrian connectivity by constructing a new sidewalk that seamlessly connects with an existing walkway in Grove Memorial Park. Additionally, pedestrian sidewalks along the project area would include a landscaped median between traffic and pedestrians to enhance safety. There would also be a design element that provides a pedestrian connection across the West Cucamonga Channel to an existing trail leading to James Galanis Park. All pedestrian sidewalk changes would be ADA-compliant. As such, no adverse effects with respect to nonmotorized and pedestrian features would occur as a result of implementation of the Build Alternative.

### ***Temporary Impacts***

#### ***No Build Alternative***

There are no improvements proposed under the No Build Alternative; therefore, there would be no temporary impacts.

#### ***Build Alternative (Proposed Project)***

Temporary impacts to circulation and access would result from construction activities. Street closures and detours would temporarily delay goods movements, affect business parking, and impede access to businesses. To the extent feasible, this work would occur during non-peak commute hours, at night, or on weekends.

As discussed in previous sections, a TMP would be implemented to minimize temporary construction impacts to circulation. Closure of streets that are in proximity to one another would not coincide so there would be convenient nearby alternate routes available for automobiles and pedestrians.

TMP strategies would accommodate major traffic movements during construction and minimize construction impacts by maintaining pedestrian, bicycle, business, and residential access to the extent practicable; minimizing parking impacts; and avoiding disruptions to existing transit service operating in the project vicinity, including OmniTrans Bus Route 63, which runs along 4<sup>th</sup> Street and 6<sup>th</sup> Street and Ontario-Montclair School District bus routes. Coordination with local jurisdictions and emergency service providers would be made during the final design to identify emergency service routes that serve hospitals, fire/police stations, emergency shelters, emergency command centers, and other facilities that provide essential emergency services within the study area. Emergency service routes would be maintained during construction or alternate routes would be provided.

The Grove Avenue Corridor Project was originally intended to be analyzed at the same time as the I-10/Grove Avenue Interchange Project. These two projects are now on separate design and environmental clearance schedules. Coordination with the design and construction team for the I-10/Grove Avenue Interchange Project would need to occur to ensure the Grove Avenue Corridor Project and the I-10/Grove Avenue Interchange Project are designed compatibly.

#### **2.1.6.4 Avoidance, Minimization, and/or Mitigation Measures**

The following minimization measures were identified for impacts to traffic and transportation as a result of the proposed project:

- T-1:** Final TMP – A TMP (July 2015) was prepared during development of the preliminary engineering for the project. During final design, a Final TMP will be prepared. At a minimum, the Final TMP will include the detailing of any projected temporary street closures or expected traffic delays due to project construction activities. The Final TMP will include a public awareness program that will use an appropriate combination of the HAR, local media, newsletters, and/or flyers. The following elements will be major components of the Final TMP: Public Awareness Campaign, particularly related to the scheduling of work; COZEEP; Utilization of portable CMSs; and notification to be sent to local cities and emergency responders, if applicable.
- T-2:** During project construction, the Project Engineer will ensure that the measures in the Final TMP are properly implemented by the contractor.
- T-3:** During final design and construction, the Project Engineer will work with affected property owners to identify means to avoid and minimize parking impacts, including space management, such as restriping of parking areas and identifying parking replacement options.
- T-4:** All pedestrian facilities will be designed to meet or exceed requirements of the ADA and current safety standards. Access to pedestrians and bicyclists shall be maintained to the extent practicable during the construction period.
- T-5:** Prior to and during construction, the Project Engineer will coordinate with Omnitrans, the Ontario-Montclair School District, and other affected transit providers to request and comply with applicable procedures for any required temporary bus stop relocations or other disruptions to transit service during construction, if necessary.
- T-6:** During final design and prior to and during construction, the Project Engineer will coordinate with the design and construction team for the I-10/Grove Avenue Interchange Project to ensure the Grove Avenue Corridor Project and the I-10/Grove Avenue Interchange Project are designed compatibly.

## 2.1.7 Visual/Aesthetics

### 2.1.7.1 Regulatory Setting

NEPA, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* and culturally pleasing surroundings (42 U.S.C. 4331[b][2]). To further emphasize this point, FHWA, in its implementation of NEPA (23 U.S.C. 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

CEQA establishes that it is the policy of the state to take all action necessary to provide the people of the state “with...enjoyment of *aesthetic*, natural, scenic, and historic environmental qualities” (CA PRC Section 21001[b]).

In addition to federal and State environmental regulations, local agencies may also have requirements or recommendations regarding developments within their boundaries. The project corridor falls within jurisdiction of the City of Ontario, which has established guidelines and requirements for development within the community through its Municipal Code and the City of Ontario Development Code. The following codes reinforce the need for landscaping and other aesthetic treatments to roadways within the city and do not discuss the interface between City roads and Interstate 10 (I-10):

- Design Quality:
  - Rich blend of architectural styles, including the historic downtown, residential neighborhoods, equestrian properties, commercial centers, and industrial and office complexes.
  - Encourage durable landscaping materials and design that enhance the aesthetics of structures, create and define public and private spaces, and provide shade and environmental benefits.
  - Encourage the inclusion of amenities, signage, and landscaping at the entry to neighborhoods, commercial centers, mixed-use areas, industrial developments, and public spaces that reinforce them as uniquely identifiable places.
- Pedestrian and Transit Environments
  - Require that pedestrian, vehicular, bicycle, and equestrian circulation on both public and private property is coordinated and designed to maximize safety, comfort, and aesthetics.

- Utilize landscaping to enhance the aesthetics, functionality, and sustainability of streetscapes, outdoor spaces, and buildings.
- City Identity
  - For many, the primary image of Ontario is shaped by what is seen from these transportation systems. Enhancing these transportation corridors to provide aesthetically pleasing visual experiences will make people want to experience more of what Ontario has to offer.

#### **2.1.7.2 Affected Environment**

This section describes the aesthetic and visual resource conditions within the project limits and discusses potential aesthetic impacts that could result from implementation of the proposed project Build Alternative. A program of minimization measures is also identified. Information in this section is based on the *Visual Impact Assessment* completed for this project (November 2016).

The visual impacts of the proposed project were determined by assessing the existing visual resources, the visual resource change due to the project, and predicting viewer response to that change. The degree of visual quality in a view was evaluated using the following FHWA descriptive terms:

- *Vividness*: Vividness is the visual power or memorability of landscape components as they combine in striking and distinctive visual patterns (e.g., Niagara Falls is a highly vivid landscape component).
- *Intactness*: Intactness is the visual integrity of the natural and human-built landscape and its freedom from encroaching elements. This factor can be present in well-kept urban and rural landscapes and natural settings (e.g., a two-lane road that meanders through the countryside).
- *Unity*: Unity is the visual coherence and compositional harmony of the landscape considered as a whole; it frequently attests to the careful design of individual components in the landscape (e.g., an English or Japanese garden).

The degree of visual character in a view was evaluated using the following FHWA descriptive terms:

- *Scale*: Visual scale is the apparent size relationship between landscape components or features and their surroundings.
- *Diversity*: Diversity is the number of pattern elements, as well as the variety among them and edge relationships between them.

- *Continuity*: Continuity is the uninterrupted flow pattern elements and the maintenance of visual relationships between immediately connected or related landscape components or features.
- *Dominance*: Dominance is components or specific features in a scene that may be dominant because of prominent positioning, contrast, extent, or importance of pattern elements.

For projects that do not create a significant impact on existing visual character or quality, a more nuanced approach categorizes impact levels as low, moderately low, moderate, moderately high, and high based on the following descriptions:

- *Low (L)*: Low negative change to existing visual resources and low viewer response to change. May or may not require mitigation.
- *Moderately Low (ML)*: Low negative change to the visual resource with a moderate viewer response or moderate negative change to the resource with a low viewer response. Impact can be mitigated using conventional methods.
- *Moderate (M)*: Moderate negative change to the visual resource with moderate viewer response. Impact can be mitigated within 5 years using conventional practices.
- *Moderately High (MH)*: Moderate negative change in the visual resource with high viewer response or high negative change with a moderate viewer response. Extraordinary mitigation practices may be required. Landscape treatment required will generally take longer than 5 years to mitigate.
- *High (H)*: High level of negative change in character or a high level of viewer response to the change such that extraordinary architectural design and landscape treatments may not mitigate impacts below a high level. An alternative project design may be required to avoid high negative impacts.

### ***Visual Environment***

The project is located within Ontario. Grove Avenue is currently a four-lane road that traverses through commercial, park, and residential land. Buildings adjacent to the existing roadway are one- to two-story buildings. The regional landscape of the project corridor is characterized by two identifying elements: the flat appearance of the foreground landscape and the steep San Bernardino and San Gabriel mountains, which form a dramatic backdrop. One additional element to be considered in the regional landscape is the haze that frequently develops in the area, obscuring the views of the mountains and influencing the overall appearance of the regional landscape.

### ***Project Viewshed***

A viewshed is the area normally visible from an observer's viewpoint of location and is limited by the screening/obstruction effects of any vegetation or structures. A viewshed can include views from within the project outward or from outside of the area into the project corridor. While viewpoints represent specific locations within the project area, a viewshed describes what is seen from that viewpoint, including the limits of what can be seen. When these individual points are strung together, the viewsheds create an overall project viewshed that can be used to describe the project area. The viewshed includes the locations of viewers within the project area that are likely to be affected by visual changes brought about by the project features.

For the Grove Avenue Corridor Project, the presence of the existing roadway in the corridor establishes much of the existing visual quality present in the corridor. The other element that contributes a large component to the visual character in the north end of the project is John Galvin Park and the plantings associated with it. The middle reach of the project has a moderate visual character, with the residences and their associated landscaping adding to the character, while the existing concrete drainage ditch and overhead wires detract. The southern reach of the project is typified by undeveloped land. The visual character is moderately low given the open and weedy appearance of the adjacent fields.

### ***Landscape Unit***

Landscape units are defined as that portion of the regional landscape that can be thought of as containing a distinct visual character. A landscape unit will often correspond to a place or district that is commonly known among the community.

In accordance with the criteria described above, the Grove Avenue Corridor Project only contains one landscape unit: the area in and around John Galvin Park. The visual character of the rest of the corridor is largely established by the existing roadway. Typical views for the John Galvin Park landscape unit are shown in Figure 2.1.7-1

**Existing Visual Character:** Within the John Galvin Park landscape unit, the roadway traverses through the park, giving viewers a direct line of sight to the plantings associated with the park.

**Existing Visual Quality:** The park nature of the view gives the existing parkway a moderately high visual quality, with moderately high vividness, intactness, and unity.





Figure 2.1.7-1. Typical Viewpoints within the Project Corridor



### ***Key Viewpoints***

The FHWA analysis methodology recommends selecting key viewpoints that represent the potential visual effects of the project and the viewers' experience. A key viewpoint is representative, typical, characteristic, and has a clear perception of project elements to the primary viewer group. Neighbors (people with views to the road) and roadway users (people with views from the road) are the two broadly defined user groups that could be most affected by the project. Key viewpoints also need to represent the landscape units and include all of the project elements. Viewpoints #2 and #4 were not chosen to be evaluated further because the visual quality of the existing corridor is not anticipated to be substantially altered from the existing by the proposed project. The largest effect on the existing corridor would be the removal of existing mature trees within the parkway strip, assessed in Viewpoints #1 and #3 for the John Galvin Park Landscape Unit. Descriptions of the key viewpoints are provided below.

- **Viewpoint #1, John Galvin Park Landscape Unit:** This view was taken looking north from the center northbound lanes of Grove Avenue within the area of John Galvin Park. The view was selected as key because it demonstrates the proposed roadway changes and views to the widened corridor within the park area.
- **Viewpoint #3, John Galvin Park Landscape Unit:** This view was taken from the north end of the pocket park at Grove Avenue and East G Street. This view was selected as a key viewpoint because it shows the widening associated with the project as it crosses the area of the park.

### **2.1.7.3 Environmental Consequences**

An evaluation of potential visual impacts associated with each alternative is presented below.

#### ***Permanent Impacts***

##### ***No Build Alternative***

The No Build Alternative would maintain the existing roadway; therefore, it would not alter existing views. Existing visual/aesthetic resources would not be permanently affected by the No Build Alternative.

##### ***Build Alternative (Proposed Project)***

The anticipated visual impact of the Build Alternative is expected to be low. The presence of the existing roadway in the corridor establishes much of the existing visual quality present in the corridor. The new, widened corridor is not anticipated to create any new sources of glare. The existing roadway is already lit, and lighting would be

incorporated into the new configuration at a similar lighting level as the existing roadway.

The other element that contributes a large component to the visual character of the project area is the John Galvin Park Landscape Unit and its associated plantings. It is anticipated that removal of trees within the existing parkway strips is likely to be the area of most concern for residents living near the proposed project. The removals could, in the short term, increase light trespass from streetlights along the widened road into adjacent neighborhoods. It is anticipated that this effect would be reduced over time as the newly planted trees in the new parkway strips grow; however, it would be many years before the new trees reach the stature to achieve the previously existing character along Grove Avenue. While there are no designated scenic vistas or scenic resources along the corridor, the proposed roadway modifications should allow a more direct line of sight to the mountains, given its wider cross section.

#### ***Key Viewpoints – Build Alternative***

Viewpoints identified as key for identifying the changes to the visual environment anticipated with the Build Alternative are Viewpoints #1 and #3. These are evaluated below.

The post-construction simulations shown for the key viewpoints on the following pages include application of BMPs and avoidance and minimization measures described in Section 2.1.7.4 for each particular view. Aesthetic treatments shown in the simulations, such as specific plant types, are representative only. Actual types of treatments and landscaping would be based on community and City input during the design phase of the work. The location of each key viewpoint is denoted with a star in Figure 2.1.7-1.

### **Viewpoint #1 Analysis**

**Orientation:** Figure 2.1.7-2 shows the location of Viewpoint #1. Figure 2.1.7-3 shows a photosimulation for Viewpoint #1 and depicts the pre- and post-construction views. The photograph is taken looking north from the center northbound lanes of Grove Avenue within the area of John Galvin Park.

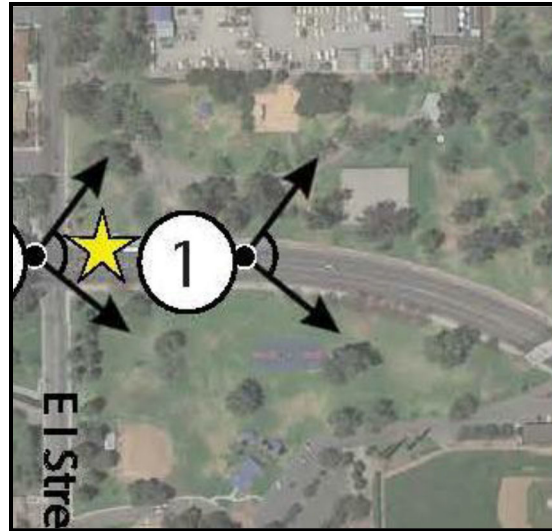
**Existing Visual Character/Quality:** The view shows Grove Avenue as it currently appears in the area of John Galvin Park. The park nature of the view gives it a moderately high visual quality, with moderately high vividness, intactness, and unity.

**Proposed Project Features:** The proposed project features in this view include an additional lane constructed in each direction, plus a landscaped median. Some of the existing trees in the background of this view (those closest to the road, past the bend) would be removed by construction of the new roadway; however, a new parkway strip would be constructed, and new street trees would be included in this strip. It is also anticipated that the new center median would be planted.

**Changes to Visual Character:** From the vantage of the roadway traveler, the anticipated changes are anticipated to be minor and mostly associated with the extra lanes and new median in the road, which are elements that are not currently part of the view. The replacement plantings in the parkway strip along the roadway would eventually create a similar visual character to the existing (as the trees grow and mature), and the planted median would help relieve the additional roadway paving associated with the new lanes.

**Anticipated Viewer Response:** Given the City's requirements for aesthetics and comfort that are described by the local regulatory environment, as described in the *Visual Impact Assessment*, it is anticipated that the viewers would be sensitive to changes to their visual environment. Due to this regulatory requirement, the potential impact has been categorized as moderately high.

**Resulting Visual Impact:** The overall anticipated impact of the project on the view is expected to be less than substantial. Overall, the effect is anticipated to be a moderately low change to the visual environment given the inclusion of minimization measures discussed in Section 2.1.7.4.



**Figure 2.1.7-2. Location of Key Viewpoint #1**



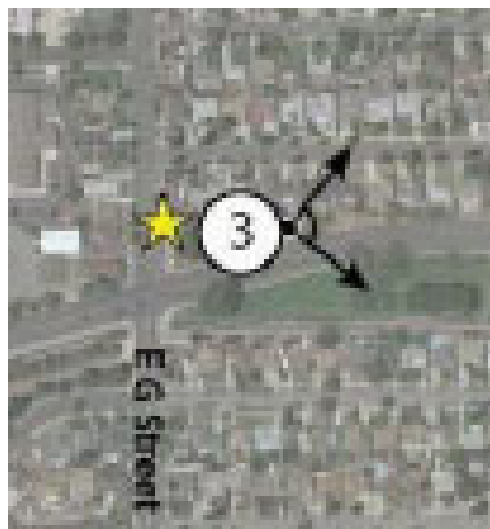
**Figure 2.1.7-3. Viewpoint #1, Looking North along Grove Avenue near East I Street**

Minimization measures depicted in the simulation include replacement plantings. Aesthetic and landscape treatments are representative only. Actual aesthetics and landscaping would be designed in collaboration with City staff during the design phase.

### **Viewpoint #3 Analysis**

**Orientation:** Figure 2.1.7-4 shows the location of Viewpoint #3. Figure 3.1.7-5 shows a photosimulation for Viewpoint #3 and depicts the pre- and post-construction views. The photograph is taken from the north end of the pocket park at Grove Avenue and East G Street.

**Existing Visual Character/Quality:** The view shows Grove Avenue as it exits the area of John Galvin Park. The cars coming towards the photographer are the southbound vehicles on Grove Avenue. The park nature of the view gives it a moderately high visual quality, with moderately high vividness, intactness, and unity.



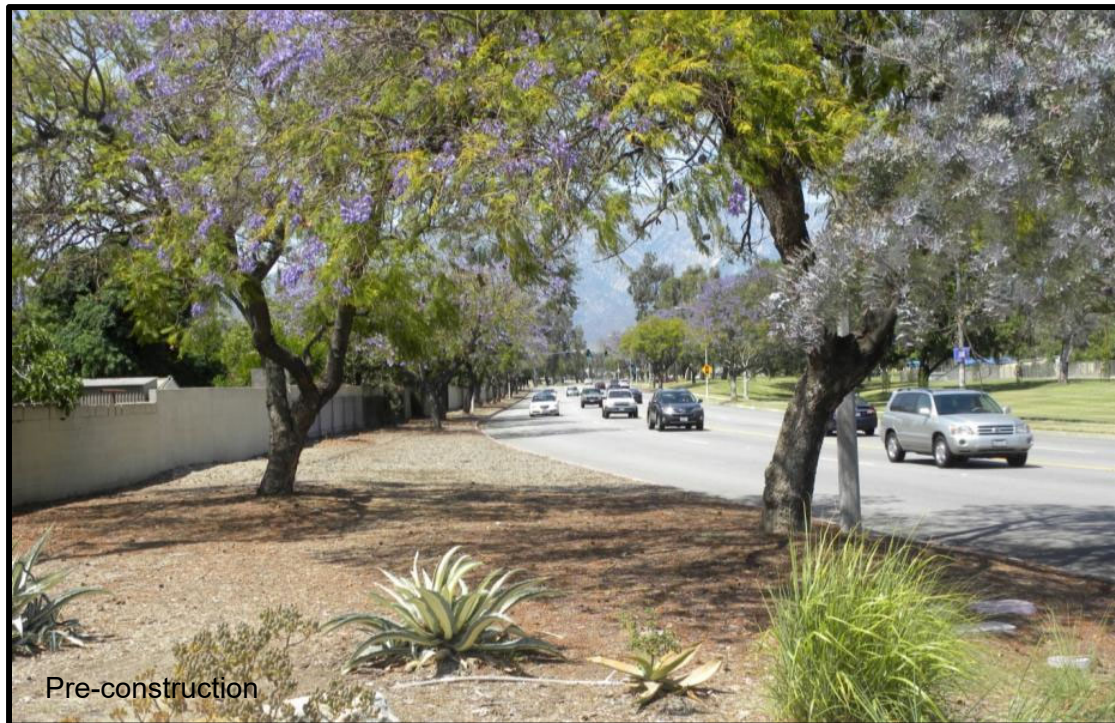
**Figure 2.1.7-4. Location of Key Viewpoint #3**

**Proposed Project Features:** The proposed project features in this view are an additional lane constructed in each direction, plus a landscaped median. The existing row of trees along the back wall/fence of the neighbors (left side of the image, mid-ground) would be removed by construction of the sidewalk; however, a new parkway strip would be constructed, and new street trees would be included in this strip. It is also anticipated that the new center median would be planted.

**Changes to Visual Character:** From the vantage of the existing pocket park, the anticipated changes are anticipated to be minor and mostly associated with the new sidewalk. The replacement plantings in the parkway strip behind the existing fence line would, over time, create a similar visual character to the existing, and the planted median would help relieve the additional roadway paving associated with the new lanes.

**Anticipated Viewer Response:** Given the City's requirements for aesthetics and comfort that are described by the local regulatory environment, as described in the *Visual Impact Assessment*, it is anticipated that the viewers would be sensitive to changes to their visual environment. Due to this regulatory environment, the anticipated viewer response is categorized as moderately high sensitivity.





**Figure 2.1.7-5. Viewpoint #3, Looking North along Grove Avenue at the Existing Pocket Park**

Minimization measures depicted in the simulation include replacement plantings. Aesthetic and landscape treatments are representative only. Actual aesthetics and landscaping would be designed in collaboration with City staff during the design phase.

**Resulting Visual Impact:** The overall anticipated impact of the project on the view is expected to be less than substantial. The visual character (scale, diversity, continuity, and dominance) of the corridor is expected to have a low degree of change, with a 4.88 percent change in rating post-project. The change is primarily related to the increased presence of the roadway, due to its wider cross section, in the view. The visual quality (vividness, intactness, and unity) of the corridor is also expected to have a low degree of change, with a rating change of 2.51 percent post-project. Overall, the effect is anticipated to be a moderately low change to the visual environment.

Table 2.1.7-1 provides a summary of findings from the analysis for each key viewpoint for the anticipated change to the visual resource, the anticipated viewer response to that change, and the overall anticipated visual impact for the Build Alternative.

**Table 2.1.7-1. Summary of Anticipated Visual Impacts of Build Alternative by Key Viewpoint**

Key Viewpoint	Anticipated Change to Visual Resource	Anticipated Viewer Response	Anticipated Visual Impact
Key Viewpoint #1	Low	Moderately High	Moderately Low
Key Viewpoint #3	Low	Moderately High	Moderately Low

Overall, the new widened roadway is not anticipated to change the overall visual character or quality of the corridor. While the widened pavement section would detract from existing views, the addition of planted medians, preserving as much of the existing trees in the corridor as feasible, and the addition of new street tree plantings would have the overall effect of maintaining the existing character and quality. The undergrounding of power lines in the southern stretch of the corridor would also help improve the quality of the views in that portion of the project area.

#### **2.1.7.4 Avoidance, Minimization, and/or Mitigation Measures**

To address the potential adverse visual impacts to the project area and to generate public acceptance of the project, the following actions are required. With implementation of these minimization measures, the visual impacts of this project

would be reduced and would not result in a substantial change in overall visual quality for the area.

- VA-1:** The existing trees, particularly within the park area, provide scale, shade, and visual relief to the extent of roadway paving. Preserving existing trees to the extent feasible will help maintain the existing visual character of the roadway.
- VA-2:** Where it is not feasible to save the existing trees, new tree and vegetation plantings shall be included in the final design of the roadway. Replacement trees shall be two 24-inch boxed trees for each tree removed by the project. All areas disturbed by the project shall be fitted with new landscaping, including trees, groundcovers, accent plants, and turf grass (in park areas adjacent to existing remaining turf).
- VA-3:** To support the replacement of plantings, the project shall include a permanent irrigation system to all new plantings. Materials used for irrigation shall be as per City of Ontario standards.
- VA-4:** Decorative paving shall be employed for medians, islands, and parkway strips that are too narrow to plant. Paving color and texture/pattern shall match City of Ontario standards.



### **2.1.8 Cultural Resources**

This section addresses potential impacts to archaeological and architectural resources that are historic properties and are within the defined Area of Potential Effects (APE). The APE includes areas that may be directly or indirectly affected by construction of the project's Build Alternative. An indirect impact occurs when the project would cause a change in character or use of the historic property but would not directly encroach or physically alter the property.

#### **2.1.8.1 Regulatory Setting**

The term "cultural resources," as used in this document, refers to the "built environment" (e.g., structures, bridges, railroads, water conveyance systems), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including "historic properties," "historic sites," "historical resources," and "tribal cultural resources." Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation (ACHP) the opportunity to comment on those undertakings, following regulations issued by the ACHP (36 CFR 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement (PA) among FHWA, the ACHP, the California State Historic Preservation Officer (SHPO), and Caltrans went into effect for Caltrans projects, both state and local, with FHWA involvement. The PA implements the ACHP's regulations, 36 CFR 800, streamlining the Section 106 process and delegating certain responsibilities to Caltrans. The FHWA's responsibilities under the PA have been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 U.S.C. 327).

Historic properties may also be covered under Section 4(f) of the USDOT Act, which regulates the "use" of land from historic properties. See Appendix A for specific information about Section 4(f).

CEQA requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. California PRC Section 5024.1 established the California Register of Historical Resources (CRHR) and

outlined the necessary criteria for a cultural resource to be considered eligible for listing in the CRHR and, therefore, a historical resource. Historical resources are defined in PRC Section 5020.1(j). In 2014, AB 52 added the term “tribal cultural resources” to CEQA, and AB 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in PRC Section 21074(a), a tribal cultural resource is a CRHR or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in PRC Section 21083.2.

PRC Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the NRHP listing criteria. It further requires Caltrans to inventory State-owned structures in its ROWs. Sections 5024(f) and 5024.5 require State agencies to provide notice to and consult with the SHPO before altering, transferring, relocating, or demolishing State-owned historical resources that are listed on or are eligible for inclusion in the NRHP or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with PRC Section 5024 are outlined in a Memorandum of Understanding (MOU) between Caltrans and SHPO, effective January 1, 2015. For most federal-aid projects on the State Highway System, compliance with the Section 106 PA will satisfy the requirements of PRC Section 5024.

#### **2.1.8.2 Affected Environment**

Cultural resource studies completed for this project are the *Historic Property Survey Report* (HPSR) (March 2017), and an *Archaeological Survey Report* (ASR) (March 2017), and *Historical Resources Evaluation Report* (HRER) (March 2017). Although the cultural resource reports completed for this project specifically address evaluation significance with regard to the federal NHPA and evaluation significance under NEPA, the information and analyses are consistent with the accepted approaches to support this analysis of evaluation significance under CEQA because of the similarity in the established criteria.

The purpose of the HRER and ASR is to identify and evaluate buildings, structures, and sites along the project alignments that may qualify for listing in the NRHP and the CRHR. Both reports were prepared using the established framework for resource identification and treatment outlined in the First Amended Section 106 PA (2014), as appropriate. Potential historic properties were identified and evaluated for inclusion in the NRHP as required by 36 CFR Part 800 and the regulations implementing Section 106 of the NHPA. This assessment also conforms to CEQA requirements and evaluates

potential historical resources for inclusion in the CRHR in accordance with Section 15064.5(a) (2)–(3) of the CEQA Guidelines using the criteria outlined in Section 5024.1 of the PRC.

### ***Methodology and Results***

The project APE includes all areas where potential direct and indirect impacts to cultural resources could occur as a result of project construction, operation, and maintenance. The same APE is used for archaeological and architectural history study areas. Consistent with general cultural resource practices, the APE for potential impacts was established as the project footprint, which includes all areas of permanent and temporary impacts. Properties that may be affected have been included within the APE, as well as existing and proposed ROW, TCEs, staging areas, and areas where there are potential visual/setting impacts. Potential indirect impacts are generally established as the legal parcel adjacent to where potential impacts would occur. If any part of a parcel would be temporarily or permanently impacted, then the whole parcel was included in the APE footprint. In terms of the vertical APE, construction of the additional street lanes would generally be confined to previously disturbed sediments that resulted from the original construction and maintenance of Grove Avenue and the existing commercial, residential, and other infrastructure developments. The exceptions may include areas associated with the proposed widening and reconstruction or construction of some of the bridge overcrossings, which have potential for undisturbed native sediments.

The minimum age threshold for the NRHP and CRHR eligibility consideration is established as 50 years. A resource less than 50 years old may be considered for listing in the registers if it can be demonstrated that sufficient time has passed to understand its historical importance. The baseline age for studying cultural resources within the project's APE was established as 1967, or the year that properties will achieve 50 years of age in 2017, which is the anticipated year of environmental clearance for the project. This is to account for lead time between preparation of Section 106 compliance documentation and the conclusion of environmental analysis and is consistent with general cultural resources practices.

The ASR and HRER evaluated the eligibility of properties and sites within the APE using the NRHP criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects

that possess integrity of location, design, setting, materials, workmanship, feeling, and association and

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of significant persons in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded or may be likely to yield, information important in history or prehistory.

Within this Environmental Impact Report (EIR)/Environmental Assessment (EA), CRHR eligibility criteria and City-designated historic properties are considered in addition to the NRHP criteria listed above. The CRHR criteria are similar to the NRHP. The four criteria for the CRHR are:

- 1. It is associated with events or patterns of events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
- 2. It is associated with the lives of persons important to local, California, or national history; or
- 3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
- 4. It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

Any property located in California that is listed in or eligible for the NRHP is automatically eligible for the CRHR. The CRHR criteria are tied to CEQA and any resource that meets the criteria listed above is considered a historical resource under CEQA.

The following standard sources of information were consulted in the process of compiling this report:

- NRHP Web site (<http://www.cr.nps.gov/nr>), through August 2015
- California Historical Landmarks
- California Points of Historical Interest
- City of Ontario List of Designated Historic Landmarks and Historic Districts
- City of Ontario Public Library
- San Bernardino County Historical Archives

In addition, archival research helped determine the location of previously documented cultural resources proximate to the project and helped establish a context for significance. In March 2015, a literature and records search was conducted at the San Bernardino Archaeological Information Center (SBAIC). The records search covered a 1-mile radius around the APE boundary. National, State, and local inventories of cultural resources were examined to identify local historical events and personages, development patterns, and interpretations of architectural styles.

Results of the literature and records search and subsequent research indicate that there are two previously recorded sites located within the project's APE. A total of 17 cultural resources have been previously documented to be outside the APE but within the 1-mile search radius. These include four sites within a 0.25-mile radius of the APE, five sites within a 0.5-mile radius of the APE, and eight sites documented between a 0.5- to 1-mile radius of the APE. All of the previously recorded sites are of the historic built environment type; no archaeological resources were identified.

Of the two sites located within the APE, one is the SPRR, which crosses Grove Avenue 0.1 mile south of Holt Boulevard in Ontario; however, it is located above the vertical extent of improvements associated with this project and is thus above and outside of the APE established for this project. No impacts would occur to the railroad or its operations.

John Galvin Park is located between 4<sup>th</sup> Street and I Street, with Grove Avenue bisecting the park into east and west halves. John Galvin Park is listed on the Historical Resources Inventory with a status code of 7N, indicating that it needed to be re-evaluated, which was done in conjunction with this project. John Galvin Park appears to be ineligible for listing in the NRHP.

However, Jay Littleton Ballpark, which is located within John Galvin Park, appears eligible for listing in the NRHP and CRHR, even though John Galvin Park does not appear eligible for listing in the NRHP or CRHR. The ballpark was evaluated as a result of the cultural reports prepared for this project and was found eligible under Criteria A

and C at the local level of significance, with the period 1937–1960 as the span of significance.

To identify archaeological resources, an intensive-level pedestrian survey of the APE was completed on May 26, 2015. The survey consisted of walking parallel transects, spaced at 10-meter intervals, in nonhardscaped areas within the APE while closely inspecting the ground surface. Existing disturbances (e.g., rodent burrows, ditches) were examined for artifacts or buried cultural deposits. Most of the APE consisted of hardscaped, paved roads, curbs, sidewalks, and portions of the channelized Cucamonga Creek. Hardscaped areas were not surveyed because there was no ground visibility.

As a result of this survey and the project plans, no known archaeological resources are anticipated to be negatively impacted by this project.

Eight of the 85 parcels located within the APE contained buildings, groups of buildings, or structures that were constructed in or before 1967 and possess sufficient integrity to warrant evaluation in this study, as defined by the PA. These include seven historic architectural properties. Seven of these eight properties that were evaluated in the HRER were found to be ineligible for the NRHP:

- 1111 E. Holt Boulevard, Ontario, CA
- 1101 E. Holt Boulevard, Ontario, CA
- 1175 E. Holt Boulevard, Ontario, CA
- 1179 E. Holt Boulevard, Ontario, CA
- 1300 E. Holt Boulevard, Ontario, CA
- 1329 E. Holt Boulevard, Ontario, CA
- John Galvin Park, Ontario, CA

The oldest building in the APE was constructed in 1920; however, most of the buildings are houses constructed in the 1950s and 60s as part of larger post-World War II housing tracts. Some of these residences have been converted to other uses or have been in-filled with commercial buildings, and they were excluded from a formal evaluation due to substantial compromises in integrity as is allowed under the Caltrans Section 106 PA Attachment 4 as Property Type 7. Numerous post-war residential tracts are located throughout the APE; however, research does not indicate these tracts are associated with either historically significant events at the local or regional level or associated with persons known to have made contributions to local history. In addition, many of the residences no longer retain sufficient integrity due to numerous alterations to character-defining features. In sum, many of the neighborhoods fronting Grove Avenue

contain a diverse mixture of old and new residential and commercial buildings, and they no longer represent intact neighborhoods or integral districts within the APE. SHPO concurred with the exemptions and the evaluations on April 25, 2017. See Appendix G for the SHPO concurrence letter.

### ***Public Participation and Native American Coordination***

In accordance with Section 106 of the NHPA, on April 15, 2015, letters were sent to local historical societies/historic preservation groups requesting from them any information they may have regarding any cultural resources that may be of significance within the project APE. Letters were also sent to the Museum of History and Art, Ontario; the Chaffey Communities Cultural Center; and the Cooper Regional Museum on June 5, 2015. Follow-up phone calls to these entities were made on August 17, 2015. No response has been received to date.

A response was received via e-mail from Mr. Richard Delman on behalf of the Ontario Heritage Society on June 9, 2015, indicating the presence of a historic building at 1206 N. Grove Avenue (also 1204 N. Grove Avenue), which is now a local business known as Halgren's Chocolates, as well as indicating that John Galvin Park could potentially be a national or State historic resource. It should be noted that the Jay Littleton Ballpark would not be impacted by the project, and the building located at 1206 N. Grove Avenue was not found to be a historic property using the NRHP criteria because it does not appear to retain integrity of setting, feeling, or association (it is also not located within this project's APE).

A sacred lands records search was requested for this project from the Native American Heritage Commission (NAHC) on March 27, 2015. The NAHC responded on April 22, 2015, that a search of the sacred lands file failed to indicate the presence of Native American cultural resources in the immediate project area. The NAHC requested that four Native American tribes or individuals be contacted for further information regarding the general project vicinity. Caltrans requested an additional two be contacted; however, one of them overlapped with another contact. The results are as follows:

- Gabrieleno/Tongva Band of Mission Indians: The Chairperson of the Gabrieleno/Tongva Band of Mission Indians, San Gabriel, Mr. Anthony Morales, responded by phone. Mr. Morales felt that archaeological monitoring should be conducted in case of subsurface archaeological material.
- Sandonne Goad, Chairperson, Gabrielino/Tongva Nation. Letter sent May 13, 2015; e-mail sent June 5, 2015; and a follow-up phone call made June 12, 2015. On



June 12, 2015, Ms. Goad deferred to Mr. Sam Dunlap, who provides all cultural resource consultation comments for the Gabrielino/Tongva Tribe. See below for Mr. Dunlap's response.

- Gabrieliño Band of Mission Indians: Mr. Andrew Salas, Chairperson of the Gabrieliño Band of Mission Indians, Covina, did not respond to any of the three attempts to contact him.
- Gabrielino/Tongva Nation Los Angeles: Mr. Sam Dunlap, Cultural Resources Director of the Gabrielino/Tongva Nation Los Angeles, responded by e-mail and recommended implementing Native American monitoring oversight during construction and to be informed of any unanticipated discovery of prehistoric cultural material. Ms. Sandonne Goad of the Gabrielino/Tongva Nation Los Angeles was reached by phone. Ms. Goad deferred to Mr. Dunlap for cultural resources consultation comments concerning the Gabrielino/Tongva Tribe.
- San Manuel Band of Mission Indians: The San Manuel Band of Mission Indians representative Leslie Mouriquand responded by e-mail asking for further information about the project and requested a copy of the cultural records search and the draft ASR. These documents were provided to her. Ms. Mouriquand commented by e-mail on the report the same day to Monica Corpuz, noting that the ethnography section contained no discussion of the Serrano. Cogstone was informed of the request and added the information to the report. Lee Claus, Cultural Resources Department Manager, responded by e-mail to the revised report asking that the tribal territory match the description developed by the tribe, that nearby villages be mentioned, and that mention of the Vanyume be removed.
- Serrano Nation: Ms. Goldie Walker of the Serrano Nation, in a phone conversation, requested to be notified if any cultural resources are observed during construction activities and emphasized she would like to be contacted no matter how small the artifact. She also requested to be contacted immediately if any human remains are encountered.

Due to the limited archaeological sensitivity of the project APE (i.e., no previously identified prehistoric archaeological sites were identified) and because the area is generally disturbed by previous development, archaeological monitoring during construction was determined not to be warranted. In the event of an unanticipated discovery during construction, the Gabrielino/Tongva Tribe will be consulted (Minimization Measures CR-1 and CR-2).

The requested changes provided by the San Manuel Band of Mission Indians were made to the ASR prepared for the project.

### **2.1.8.3 Environmental Consequences**

#### ***No Build Alternative***

The No Build Alternative would maintain the existing roadway; therefore, it would not alter existing conditions. Existing built environment resources would not be permanently affected by the No Build Alternative.

#### ***Build Alternative (Proposed Project)***

##### ***Archaeological Resources***

No NRHP-eligible archaeological resources were identified during the survey for the current project. The literature and records search did not reveal any known archaeological sites within a 1-mile radius, and the NAHC sacred lands file search did not reveal any results. There are not any anticipated project-related effects to any archaeological resources.

If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA PRC Section 5097.98, if the remains are thought to be Native American, the coroner will notify the NAHC, which will then notify the Most Likely Descendent (MLD). At this time, the Caltrans District 8 Environmental Branch Chief, Andrew Walters (909) 383-2647, will be contacted so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

##### ***Built Environment Resources***

As a result of the cultural studies completed for this project, the APE contains one historic property that was determined to be eligible for listing in the NRHP (and is thus a CEQA resource as well) and two additional historical resources for the purposes of CEQA only, as defined by CEQA Section 21084.1.

##### ***Jay Littleton Ballpark***

Jay Littleton Ballpark, located within John Galvin Park, consists of a baseball field, grandstands, press box, clubhouse, and lockers. The ballpark, built in 1937, is still in popular use today and is well maintained and in good condition. The Los Angeles Angels of the old Pacific Coast League (PCL) became the first professional ball club

to use Ontario as their spring training anchor in 1937. Other PCL teams followed their footsteps over the years, including the Hollywood Stars, San Diego Padres, Sacramento Solons, and Hawaiian Islanders. In addition to the PCL, major league baseball teams, including the Chicago Cubs, the Chicago White Sox, and the Pittsburgh Pirates, all played at the Ontario ballpark, coming in from their own spring training camps held elsewhere in southern California. However, by approximately 1960, the Ontario ballpark stopped hosting games for the PCL. Local organizations that used the park mainly in the post-WWII era included the Colt League, American Legion, American Baseball Congress, and Little League. The ballpark appears eligible under Criterion A and C at the local level of significance, with the period 1937–1960 as the span of significance.

On April 25, 2017, the SHPO concurred with Caltrans' determination that the Jay Littleton Ballpark was eligible for the NRHP at the local level under Criteria A and C, with a period of significance from 1937 to 1960.

Although the ballpark is within the APE, the project improvements do not infringe on the physical aspects of any portion of the ballpark. The project as proposed would widen Grove Avenue to the west, which is merely adjacent to the ballpark; therefore, there would be no impact to the sidewalk or area surrounding the ballpark. At a maximum, the following would be performed: pavement maintenance to the roadway (Grove Avenue), grind and overlay of hot mix asphalt, and repavement of the pavement delineation striping. The ballpark has been avoided in the engineering design. Access to the ballpark and its facilities would be maintained at all times throughout construction. Visual, noise, air quality, and vibration impacts during construction would be typical of roadway construction projects. Any minor visual changes associated with the Build Alternative would not be out of character with the existing corridor. The ballpark is currently subject to indirect air quality, vibration, and noise impacts due to its proximity to the existing I-10 mainline and Grove Avenue and due to the ballpark's location in a built-out suburban environment. The incremental increase in noise, vibration, and air quality impacts during construction and once the proposed project is built would not inhibit existing recreational functions in the park that are already subject to noise and air quality proximity impacts. Therefore, the Jay Littleton Ballpark, the only Historic Property in the APE, would not be directly affected by the undertaking, and potential indirect effects would be minimal. Pursuant to Caltrans Section 106 Programmatic Agreement Stipulation IX.A, Caltrans has made a finding of No Historic Properties Affected for the undertaking.

### *Fountain Winery*

The one-story, 4,400-square-foot warehouse building located at 1300 E. Holt Boulevard in Ontario is located in the eastern portion of the parcel. The warehouse is estimated to have been built prior to 1927. The warehouse was known as the Fontaine Winery (alternately known as the Fountain Winery) from 1938 to 1972. No significant historical events could be identified to have occurred at this location. Although the Fountain Winery is one of the businesses associated with the wine industry in Ontario and the region, it was a small operation in comparison to many others in Ontario. Although the warehouse was not found to be eligible for the NRHP in consultation with SHPO (see April 25, 2017, letter), it has been determined eligible for the City's List of Eligible Historical Resources because of its historical associations with the local wine industry and is thus considered a CEQA-only resource (Note: The CEQA determination for this building was made by the City).

### *Cucamonga Valley Wine Company and Distillery*

Estimated to have been built in the late 1920s, this approximately 6,500-square-foot building in the Mission Revival style is located at 1101 E. Holt Boulevard. The building originally served as a warehouse for a poultry rancher named Paul Walter, and then, beginning in 1933, as the Cucamonga Valley Wine Company and Distillery, which it remained until it began serving as a church. Although the building itself has lost some integrity over the years, the building is still easily recognizable in comparison with photos from the 1930s. While the former Cucamonga Winery warehouse located at 1101 E. Holt Boulevard does not appear to be eligible for the NRHP based on SHPO consultation (see April 25, 2017, letter), the building has been added to the City's List of Eligible Historical Resources as recommended by the City's Historic Preservation Commission in 2009, because of its associations with the local wine industry; thus, it is a resource for the purposes of CEQA (Note: The CEQA determination for this building was made by the City).

Based on SHPO consultation conducted in April 2017 (see Appendix G), Caltrans has made a finding of No Historic Properties Affected for the undertaking pursuant to Caltrans Section 106 Programmatic Agreement Stipulation IX.A.

Jay Littleton Ballpark was determined eligible for the NRHP; therefore, it is considered a Section 4(f) resource. No historic archaeological sites were found eligible for listing in the NRHP.

Based on design plans for the project, Grove Avenue would be widened to the west to avoid the historic ballpark. No adverse effects to any cultural resources are anticipated.

All historic properties identified along the project corridor are outside of the direct impact footprint and would not be directly affected by the Build Alternative. However, because Jay Littleton Ballpark was found eligible for listing in the NRHP and is located in the indirect APE, a Section 4(f) analysis was completed. The effect to the ballpark was found to be *De Minimis*. See Appendix A for the Section 4(f) *De Minimis* Finding.

#### **2.1.8.4 Avoidance, Minimization, and/or Mitigation Measures**

The proposed project is not expected to impact any cultural resources. However, the following minimization measures will be followed in the event of any unanticipated discoveries:

**CR-1:** If cultural resources are discovered at the job site, all work activities shall stop within a 60-foot radius of the discovery, the discovery area shall be protected, and the Resident Engineer shall be notified. Cultural resources shall not be moved or taken from the job site until Caltrans investigates and determines the significance of the find. Work activities shall not resume within the discovery area until Caltrans provides written notification authorizing work activities to resume.

**CR-2** **Human Remains.** If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the NAHC, who will designate the MLD. At this time, the Caltrans District 8 Environmental Branch Chief, Andrew Walters (909) 383-2647, will be contacted so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

## **2.2 Physical Environment**

### **2.2.1 Hydrology and Floodplains**

This section describes the regulatory setting associated with hydrology and floodplains, the affected environment, the environmental consequences on hydrology and floodplains that would result from the project, and the minimization and/or mitigation measures that would reduce any potential impact.

#### **2.2.1.1 Regulatory Setting**

EO 11988 (Floodplain Management) directs all federal agencies to refrain from conducting, supporting, or allowing actions in floodplains unless it is the only practicable alternative. FHWA requirements for compliance are outlined in 23 CFR 650 Subpart A.

To comply, the following must be analyzed:

- The practicability of alternatives to any longitudinal encroachments.
- Risks of the action.
- Impacts on natural and beneficial floodplain values.
- Support of incompatible floodplain development.
- Measures to minimize floodplain impacts and to preserve/restore any beneficial floodplain values affected by the project.

The base floodplain is defined as “the area subject to flooding by the flood or tide having a 1 percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

Floodplains are a natural feature of rivers that may also occur in portions of a watershed on land depressions or wetlands. They are the mostly flat land adjacent to the river and are formed due to the actions of a river. The base floodplain is defined as “the area subject to flooding by the flood or tide having a 1 percent chance of being exceeded in any given year.” An encroachment is defined as “an action within the limits of the base floodplain.”

In general, a floodplain cannot be altered in any way until it has been shown that alteration will pass the base flood without significant damage to either the floodplain or surrounding areas. No bridge abutment or embankment shall encroach on a regulatory floodway.

The Federal Emergency Management Agency (FEMA) designates Special Flood Hazard Areas according to zones. The base flood elevation (BFE) is the water surface elevation of the 1 percent annual chance of flood. The zones are described as:

**Zone A** – Corresponds to the 100-year floodplains that are determined in the Flood Insurance Study (FIS) by approximate methods. No BFEs or depths have been determined.

**Zone AE** – Corresponds to the areas of 100-year floodplains that are determined in the FIS by detailed methods. In most instances, BFEs have been derived from detailed hydraulic analyses and are shown within this zone.

**Zone AH** – Corresponds to the areas of 100-year shallow flooding with a constant water surface elevation. Flood depths are 1 to 3 feet (usually areas of ponding); BFEs are derived from detailed hydraulic analyses and are shown at selected intervals within this zone.

**Zone AO** – Corresponds to the areas of 100-year shallow flooding. Flood depths are 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities are also determined.

**Zone AR** – Depicts areas protected from flood hazards by flood control structures such as levees that are being restored.

**Zone X (dotted)** – Other flood areas. Areas of 0.2 percent annual chance flood; areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1 percent annual chance flood.

**Zone X** – Areas determined to be outside the 0.2 percent annual chance floodplain.

#### **2.2.1.2 Affected Environment**

This section is based on the *Floodplain Evaluation Report* (September 2015) and *Water Quality Technical Report* (June 2016).

The primary drainage that conveys stormwater in the project corridor is the West Cucamonga Channel. The West Cucamonga Channel traverses south through the project corridor before terminating at the Ely Percolation Basins, just north of SR-60. Flow from Ely Basin is conveyed to Cucamonga Creek. Cucamonga Creek is a concrete-lined channel that serves as the major drainage course within Ontario. It flows



south through the approximate center of the city, converges with Lower Deer Creek Channel at Chris Basin (a small retention basin), exits the city, and eventually discharges to the Prado Flood Control Basin in Riverside County. Once the water reaches Prado Basin, it is discharged through the outlet of Prado Dam into the Santa Ana River, which ultimately discharges into the Pacific Ocean near the Huntington Beach/Newport Beach city boundary (The Planning Center, 2009).

In accordance with FEMA Flood Insurance Rate Map (FIRM), the project is fully encompassed by the 100-year flood plain (Zone X), in which the West Cucamonga Channel has a 1 percent annual chance flood capacity throughout the project area.

### **2.2.1.3 Environmental Consequences**

An evaluation of potential hydrological and floodplain impacts associated with each alternative is presented below.

#### ***Permanent Impacts***

##### ***No Build Alternative***

Implementation of the No Build Alternative would not result in any floodplain encroachment.

##### ***Build Alternative (Proposed Project)***

The proposed Build Alternative improvements include roadway widening, grading, retaining walls, and culverts. There are two locations of floodplain encroachments where two existing culverts (12 feet by 6.5 feet and 12 feet by 8 feet) cross under Grove Avenue and G Street, respectively. At these two locations, the roadway widening would require covering portions of the West Cucamonga Channel, thereby extending the existing culverts.

Although the roadway widening associated with the Build Alternative would geometrically encroach on the West Cucamonga Channel's floodplain at the culvert crossings, it is not anticipated that the proposed work would alter the floodplain. The culvert crossings would only be extended to accommodate the roadway widening by a maximum of approximately 37 feet. Other than the culvert extensions, there would be no modifications to the existing channel, and the 100-year flood event would still be contained in the channel under the proposed conditions.

No natural or beneficial uses for this floodplain have been identified in the Santa Ana Regional Water Quality Control Board's (RWQCB) Basin Plan for the Santa Ana River Basin. As such, West Cucamonga Channel's only use is for drainage conveyance.

Because the proposed work is located on an existing roadway, a new roadway alignment is not a feasible alternative to floodplain encroachment. The only variable to the impacts is the degree of encroachment; therefore, during the final design and construction phases, disturbance to the floodplain shall be minimized where possible.

### ***Temporary Impacts***

#### ***No Build Alternative***

The No Build Alternative would not change the existing physical environment; therefore, the No Build Alternative would result in no temporary impacts to hydrology and floodplains.

#### ***Build Alternative (Proposed Project)***

During construction of the Build Alternative, temporary impacts to hydrology and floodplains are not anticipated with inclusion of the measures described below.

#### **2.2.1.4 Avoidance, Minimization, and/or Mitigation Measures**

The proposed project would be designed to minimize impacts, where possible, by limiting the grading and structural encroachments at designated floodplain and floodway areas. The following minimization measures would be incorporated into the design and construction phases to minimize potential floodplain impact:

- HYD-1:** Provide positive drainage during construction and refrain from filling designated floodplains. Construction site surface runoff will be channeled into existing drainage facilities so as to not cause water flow on neighboring properties. Offsite flows will be managed in a manner that will mimic the existing drainage network and will not inundate the roadway surface of any of the existing drainage systems.
- HYD-2:** Implement standard BMPs as identified in the City of Ontario's Water Quality Management Plan, including temporary construction site BMPs to address site soil stabilization and reduce deposition of sediments to receiving waters.
- HYD-3:** Include erosion control and water quality protection during construction at the West Cucamonga Channel. BMPs will be designed and implemented to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP). Typical measures that may be implemented include preservation of existing vegetation, use of soil binders or hydroseeding, and installation of silt fences or fiber rolls.

**HYD-4:** Contractor shall develop a contingency plan for unforeseen discovery of underground contaminants in the Stormwater Pollution Prevention Plan (SWPPP).

**HYD-5:** Limit construction activities between October and May to those actions that can adequately withstand high flows and entrainment of construction materials. The Contractor shall prepare a Rain Event Action Plan (REAP) and discuss high flows mitigation.

## **2.2.2 Water Quality and Stormwater Runoff**

This section describes the regulatory setting associated with water quality, the affected environment, the environmental consequences on water quality and stormwater runoff that would result from the proposed project, and the minimization and/or mitigation measures that would reduce any potential impact.

### **2.2.2.1 Regulatory Setting**

#### ***Federal Requirements: Clean Water Act***

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the U.S. from any point source<sup>4</sup> unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. RWQCBs administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the U.S. This permit program is administered by the United States Army Corps of Engineers (USACE).

The goal of the CWA is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

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<sup>4</sup> A point source is any discrete conveyance such as a pipe or a man-made ditch.

USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with United States Environmental Protection Agency's (EPA) Section 404 (b)(1) Guidelines (40 CFR Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by EPA in conjunction with USACE and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent<sup>5</sup> standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements (see 33 CFR 320.4). A discussion of the LEDPA determination, if any, for the document is included in Section 2.3.2, Wetlands and Other Waters.

### ***State Requirements: Porter-Cologne Water Quality Control Act***

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition

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<sup>5</sup> EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

is broader than the CWA definition of “pollutant.” Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

### ***State Water Resources Control Board and Regional Water Quality Control Boards***

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWQCBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

### ***National Pollution Discharge Elimination System Program***

#### ***Municipal Separate Storm Sewer Systems***

Section 402(p) of the CWA requires issuance of NPDES permits for five categories of stormwater discharges, including MS4s. An MS4 is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater.” The SWRCB has identified Caltrans as an owner/operator of an MS4 under federal regulations. Caltrans’ MS4 permit covers all Caltrans ROWs, properties, facilities, and activities in the state.

The SWRCB or the RWQCB issue NPDES permits for 5 years, and permit requirements remain active until a new permit has been adopted.

Caltrans' MS4 Permit, Order No. 2012-0011-DWQ (adopted on September 19, 2012, and effective on July 1, 2013), as amended by Order No. 2014-0006-EXEC (effective January 17, 2014), Order No. 2014-0077-DWQ (effective May 20, 2014) and Order No. 2015-0036-EXEC (conformed and effective April 7, 2015), has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the State to effectively control stormwater and non-stormwater discharges; and
3. Caltrans stormwater discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the maximum extent practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Storm Water Management Plan (SWMP) to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within Caltrans for implementing stormwater management procedures and practices, as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address stormwater runoff.

### ***Construction General Permit***

Construction General Permit, Order No. 2009-0009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order No. 2010-0014-DWQ (effective February 14, 2011) and Order No. 2012-0006-DWQ (effective on July 17, 2012), regulates stormwater discharges from construction sites that result in a Disturbed Soil Area (DSA) of 1 acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil

disturbance of at least 1 acre must comply with the provisions of the Construction General Permit. Construction activity that results in soil disturbances of less than 1 acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop SWPPPs; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and they are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory stormwater runoff pH and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective SWPPP. In accordance with Caltrans' SWMP and Standard Specifications, a Water Pollution Control Program (WPCP) is necessary for projects with DSA less than 1 acre.

**Local Agency Construction Activity Permitting.** The City is regulated under an Area Wide Municipal Urban Storm Water Runoff Permit (NPDES Order No. R8 2010-0036, NPDES No. CAS 618036) issued by the Santa Ana RWQCB. This permit sets out guidelines and regulates WDRs for the discharge of stormwater from areas of San Bernardino County. The principal permittee of this permit is the SBCFCD, and there are 17 other co-permittees, including the City. It is noted that the above permit expired on January 29, 2015; this permit has been extended. The SBCFCD is in the process of obtaining renewal of the County Municipal NPDES Stormwater Permit. On August 1, 2014, the SBCFCD submitted a Report of Waste Discharge on behalf of San Bernardino County and the 16 incorporated cities within San Bernardino County, including the City. The Report of Waste Discharge serves as the permit renewal application. The permit application is still in the permit renewal process. The Santa Ana RWQCB's Dewatering Permit Order is identified as R8-2015-0004 (NPDES NO. CAG998001). This permit covers the General WDRs for Discharges to Surface Water which Pose an Insignificant (*De Minimis*) Threat to Water Quality from dewatering activities.

**Section 401 Permitting.** Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will be in compliance with



state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as WDRs under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

**Section 1602 Streambed Alteration Agreement.** Section 1602 of the California Fish and Game Code (CFG Code) requires a Streambed Alteration Agreement for any alteration to the bank or bed of a stream or lake or for any activity that substantially diverts or obstructs the natural flow of any river, stream, or lake. Further coordination with the California Department of Fish and Wildlife (CDFW) regarding potential project impacts is required,

#### **2.2.2.2 Affected Environment**

Analysis in this section is based on the *Water Quality Technical Report* (June 2016) prepared for the project.

The project is located within the Santa Ana River hydrologic unit, and in the Chino Split hydrologic subarea (HSA) as identified in Table 2.2.2-1 by the Caltrans Water Quality Planning Tool (Caltrans, 2014). The Chino Split covers approximately 191,515 acres or approximately 300 square miles.

**Table 2.2.2-1. Grove Avenue Corridor Project  
Receiving Hydrologic Units Hydrologic Subareas**

<b>Hydrologic Unit</b>	<b>Hydrologic Area</b>	<b>Hydrologic Subarea #</b>	<b>Hydrologic Subarea Name</b>
Santa Ana River	Middle Santa Ana River	801.21	Chino (Split)

The project corridor is located in the Chino Creek watershed and the Lower Chino Creek subwatershed. The primary drainage that conveys stormwater in the project corridor is the West Cucamonga Channel. The West Cucamonga Channel is an engineered, concrete channel that traverses south through the project corridor before terminating at the Ely Percolation Basins, just north of SR-60. Flow from Ely Basin is

conveyed to Cucamonga Creek. Cucamonga Creek is a concrete-lined channel that serves as the major drainage course within Ontario. It flows south through the approximate center of the city, converges with Lower Deer Creek Channel at Chris Basin (a small retention basin), exits the city, and eventually discharges to the Prado Flood Control Basin in Riverside County. Once the water reaches Prado Basin, it is discharged through the outlet of Prado Dam into the Santa Ana River, which ultimately discharges into the Pacific Ocean near the Huntington Beach/Newport Beach city boundary (The Planning Center, 2009).

The Santa Ana RWQCB conducted a 6-year study (2006–2011) of the waterways within the Santa Ana River watershed (Surface Water Ambient Monitoring Program 2014). The purpose of the study was to determine the integrity of surface waters by sampling the biological (i.e., benthic macroinvertebrates), physical (i.e., in-stream habitat, surrounding riparian habitats), and chemical attributes. During the 2011 bioassessment sampling events, benthic macroinvertebrates were identified from 45 locations. Of the 45 locations, 2 are close to the Grove Avenue Corridor Project, as indicated in Table 2.2.2-2.

**Table 2.2.2-2. Santa Ana River Watershed Sampling Sites**

<b>SWAMP Code</b>	<b>Stream Name</b>	<b>Latitude NAD 83</b>	<b>Longitude NAD 83</b>	<b>Distance from Proposed Project</b>	<b>Elevation (meters)</b>	<b>Collection Date</b>
801RB8566	Cucamonga Creek	33.99743	-117.59924	6 miles southeast	216	June 15, 2011
801RB8197	Chino Creek	33.9827	-117.69921	8 miles southwest	179	July 11, 1011

Biological assessments provide a more familiar representation of the ecological health of a particular location. Locations can then be ranked by values and classified into qualitative categories of “very good,” “good,” “fair,” “poor,” and “very poor.” This system of ranking and categorizing biological conditions is referred to as an Index of Biotic Integrity (IBI). Water chemistry, IBI metrics, and the overall rating for the two locations within the Santa Ana River Watershed are provided in Appendix B of the Water Quality Technical Report. The overall rating for Cucamonga Creek Channel and Chino Creek was “poor.”

The drainage course of water from the proposed project corridor to offsite areas was used to determine what water bodies could potentially be impacted by the project. Table

2.2.2-3 summarizes these water bodies and lists the impairments and established TMDLs per the 2010 Integrated Report (CWA Section 303(d) List/305(b) Report) and the Caltrans Water Quality Planning Tool<sup>6</sup> (SWRCB, 2011).

**Table 2.2.2-3. Impaired Waters**

Water Body	Impairment	Size (miles)	TMDL Status
Cucamonga Creek Reach 1 - Confluence with Mill Creek to 23 <sup>rd</sup> Street in Upland	Cadmium	10	Required
	Coliform Bacteria	10	Being addressed by an EPA-approved TMDL
	Copper	10	Required
	Lead	10	Required
	Zinc	10	Required
Mill Creek (Prado Area)	Nutrients	1.6	Required
	Pathogens	1.6	Being addressed by an EPA-approved TMDL
	Total Suspended Solids	1.6	Required
Chino Creek 1A (Santa Ana River confluence with Mill Creek [Prado Area])	Nutrients	0.8	Required
	Pathogens	0.8	Being addressed by an EPA-approved TMDL
Santa Ana River, Reach 3 Prado Dam to Mission Boulevard in Riverside	Pathogens	26	Being addressed by an EPA-approved TMDL
	Copper	26	Required
	Lead	26	Required
Santa Ana River, Reach 2 17 <sup>th</sup> Street in Santa Ana to Prado Dam	Indicator Bacteria	20	Required

Ontario sits on the Chino Groundwater Basin and in the Santa Ana River hydrologic unit. The basin is bounded by the Rialto-Colton Fault on the northeast, the Jurupa Mountains and La Sierra Hills to the southeast, the Central Avenue Fault to the southwest, and the San Jose Fault and Red Hill Fault to the northwest. Ontario currently draws all of its groundwater supply from the Chino Basin. The primary water quality concerns for Ontario's groundwater wells are nitrate and perchlorate levels. Other contaminants of concern are volatile organic compounds (VOC) and total dissolved solids (TDS) (The Planning Center, 2009). There are known groundwater contamination plumes affecting Ontario's groundwater supply although none of them are located within the project corridor.

<sup>6</sup> <http://svctenvims.dot.ca.gov/wqpt/wqpt.aspx>.

The City of Ontario water supply is derived from a combination of local and imported water, obtained primarily from four sources: Ontario wells and treatment in the Chino Groundwater Basin; the Chino Desalter Authority wells and treatment in the Chino Groundwater Basin; treated State Water Project water from the Water Facilities Authority; and recycled water from the Inland Empire Utilities Agency, a member of the Metropolitan Water District.

Ontario has a rapidly expanding recycled water program and currently serves approximately 4,000 acre-feet per year of recycled water to more than 70 customers, including interim agricultural users in the area. The source for recycled water is locally reclaimed nonpotable wastewater provided by the wholesaler, Inland Empire Utilities Agency, which operates the regional wastewater treatment plants for the cities in the area and provides transmission back to Ontario.

Of the water quality impairments for receiving waters within the Grove Avenue Corridor, cadmium, copper, lead (Pb), zinc, and nutrients (e.g., nitrogen and phosphorus) are associated with roadway runoff and must therefore be considered when evaluating and implementing BMP techniques for utilization on the Grove Avenue Corridor Project.

### **2.2.2.3 Environmental Consequences**

An evaluation of potential water quality impacts associated with each alternative is presented below.

#### ***Permanent Impacts***

##### ***No Build Alternative***

Under the No Build Alternative, no changes to the existing condition would occur. As such, there would be no increase in runoff flow velocities, volumes, or peak flow rates; therefore, no adverse impacts to water quality would result from the No Build Alternative.

##### ***Build Alternative (Proposed Project)***

Based on the current level of design of the Build Alternative, there are no permanent impacts to jurisdictional features. As the design advances, the City would coordinate with resource agencies, including USACE, RWQCB, and CDFW, and keep Caltrans updated with the project status. Should final design of the Build Alternative result in impacts to jurisdictional features, the appropriate permits (i.e., Section 404 Permit from USACE, Section 401 Water Quality Certification from RWQCB, or Streambed

Alteration Agreement from CDFW) would be obtained with all minimization and/or mitigation measures identified as part of the permitting process implemented.

Construction of the Build Alternative would add 2.57 acres of additional impervious surface area, as shown in Table 2.2.2-4. The additional impervious surface area would not alter the existing drainage patterns or result in runoff that would exceed the existing stormwater drainage system capacity. Construction of the project and the increase in runoff would potentially cause or contribute to an alteration in water quality and have the potential to affect the beneficial use of receiving water bodies downstream of the project corridor.

It is not anticipated that the Build Alternative would cause a change to sedimentation in downstream receiving water bodies because the proposed project would result in a very minor increase in runoff compared to the entire hydrologic area. Design Principles, such as conservation of natural areas, minimization of disturbances to natural drainage, and use of landscaping to promote surface infiltration, would be implemented to the MEP once the project is complete.

The addition of impervious surfaces as a result of implementation of the Build Alternative would not interfere with groundwater recharge because the proposed project area is not located in an area used by local water districts for aquifer recharge. Recharge to the subbasins is predominantly accomplished at spreading grounds located outside of the proposed project corridor.

**Table 2.2.2-4. Comparison of Existing and Proposed Impervious Surface Area for the Build Alternative**

Existing Impervious Surface Area (acres)	Proposed Additional Impervious Surface Area (acres)	Total Impervious Surface Area (acres)
20.12	2.57	22.69

Source: Developed from the Water Quality Technical Report, 2016.

Table 2.2.2-5 summarizes the operation and maintenance (long-term) activities that were evaluated for their potential impact on downstream water bodies for the Build Alternative. No unique impacts were identified for the Build Alternative.

**Table 2.2.2-5. Summary of Operation/Maintenance (Long-Term) Impacts to the Aquatic Environment**

Summary of Impacts
<b>Physical/Chemical Characteristics</b>
Proposed slopes may be a source of sedimentation in downstream substrates.
Pollutants associated with the new roadway may create turbidity in downstream receiving water bodies.
Pollutants, such as oil and grease and other pollutants associated with operation of the proposed project, may impair downstream receiving water bodies.
Nutrients associated with chemicals used in roadway landscaping may cause oxygen depletion and increased temperatures in the aquatic environment.
<b>Biological Characteristics</b>
Sedimentation from natural erosion to any special aquatic sites located downstream from the project corridor.
Increase in stormwater discharge to the aquatic organisms' habitat downstream from the project and higher concentrations of pollutants of concern because of the increase in impervious surface area.
<b>Human Use Characteristics</b>
No long-term impacts to the human use characteristics of the aquatic environment are anticipated.

The proposed project is not sited in a location used by a local water district for existing or potential water supplies or water conservation; therefore, no changes to existing water supplies, potential water supplies, or water conservation are anticipated.

### ***Temporary Impacts***

#### ***No Build Alternative***

The No Build Alternative would not change the existing physical environment; therefore, the No Build Alternative would result in no temporary water quality impacts.

#### ***Build Alternative (Proposed Project)***

Construction of the proposed corridor has the potential to contribute pollutants to offsite receiving water bodies. These pollutants include sediment and silt associated with soil disturbance because of construction of the proposed corridor and chemical pollutants associated with the construction materials that are brought onto the project site. Table 2.2.2-6 summarizes the construction (short-term) activities that were evaluated for their potential impact on downstream water bodies for the Build Alternative. No unique impacts were identified for the Build Alternative.

**Table 2.2.2-6. Summary of Construction (Short-Term) Impacts  
to the Aquatic Environment**

Summary of Impacts
<b>Physical/Chemical Characteristics</b>
Excavation and trenching, soil compaction and moving, cut and fill activities, and grading could contribute sediment to downstream receiving water bodies.
Construction materials, waste handling, and the use of construction equipment could also result in stormwater contamination and affect water quality.
Chemical contaminants, such as oils, fuels, paints, solvents, nutrients, trace metals, and hydrocarbons, can attach to sediment and be transported to downstream drainages and ultimately into collecting waterways contributing to the chemical degradation of water quality.
<b>Biological Characteristics</b>
Erosion and sedimentation could affect biological characteristics of the aquatic environment in downstream water resources.
<b>Human Use Characteristics</b>
Service vehicle access.

Construction materials, waste handling, and the use of construction equipment could also result in stormwater contamination and affect water quality. Spills or leaks from heavy equipment and machinery can result in oil and grease contamination. Operation of vehicles during construction could also result in tracking of dust and debris. Staging areas can also be sources of pollutants because of the use of paints, solvents, cleaning agents, and materials containing metals that are used during construction.

A total of 13.60 acres of temporary DSA would result from construction of the Build Alternative. Implementation of the SWPPP is expected to attenuate and minimize the amount of sediments released from the construction site. Short-term impacts caused by the Build Alternative include potential increases in sediment loads because of removal of existing groundcover and disturbance of soil during grading. The temporary residual increase in sediment loads from construction areas is unlikely to alter the hydrologic response (i.e., erosion and deposition) downstream in the HSA and, subsequently, the sediment processes in these areas would be reduced because all DSAs would be stabilized before completion of construction with permanent landscaping and/or permanent erosion control measures.

During the construction phase, Construction Site BMPs would be implemented to treat stormwater and nonstormwater discharges to the MEP; therefore, runoff from the construction area would not likely create any surface water quality impacts.

#### 2.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

Project design features for the selected alternative would include Construction Site, Source Control, Design Principles, and BMP Techniques. These BMPs would be implemented to improve stormwater quality during construction and operation of the transportation facility to minimize potential stormwater and non-stormwater impacts to water quality. The County of San Bernardino's Transportation Project BMP Guidance describes how the City would comply with their MS4 NPDES Permit. The BMPs are organized into four categories, as shown in Table 2.2.2-7.

**Table 2.2.2-7. Transportation Project BMP Categories**

<b>BMP</b>	<b>Description</b>
Construction Site	Temporary soil stabilization and sediment control, non-stormwater management, and waste management.
Design Principles	Conservation of natural areas, minimization of impervious surface areas, designing pervious areas to receive roadway runoff and use of landscaping to promote infiltration.
Techniques	Permanent treatment devices and minimizing street width.
Source Control	Includes nonstructural (e.g., litter pickup, landscape management, street sweeping) and structural (e.g., storm drain stenciling, efficient irrigation slope and channel protection) BMPs.

The Grove Avenue Corridor Project would require the following minimization measures to minimize potential water quality and hydrological impacts associated with implementation of the project.

**WQ-1: Implement Temporary Construction BMPs.** The project will be required to conform to the requirements of the NPDES Permit for Construction Activities, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002.

**WQ-2: Prepare and Implement an SWPPP.** The Contractor will be required to develop an acceptable SWPPP. The SWPPP shall contain BMPs that have demonstrated effectiveness at reducing stormwater pollution. The SWPPP shall address all construction-related activities, equipment, and materials that have the potential to affect water quality. All Construction Site BMPs will be installed, maintained, and inspected to control and minimize the impacts of construction-related pollutants. The SWPPP shall include BMPs to control pollutants, sediment from erosion, stormwater runoff, and other construction-related impacts. In addition, the SWPPP shall include implementation of specific stormwater



effluent monitoring requirements based on the project's risk level to ensure that the implemented BMPs are effective in preventing discharges from exceeding any of the water quality standards.

**WQ-3: Incorporate Design Principles into Final Roadway Design.** Design Principles are permanent measures to minimize pollution discharges by retaining source materials and stabilizing soils. The three objectives associated with Design Principle BMPs include maximizing vegetated surfaces; preventing downstream erosion; and stabilizing soil areas. These design objectives will be applied to the entire project.

### **2.2.3 Geology/Soils/Seismic/Topography**

This section describes the regulatory setting, affected environment, environmental consequences on geological resources that would result from the proposed project, and minimization and/or mitigation measures that would reduce any potential impact. This section of the environmental document references findings from the Caltrans *Geotechnical Memorandum* (September 2015).

#### **2.2.3.1 Regulatory Setting**

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects “outstanding examples of major geological features.” Topographic and geologic features are also protected under CEQA.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Caltrans’ Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects. Structures are designed using the Caltrans’ Seismic Design Criteria (SDC). The SDC provides the minimum seismic requirements for highway bridges designed in California. A bridge’s category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, please see the Caltrans Division of Engineering Services, Office of Earthquake Engineering, SDC.

#### **2.2.3.2 Affected Environment *Topography***

The natural site topography is relatively flat along the corridor, dropping from an elevation of near 1,070 feet on the north end of the corridor to approximately 960 feet on the south end of the corridor. There are no natural creeks, streams, or rivers within the site. There is a channelized storm drainage U-channel that crosses Grove Avenue south of 4<sup>th</sup> Street, goes into a buried box culvert until East I Street, where it again becomes a U-shaped open channel, runs along the east side of the Grove Avenue corridor until south of East G Street, where it diverges from Grove Avenue and heads southeast. The area between Holt Boulevard was excavated a maximum of approximately 20 feet below surrounding grades to create a grade separation at the SPRR, which creates a low-lying basin in this area.

### ***Geology/Soils***

The Grove Avenue Corridor Project is located at the northern end of the Peninsular Ranges geomorphic province of southern California. It is situated within the northern portion of the Perris Block, between the Elsinore and San Jacinto Fault Zones, and north of the Santa Ana River. In the project area, the basement rock of the Perris Block has been buried by the deep alluvial fan sediments from the San Gabriel Mountains of the Transverse Ranges.

Based on the Geologic Map of the San Bernardino 30' x 60' Quadrangle (Figure 2.2.3-1), the surficial soils consist of young alluvial fan deposits derived from the San Gabriel Mountains in the Transverse Ranges to the north. Cucamonga Creek and other washes have contributed to the formation of the deep alluvial fan complexes along the steep mountain front. The project area is mapped as being completely underlain by middle Holocene young alluvial fan deposits. Regionally, these deposits are generally poorly consolidated, undissected to slightly dissected, boulder, cobble, gravel, sand and silt deposits, and are generally underlain by older more consolidated early Holocene and Pleistocene alluvial fan soils. Holocene alluvium in the area is up to 150 feet in thickness, underlain by 600 to 700 feet of Pleistocene alluvium. Due to natural hydraulic sorting, the alluvial fan grain size is coarsest near the mountains (containing boulders and cobbles), becoming finer farther down the fan. Within the project area, soils are mixtures of primarily sand, with a lesser percentage of silt and gravel.

### ***Groundwater***

The project site overlies the Chino Groundwater Basin. The groundwater within this managed basin is relatively deep. Current groundwater levels at the Grove Avenue Corridor Project site are at an elevation of approximately 615 to 625 feet, or more than 300 feet below current site grades. No groundwater was encountered in any of the previous borings drilled to depths of up to 30 feet below the ground surface (bgs). No springs, artesian conditions, or groundwater barriers are known to be present at the site. No known perched groundwater is present, but as with any site, localized perched water may be present due to man-made sources.

### ***Faulting and Seismicity***

The site is not located in an Alquist-Priolo Fault Special Studies Zone, it is not within 1,000 feet of any unzoned fault, and no faults considered capable of surface rupture are mapped at the site of projecting towards the site.

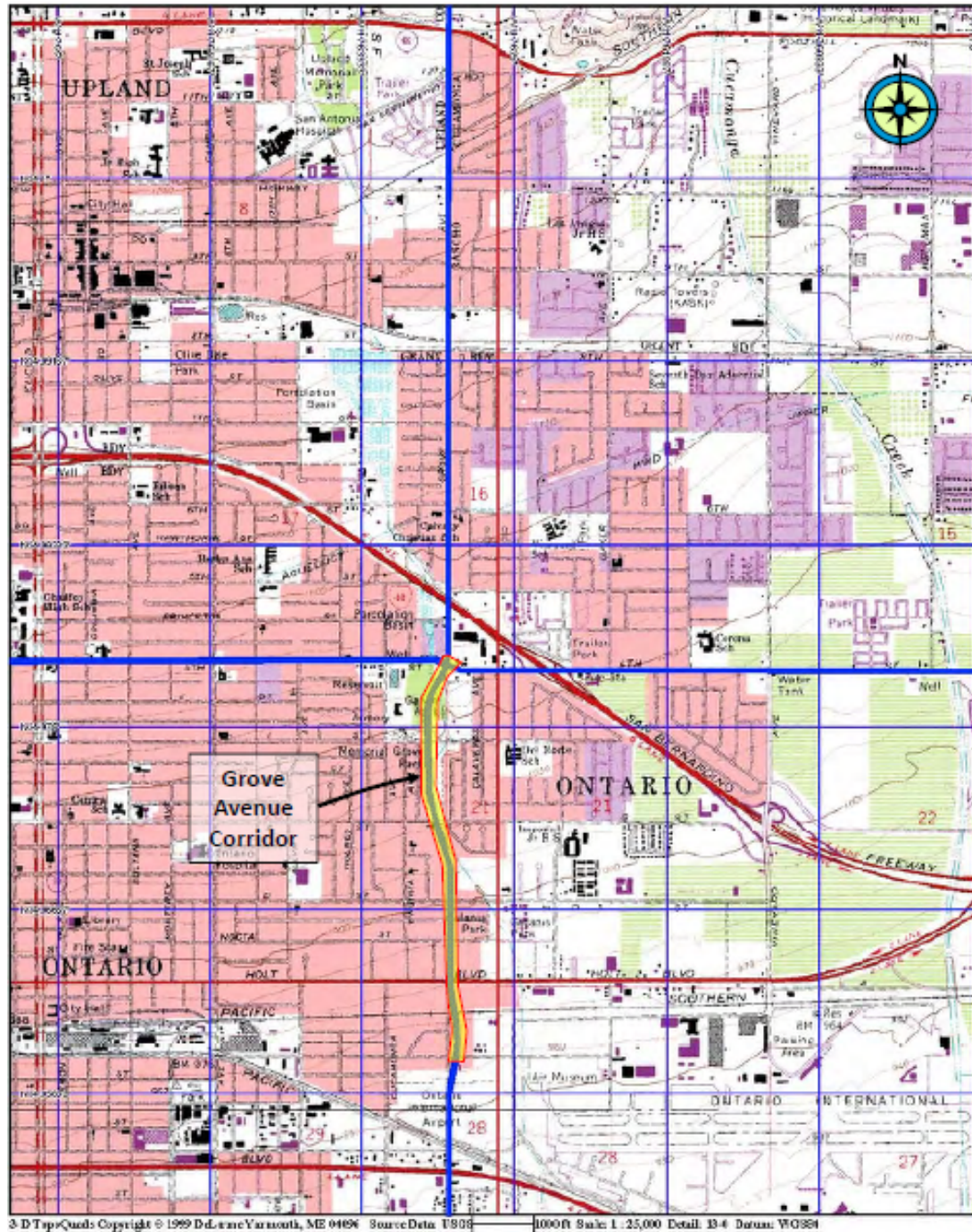


Figure 2.2.3-1. Topographic Map Quadrangle

However, the site is located within a seismically active region within the zone of influence of the highly active strike-slip faults of the Elsinore, San Jacinto, and San Andreas Fault Zones. Many other less significant strike-slip and reverse faults also contribute to the seismic risk at the site. Based on an estimated shear wave velocity of 300 m/s, the preliminary Peak Ground Acceleration at the site is estimated at 0.68g, with a probabilistic moment magnitude of 6.8.

### **2.2.3.3 Environmental Consequences**

An evaluation of potential geology and seismic-related impacts associated with each alternative is presented below.

#### ***No Build Alternative***

Under the No Build Alternative, there would be no change to the existing corridor, posing no changes to the existing environment and requiring no disturbance of soils; therefore, there would be no impact to geologic resources.

#### ***Build Alternative (Proposed Project)***

The project area generally has a low to negligible potential for geologic hazards such as landslides, expansive soil, collapsible soil, tsunamis, seismic slope instability, and subsidence due to its relatively flat topography, distance from the ocean, and presence of numerous structures. Fault rupture potential is remote due to distance from earthquake faults, and the risk of secondary seismic hazards, such as liquefaction and earthquake-induced landslide, is generally low as Grove Avenue is located outside designated earthquake zones of required investigations and groundwater is estimated at 375 to 475 feet below the ground surface. The primary seismic hazard at the site is strong shaking.

#### ***Seismicity***

Although the proposed project site is located in seismically active southern California, it is within an existing transportation corridor. The project would be designed to meet the City's design standards to minimize geologic and seismic hazards. No structures would be constructed that would increase the current risk of loss, injury, or death as a result of ground shaking or seismically induced effects. The proposed project would not increase the risk of exposing people or structures to potential adverse effects because of seismic activities or seismic-related ground failure beyond the existing level already present with the Grove Avenue configuration.

#### **2.2.3.4 Avoidance, Minimization, and/or Mitigation Measures**

All project components will be designed in accordance with standard engineering practices and Caltrans' Standard Specifications. Because no substantial adverse effects under NEPA or significant impacts under CEQA would occur related to geology, soils, topography and seismicity, no avoidance, minimization, and/or mitigation measures are required.



## **2.2.4 Paleontology**

This section describes the regulatory setting, affected environment, environmental consequences on paleontological resources that would result from the proposed project, and minimization and/or mitigation measures that would reduce any potential impact.

### **2.2.4.1 Regulatory Setting**

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. Many federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized or funded projects. The following laws and regulations are applicable to this project:

- Antiquities Act of 1906 (16 U.S.C. 431-433) prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the department of government having jurisdiction over the land;
- 23 U.S.C. 1.9(a) requires that the use of federal-aid funds must be in conformity with federal and state law;
- Federal-Aid Highway Act of 1960 (23 U.S.C. 305) authorizes funds be appropriated and used for archaeological and paleontological salvage as necessary by the highway department of any state, in compliance with 16 U.S.C. 431-433;
- Native American Historic Resource Protection Act, California PRC 5097-5097.993; and
- San Bernardino County Development Code Section 82.20.040.

Under California law, paleontological resources are protected by CEQA.

### **2.2.4.2 Affected Environment**

The information from this section was synthesized from the combined *Paleontological Identification Report and Paleontological Evaluation Report* prepared for the project (March 2017).

The Grove Avenue Corridor Project is located in one of the most tectonically active regions of North America. To the northeast of the project corridor, the San Andreas Fault Zone travels up Cajon Pass where it forms the boundary between the Pacific Plate and the North American Plate. The Transverse Ranges are a result of these two plates grinding past each other and “catching” along the bend in the San Andreas Fault. The Pacific Plate is composed of numerous blocks that can move independently.

The Transverse Range Province is an east-west trending series of steep mountain ranges and valleys aligned obliquely to the normal northwest trend of coastal California, hence the name “Transverse.” The province extends offshore to include San Miguel, Santa Rosa, and Santa Cruz islands. Its eastern extension, the San Bernardino Mountains, has been displaced to the south along the San Andreas Fault. Intense north-south compression is squeezing the Transverse Ranges, and as a result, this is one of the most rapidly rising regions of the earth.

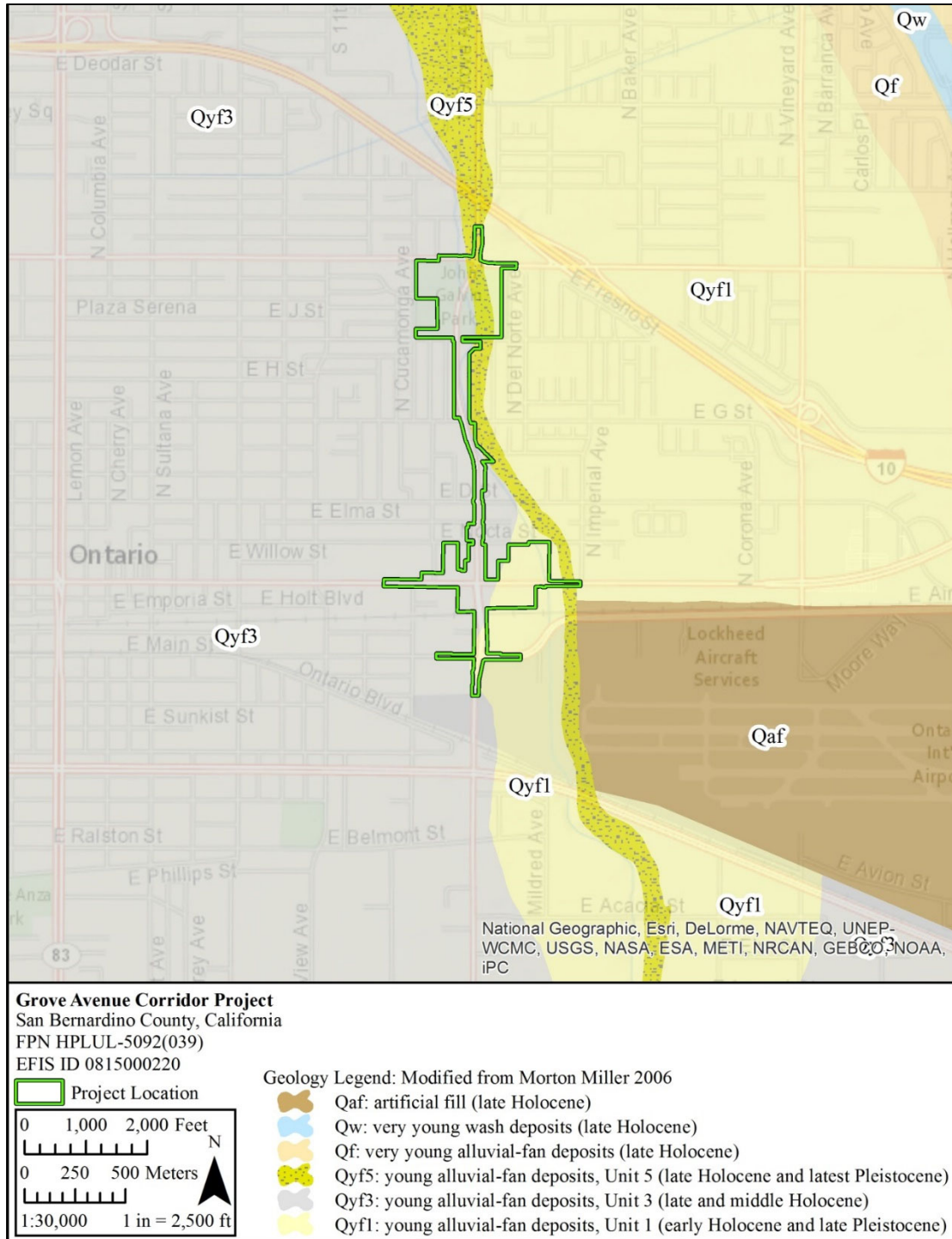
The project area is mapped as various types of Quaternary alluvial fan deposits. These deposits are between early Pleistocene and latest Holocene in age (less than 2.6 million years old).

Figure 2.2.4-1 shows the geological composition of the project area. Units Qyf 1, 3, and 5 are late Pleistocene to late Holocene alluvial fan deposits that are less than 126,000 years old and consist of unconsolidated to moderately consolidated silts, sands, and conglomerates eroded from the highlands. Clasts are coarsest adjacent to the highlands and fine away from them. Surfaces are slightly to moderately dissected by more recent erosional activities. All young alluvial fan deposits in the area are very similar in their compositions.

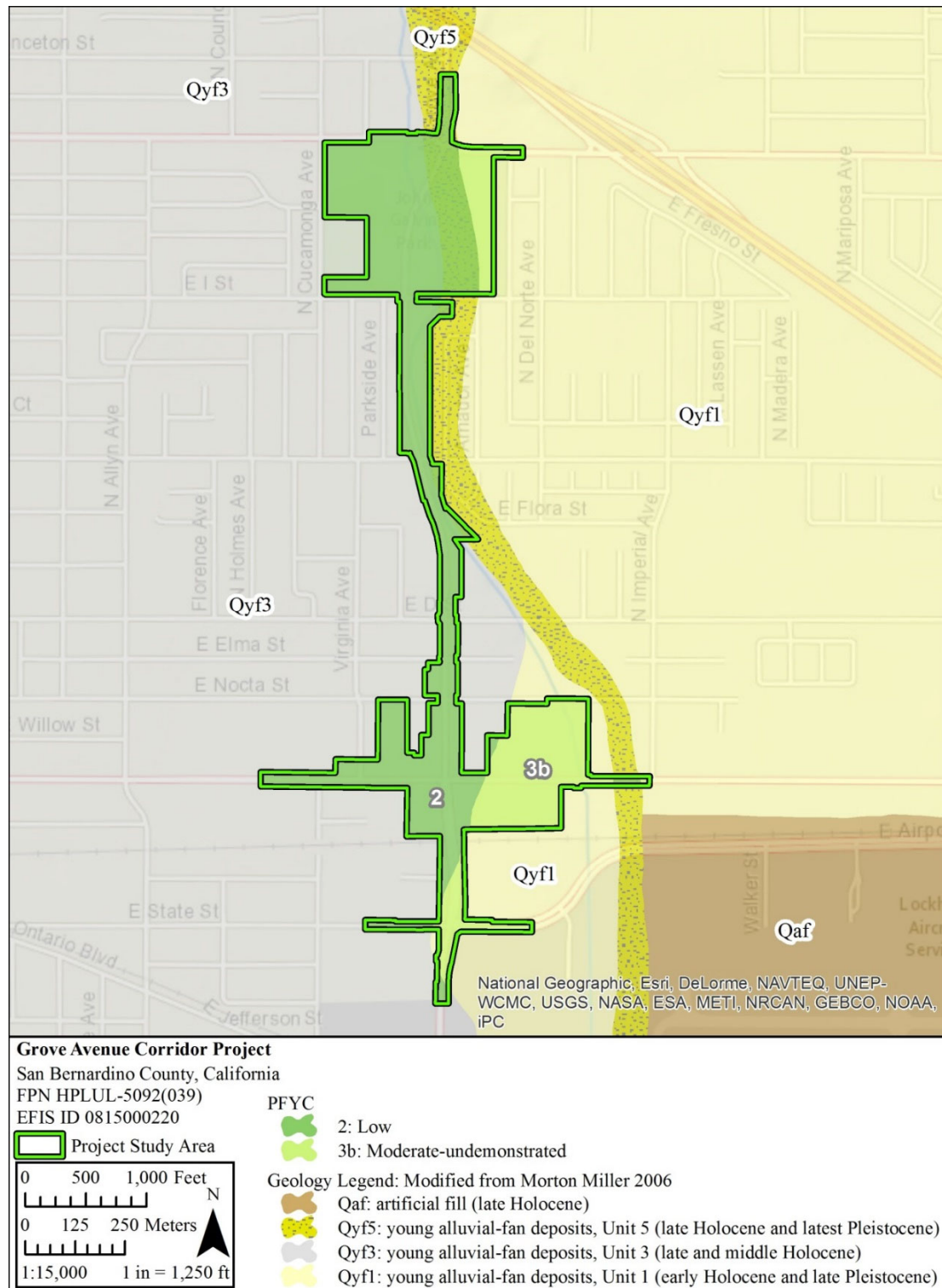
A review of records at the San Bernardino County Museum (SBCM) and in published materials yielded no fossil records known from the deposits within the project area. However, in at least eight localities between 2.5 and 8 miles from the APE, extinct animals have been recovered in the Quaternary older alluvial deposits, including ground sloth, mammoth, horse, bison, and camel. Other localities in similar sediments in San Bernardino and Riverside counties have also produced ground sloths, short-faced bears, dire wolves, and horses.

Only the oldest Young alluvial fan deposit (Qyf1) has the potential for fossils near the surface. Based on other finds in the area, the Pleistocene portion of this unit is assigned moderate sensitivity, while all other units are too young to contain fossils; however, they do overlie older deposits that are fossiliferous, and fossils may be impacted if the depths of the cuts extend more than 5 feet below the original ground surface. Figure 2.2.4-2 displays the paleontological sensitive areas in the proposed project area.





**Figure 2.2.4-1. Geology Map**



**Figure 2.2.4-2. Paleontological Sensitivity Map**

### 2.2.4.3 Environmental Consequences

Paleontological resources are considered significant if they provide new data on fossil animals, distribution, evolution, or other scientifically important information as previously stated. Caltrans uses a tripartite scale to characterize paleontological sensitivity:

- **High Potential:** Rock units that, based on previous studies, contain or are likely to contain significant vertebrate, significant invertebrate, or significant plant fossils. These units include sedimentary formations that contain significant nonrenewable resources anywhere within the geographic extent.
- **Low Potential:** Rock units that are not known to have produced significant fossils in the past but possess a potential to contain fossils or those that yield common fossil invertebrates.
- **No Potential:** Rock units with no potential to contain fossils. This includes most rocks of igneous origin or metamorphosed transformation.

A multilevel ranking system was developed by professional resource managers as a more practical tool, the Potential Fossil Yield Classification (PFYC) system (BLM, 2007). Using the PFYC system, geologic units are classified based on the relative abundance of vertebrate fossils or scientifically significant invertebrate or plant fossils and their sensitivity to adverse impacts. This ranking is not intended to be applied to specific paleontological localities or small areas within units. Although significant fossil localities may occasionally occur in a geologic unit, a few widely scattered important fossils or localities do not necessarily indicate a higher PFYC value; instead, the relative abundance of fossil localities provides the major determinant for the value assignment.

Only the oldest Young alluvial fan deposit (Unit 1) has the potential for fossils near the surface. Based on other finds in the area, the Pleistocene portion of this unit is assigned a PFYC level of 3b, moderate – unknown. All other units are too young to contain fossils and are assigned a PFYC level of 2. However, they do overlie older deposits that are fossiliferous, and fossils may be impacted if the depths of the cuts extend to more than 5 feet below the original ground surface (see Table 2.2.4-1).

**Table 2.2.4-1. Paleontological Sensitivity Rankings**

<b>PFYC Rankings</b>	<b>5: Very High</b>	<b>4: High</b>	<b>3a: Moderate- Patchy</b>	<b>3b: Moderate Undemonstrated</b>	<b>2: Low</b>	<b>1: Very Low</b>
Rock Units						
Young alluvial fan deposit (Qyf <sub>5</sub> )					X <sup>1</sup>	
Young alluvial fan deposit (Qyf <sub>3</sub> )					X <sup>1</sup>	
Young alluvial fan deposit (Qyf <sub>1</sub> )				X		

### ***No Build Alternative***

The No Build Alternative would have no surface or subsurface impacts; therefore, it would not create adverse impacts to potential paleontological resources.

### ***Build Alternative (Proposed Project)***

The Build Alternative has the potential to impact significant paleontological resources during construction. Depth of construction would typically be 3 to 5 feet for the widening of Grove Avenue. The segment of ROW where Grove Avenue passes below the SPRR line has the highest potential for encountering fossil resources during ground disturbances. In this area, the roadway is depressed to approximately 20 feet deep through the deepest portion immediately under the SPRR line. Excavations deeper than 5 feet below the original ground surface have the potential to impact fossils in the Quaternary old alluvial deposits because extinct Ice Age animal fossils have previously been recovered at shallow depths in the project vicinity. Paleontological monitoring is needed for all excavations greater than 10 feet deep in sediments mapped as Holocene at the surface and for all excavations greater than 5 feet deep in sediments mapped as Pleistocene at the surface. Drilling with augers smaller than 3 feet in diameter are exempt from monitoring because recovered fossil fragments would not meet significance criteria.

#### **2.2.4.4 Avoidance, Minimization, and/or Mitigation Measures**

The following construction specifications would be implemented as a minimization measure to ensure there are no impacts to paleontological resources:

- P-1:** Develop and implement a Paleontological Monitoring Plan (PMP), with monitoring in excavations more than 10 feet deep for sediments mapped as Holocene at the surface and more than 5 feet deep for excavations mapped as Pleistocene at the surface. The PMP will guide and facilitate

the identification and treatment of paleontological resources, if any are found, during project construction to reduce adverse effects on significant resources. The PMP will summarize identified paleontologically sensitive areas within the APE, the organization and responsibilities of the paleontological team, the responsibilities of other parties, and the treatment and communications procedures to be implemented if paleontological resources are encountered during the project.

## **2.2.5 Hazardous Waste/Materials**

This section describes the regulatory setting associated with hazardous waste and materials, the affected environment, the environmental consequences related to hazardous waste and materials that would result from the proposed project, and the minimization and/or mitigation measures that would reduce any potential impact. Information in this section is from the *Initial Site Assessment* (September 2015) prepared for the project.

### **2.2.5.1 Regulatory Setting**

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage, and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as “Superfund,” is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- CWA
- Federal Clean Air Act (FCAA)
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

Section 121(d) of CERCLA requires that remedial action plans include consideration of more stringent state environmental “Applicable or Relevant and Appropriate Requirements” (ARARs). The 1990 National Oil and Hazardous Substances Pollution Contingency Plan (NCP) also requires compliance with ARARs during remedial actions and during removal actions to the extent practicable. As a result, State laws pertaining to hazardous waste management and cleanup of contamination are also pertinent.

In addition to the acts listed above, EO 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material are vital if it is found, disturbed, or generated during project construction.

#### **2.2.5.2 Affected Environment**

Information in this section is from the *Initial Site Assessment* (September 2015) prepared for the project.

The scope of the Initial Site Assessment included a review of reasonably ascertainable environmental regulatory agency databases to identify known or suspected environmental concerns or Recognized Environmental Conditions (RECs) that may be associated with the project. A search of readily available environmental records was obtained from Environmental Data Resources, Inc. (EDR). The purpose of the regulatory database report review was to evaluate to the extent possible whether activities, processes, operations, or actions in the project corridor, adjoining properties, and nearby locations have the potential to adversely impact the environmental condition of the project area, are suspected sources of environmental concern, or are present RECs for the site. Available historical information was reviewed to ascertain the historical uses of the project corridor and the adjoining properties. Review references primarily were Sanborn insurance maps, historic aerial photographs, topographic maps, building department records, and oil exploration maps. Online records maintained by California state agencies for all addresses and parcels associated

with the project area were reviewed. In addition, an interview was conducted with Mr. Jay Bautista, Principal Engineer with the City of Ontario in May 2015.

The scope of this assessment is interpreted as limited because owner interviews were not conducted for acquisition parcels, onsite reconnaissance was not conducted for acquisition parcels, and no environmental sampling of media of concern (e.g., soil, paint) is conducted as part of an Initial Site Assessment. It was also not within the scope of the assessment to address issues not included in ASTM 1527-13 (e.g., radon, lead in drinking water, naturally occurring hazardous materials). Furthermore, it is not the purpose of the site assessment to determine the degree or extent of contamination, if any, at the project location.

The proposed project is located in Ontario in San Bernardino County, California. The project corridor consists of City ROW along portions of Grove Avenue and Holt Boulevard. Adjacent properties include residential, commercial, industrial, and parkland uses.

Visual reconnaissance of the project area found that all properties adjacent to the project corridor were well maintained and did not appear to be of environmental concern. There was no evidence of storage tanks, drums, hazardous substances or petroleum products, unidentified substance containers, odors, pools of liquid, or any other RECs. Utility poles and overhead transformers are located within the corridor, and these features are considered environmental areas of concern (AOC) that may require further investigation during construction if necessary.

The ISA identified the following two AOCs in City ROW:

**Grove Avenue and Holt Boulevard:** Utility poles exist along Grove Avenue and Holt Boulevard that may require removal in support of the project. The poles consist of creosote-treated wood and are considered AOCs. If removed during the project, the poles should be managed as treated wood waste (TWW) in accordance with the Department of Toxic Substances Control (DTSC) Alternative Management Standards for TWW.

**Grove Avenue:** Overhead transformers appear to be mounted on multiple utility poles along Grove Avenue. Historically, pole-mounted transformers have contained polychlorinated biphenyls (PCBs), which would need to be profiled and managed appropriately, if present.



The ISA identified the following one AOC, one historic recognized environmental condition (HREC), and one REC in association with the acquisition properties:

**Residential Structures:** Multiple residential structures would be removed in support of the project. Depending on the age of the structures, they may contain asbestos-containing materials (ACM) and lead-based paint (LBP). The presence of these materials would need to be investigated prior to removal of the structures to comply with environmental and worker safety regulatory requirements for ACM and LBP. Residential structures are considered an AOC.

**1194 E. Holt Boulevard:** The partial acquisition property located at 1194 E. Holt Boulevard is listed as a leaking underground storage tank (LUST) Cleanup Site. The cleanup status is shown as “Completed – Case Closed” as of October 2000. The San Bernardino Case Closure Summary reports that eight 10,000-gallon tanks once operated on the property. Petroleum hydrocarbons as gasoline and diesel, as well as benzene, toluene, ethyl benzene, and xylenes (BTEX), were detected in soil at the property. Although it is reported that the contaminated soil was removed from the property, the potential for residual contamination exists. 1194 E. Holt Boulevard is considered an HREC.

**1111 E. Holt Boulevard:** Illegal disposal of hazardous liquid waste to soil is documented by the San Bernardino County Fire Department for this property. The precise location where these illicit activities occurred is unknown; however, residual contamination likely still exists in the soil on this property. 1111 E. Holt Boulevard is considered an REC.

On May 14, 2015, an interview was conducted with Mr. Jay Bautista, Principal Engineer with the City of Ontario. The interview was conducted to satisfy the Initial Site Assessment requirement for an interview with a local government official. The interview was conducted to obtain information regarding the environmental history and current conditions of the site and to evaluate the potential presence of hazardous substances and petroleum products on the site. The Initial Site Assessment Interview Checklist was used in accordance with the Caltrans Guidance to conduct the interview. Mr. Bautista was not aware of any environmental conditions at the site, including any hazardous substances and petroleum products.

### **2.2.5.3 Environmental Consequences**

An evaluation of potential hazardous waste impacts associated with each alternative is presented below.

As previously discussed, three AOCs, one HREC, and one REC that may warrant additional investigation or BMPs during construction were identified within the project area.

### ***No Build Alternative***

The No Build Alternative would have no surface or subsurface impacts; therefore, it would not create adverse impacts associated with hazardous waste or materials.

### ***Build Alternative (Proposed Project)***

The Build Alternative may require the removal of utility poles along Grove Avenue and Holt Boulevard. The poles consist of creosote-treated wood and are considered AOCs. If removed, the poles should be managed as TWW in accordance with the DTSC Alternative Management Standards for TWW. In addition, several utility poles along Grove Avenue have overhead transformers mounted on them. Historically, pole-mounted transformers have contained PCBs, which need to be profiled and managed appropriately, if present.

The Build Alternative would require the removal of multiple residential structures and, depending on the structures' age, they may contain ACM and LBP. The presence of these materials would need to be investigated prior to removal of the structures to comply with environmental and worker safety regulatory requirements for ACM and LBP.

Additionally, two properties identified for acquisition present potential hazardous waste issues:

- 1194 E. Holt Boulevard: The partial acquisition property located at 1194 E. Holt Boulevard is listed as a LUST Cleanup Site. The cleanup status is shown as "Completed – Case Closed" as of October 2000. The San Bernardino Case Closure Summary reports that eight 10,000-gallon tanks once operated on the property. Total petroleum hydrocarbons (TPH) as gasoline and diesel and BTEX were detected in soil at the property. Although it has been reported that the contaminated soil was removed from the property, the potential for residual contamination exists. 1194 E. Holt Boulevard is considered an HREC.
- 1111 E. Holt Boulevard: Illegal disposal of hazardous liquid waste to soil is documented by the San Bernardino County Fire Department for this property. The precise location where these illicit activities occurred is unknown; however, residual contamination likely still exists in the soil on this property. 1111 E. Holt Boulevard is considered an REC.

The proposed project would not create a significant hazard to the public or environment through transport, use, or disposal of hazardous materials because the project is not expected to produce a large amount of hazardous waste, and BMPs and industry standards would be utilized while handling and transporting any project-related hazardous materials. In addition, project activities, especially those that are identified as being near potential hazardous waste concerns, are not located near schools or airstrips. Lastly, there is no potential for the project to interfere with an adopted emergency response or evacuation plan, and there are no wildlands in the project vicinity.

#### **2.2.5.4 Avoidance, Minimization, and/or Mitigation Measures**

Although it has not been proven that hazardous waste may exist on the aforementioned properties, the following minimization measure is used to address the potential adverse hazardous waste impacts to the project area.

**HW-1:** Prior to property acquisition, limited soil investigations at 1194 E. Holt Boulevard and 1111 E. Holt Boulevard will be performed to determine the presence of compromised soils. If any compromised soils are present, they shall be removed and disposed of per regulatory requirements.

### **2.2.6 Air Quality**

This section evaluates potential air quality impacts related to construction and operational activities associated with the project by determining whether the project would:

- Exceed established construction emission thresholds of significance;
- Cause a carbon monoxide (CO) or particulate matter (PM) hot spot;
- Violate any ambient air quality standard, contribute substantially to an existing or projected violation, or expose sensitive receptors to substantial pollution concentrations; or
- Have a significant effect on the environment from a cumulative standpoint.

This section provides information to make a conformity determination on a regional and project-level basis.

#### **2.2.6.1 Regulatory Setting**

The FCAA, as amended, is the primary federal law that governs air quality, while the California Clean Air Act (CCAA) is its companion state law. These laws, and related regulations by EPA and the California Air Resources Board (ARB), set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (NAAQS). NAAQS and State ambient air quality standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: CO, nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), PM—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM<sub>10</sub>) and particles of 2.5 micrometers and smaller (PM<sub>2.5</sub>)—and sulfur dioxide (SO<sub>2</sub>). In addition, national and State standards exist for Pb, and State standards exist for visibility reducing particles, sulfates, hydrogen sulfide (H<sub>2</sub>S), and vinyl chloride. The NAAQS and State standards are set at levels that protect public health with a margin of safety and are subject to periodic review and revision. Both State and federal regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under NEPA. In addition to this environmental analysis, a parallel “Conformity” requirement under the FCAA also applies.

### **Conformity**

The conformity requirement is based on FCAA Section 176(c), which prohibits USDOT and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan (SIP) for attaining the NAAQS. “Transportation Conformity” applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and “maintenance” (former nonattainment) areas for the NAAQS, and only for the specific NAAQS that are or were violated. EPA regulations at 40 CFR 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for NAAQS and do not apply at all for State standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the NAAQS for CO, NO<sub>2</sub>, O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and in some areas (although not in California), SO<sub>2</sub>. California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except SO<sub>2</sub>, and also has a nonattainment area for Pb; however, Pb is not currently required by the FCAA to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of RTPs and Federal Transportation Improvement Programs (FTIPs) that include all transportation projects planned for a region over a period of at least 20 years (for the RTP) and 4 years (for the FTIP). RTP and FTIP conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the FCAA and the SIP are met. If the conformity analysis is successful, the MPO, FHWA, and Federal Transit Administration (FTA) make the determinations that the RTP and FTIP are in conformity with the SIP for achieving the goals of the FCAA. Otherwise, the projects in the RTP and/or FTIP must be modified until conformity is attained. If the design concept and scope and the “open-to-traffic” schedule of a proposed transportation project are the same as described in the RTP and FTIP, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming RTP and FTIP; the project has a design concept and scope<sup>7</sup> that has not changed significantly from those in the RTP and FTIP; project analyses have used the latest planning assumptions and EPA-approved emissions models; and in PM areas, the project complies with any control measures in the SIP. Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in CO and PM nonattainment or maintenance areas to examine localized air quality impacts.

#### **2.2.6.2 Affected Environment**

Information described in this section comes from the *Air Quality Report* (February 2017) for the project. Detailed analysis methodology, modeling files, and calculation worksheets can be found in the *Air Quality Report* (February 2017).

The project site is located within the South Coast Air Basin (Basin). The topography and climate within the Basin make it an area of high air pollution potential. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of the perimeter. The general region lies in the semipermanent high-pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cool marine layer and inhibits the pollutants in the marine layer from dispersing upward. In addition, light winds during the summer further limit ventilation, and sunlight triggers the photochemical reactions that produce O<sub>3</sub>.

#### ***Attainment Status***

Federal, State, and local agencies have established ambient air quality standards for six criteria pollutants: CO, O<sub>3</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>2</sub>, SO<sub>2</sub>, and Pb, as presented in Table 2.2.6-1. O<sub>3</sub> and PM are generally considered regional pollutants because they or their precursors affect air quality on a regional scale. Pollutants such as CO, PM, NO<sub>2</sub>, SO<sub>2</sub>, and Pb are considered local pollutants because they tend to accumulate in the air locally. The Basin air quality status is summarized in Table 2.2.6-2.

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<sup>7</sup> "Design concept" means the type of facility that is proposed, such as a freeway or arterial highway. "Design scope" refers to those aspects of the project that would clearly affect capacity and thus any regional emissions analysis, such as the number of lanes and the length of the project.

**Table 2.2.6-1: State and Federal Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State <sup>1</sup> Standard	Federal <sup>2</sup> Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Ozone (O <sub>3</sub> )	1 hour	0.09 ppm <sup>3</sup>	--- <sup>4</sup>	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic VOC may also contribute.	Low-altitude O <sub>3</sub> is almost entirely formed from reactive organic gases (ROG)/VOC and nitrogen oxides (NO <sub>x</sub> ) in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.	Nonattainment (1-hour) Nonattainment (8-hour)	Nonattainment/ Extreme (1-hour)
	8 hours	0.070 ppm	0.070 ppm (4 <sup>th</sup> highest in 3 years)				
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	CO interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. CO also is a minor precursor for photochemical O <sub>3</sub> . Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. CO is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.	Attainment	Attainment/ Maintenance
	8 hours	9.0 ppm <sup>1</sup>	9 ppm				
	8 hours (Lake Tahoe)	6 ppm	---				
Respirable Particulate Matter (PM <sub>10</sub> ) <sup>5</sup>	24 hours	50 µg/m <sup>3</sup> <sup>6</sup>	150 µg/m <sup>3</sup> (expected number of days above standard < or equal to 1)	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic & other aerosol and solid compounds are part of PM <sub>10</sub> .	Dust- and fume-producing industrial and agricultural operations; combustion smoke & vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.	Nonattainment	Attainment/ Maintenance
	Annual	20 µg/m <sup>3</sup>	--- <sup>5</sup>				

**Table 2.2.6-1: State and Federal Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State <sup>1</sup> Standard	Federal <sup>2</sup> Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>5</sup>	24 hours	---	35 µg/m <sup>3</sup>	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the PM <sub>2.5</sub> size range. Many toxic & other aerosol and solid compounds are part of PM <sub>2.5</sub> .	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including NO <sub>x</sub> , sulfur oxides (SO <sub>x</sub> ), ammonia, and ROG.	Nonattainment	Nonattainment
	Annual	12 µg/m <sup>3</sup>	12.0 µg/m <sup>3</sup>				
	24 hours (conformity process <sup>7</sup> )	---	65 µg/m <sup>3</sup>				
	Secondary Standard (annual; also for conformity process <sup>5</sup> )	---	15 µg/m <sup>3</sup> (98 <sup>th</sup> percentile over 3 years)				
Nitrogen Dioxide (NO <sub>2</sub> )	1 hour	0.18 ppm	0.100 ppm <sup>8</sup>	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain & nitrate contamination of stormwater. Part of the “NO <sub>x</sub> ” group of O <sub>3</sub> precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.	Attainment	Attainment/ Maintenance
	Annual	0.030 ppm	0.053 ppm				
Sulfur Dioxide (SO <sub>2</sub> )	1 hour	0.25 ppm	0.075 ppm <sup>9</sup> (99 <sup>th</sup> percentile over 3 years)	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.	Attainment	Attainment
	3 hours	---	0.5 ppm <sup>10</sup>				
	24 hours	0.04 ppm	0.14 ppm (for certain areas)				
	Annual	---	0.030 ppm (for certain areas)				



**Table 2.2.6-1: State and Federal Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State <sup>1</sup> Standard	Federal <sup>2</sup> Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
Lead (Pb) <sup>11</sup>	Monthly	1.5 µg/m <sup>3</sup>	---	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.	Nonattainment	Nonattainment
	Calendar Quarter	---	1.5 µg/m <sup>3</sup> (for certain areas)				
	Rolling 3-month average	---	0.15 µg/m <sup>3</sup> <sup>12</sup>				
Sulfate	24 hours	25 µg/m <sup>3</sup>	---	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.	Attainment	N/A
Hydrogen Sulfide (H <sub>2</sub> S)	1 hour	0.03 ppm	---	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources such as volcanic areas and hot springs.	Unclassified	N/A
Visibility-Reducing Particles (VRP)	8 hours	Visibility of 10 miles or more (Tahoe: 30 miles) at relative humidity less than 70%	---	Reduces visibility. Produces haze. NOTE: Not directly related to the Regional Haze program under the FCAA, which is oriented primarily toward visibility issues in National Parks and other "Class I" areas. However, some issues and measurement methods are similar.	See particulate matter above. May be related more to aerosols than to solid particles.	Unclassified	N/A

**Table 2.2.6-1: State and Federal Criteria Air Pollutant Standards, Effects, and Sources**

Pollutant	Averaging Time	State <sup>1</sup> Standard	Federal <sup>2</sup> Standard	Principal Health and Atmospheric Effects	Typical Sources	State Project Area Attainment Status	Federal Project Area Attainment Status
<p>Adapted from Sonoma-Marín Narrows Draft EIR and California ARB Air Quality Standards chart (<a href="http://www.arb.ca.gov/research/aaqs/aaqs2.pdf">http://www.arb.ca.gov/research/aaqs/aaqs2.pdf</a>).</p> <p><u>Greenhouse Gases and Climate Change:</u> Greenhouse gases do not have concentration standards for that purpose. Conformity requirements do not apply to greenhouse gases.</p> <p><sup>1</sup> State standards are “not to exceed” or “not to be equaled or exceeded” unless stated otherwise.</p> <p><sup>2</sup> Federal standards are “not to exceed more than once a year” or as described above.</p> <p><sup>3</sup> ppm = parts per million</p> <p><sup>4</sup> Prior to June 2005, the 1-hour O<sub>3</sub> NAAQS was 0.12 ppm. Emission budgets for 1-hour O<sub>3</sub> are still in use in some areas where 8-hour O<sub>3</sub> emission budgets have not been developed, such as the San Francisco Bay Area.</p> <p><sup>5</sup> Annual PM<sub>10</sub> NAAQS revoked October 2006; was 50 µg/m<sup>3</sup>. 24-hour. PM<sub>2.5</sub> NAAQS tightened October 2006; was 65 µg/m<sup>3</sup>. Annual PM<sub>2.5</sub> NAAQS tightened from 15 µg/m<sup>3</sup> to 12 µg/m<sup>3</sup> December 2012 and secondary annual standard set at 15 µg/m<sup>3</sup>.</p> <p><sup>6</sup> µg/m<sup>3</sup> = micrograms per cubic meter</p> <p><sup>7</sup> The 65 µg/m<sup>3</sup> PM<sub>2.5</sub> (24-hour) NAAQS was not revoked when the 35 µg/m<sup>3</sup> NAAQS was promulgated in 2006. The 15 µg/m<sup>3</sup> annual PM<sub>2.5</sub> standard was not revoked when the 12 µg/m<sup>3</sup> standard was promulgated in 2012. The 0.08 ppm 1997 O<sub>3</sub> standard is revoked FOR CONFORMITY PURPOSES ONLY when area designations for the 2008 0.75 ppm standard become effective for conformity use (July 20, 2013). Conformity requirements apply for all NAAQS, including revoked NAAQS, until emission budgets for newer NAAQS are found adequate, SIP amendments for the newer NAAQS are approved with an emission budget, EPA specifically revokes conformity requirements for an older standard, or the area becomes attainment/unclassified. SIP-approved emission budgets remain in force indefinitely unless explicitly replaced or eliminated by a subsequent approved SIP amendment. During the “Interim” period prior to availability of emission budgets, conformity tests may include some combination of build versus no build, build versus baseline, or compliance with prior emission budgets for the same pollutant.</p> <p><sup>8</sup> Final 1-hour NO<sub>2</sub> NAAQS published in the <i>Federal Register</i> on February 9, 2010, effective March 9, 2010. Initial area designation for California (2012) was attainment/unclassifiable throughout. Project-level hot spot analysis requirements do not currently exist. Near-road monitoring starting in 2013 may cause redesignation to nonattainment in some areas after 2016.</p> <p><sup>9</sup> EPA finalized a 1-hour SO<sub>2</sub> standard of 75 ppb (parts per billion [thousand million]) in June 2010. Nonattainment areas have not yet been designated as of September 2012.</p> <p><sup>10</sup> Secondary standard, set to protect public welfare rather than health. Conformity and environmental analysis address both primary and secondary NAAQS.</p> <p><sup>11</sup> ARB has identified vinyl chloride and the PM fraction of diesel exhaust as toxic air contaminants. Diesel exhaust PM is part of PM<sub>10</sub> and, in larger proportion, PM<sub>2.5</sub>. Both ARB and EPA have identified Pb and various organic compounds that are precursors to O<sub>3</sub> and PM<sub>2.5</sub> as toxic air contaminants. There are no exposure criteria for adverse health effect due to toxic air contaminants, and control requirements may apply at ambient concentrations below any criteria levels specified above for these pollutants or the general categories of pollutants to which they belong.</p> <p><sup>12</sup> Lead NAAQS are not considered in Transportation Conformity analysis.</p>							

Regional air quality is monitored locally by the South Coast Air Quality Management District (SCAQMD) in conjunction with ARB. These two agencies operate a network of approximately nine air quality monitoring stations throughout the Basin. SCAQMD relies on one or more monitoring stations to document local air pollutant concentration levels. EPA determines regional air quality status based on data collected from permanent monitoring stations. An area is classified as "attainment" if the primary NAAQS have been achieved and "nonattainment" if the NAAQS are not achieved. Within the project area, NO<sub>2</sub> and SO<sub>2</sub>, are currently in attainment with federal and State standards. CO and PM<sub>10</sub> are currently characterized as a maintenance area, while PM<sub>2.5</sub>, O<sub>3</sub>, and Pb are designated as nonattainment. The Basin air quality status is summarized in Table 2.2.6-2.

**Table 2.2.6-2. South Coast Air Basin Attainment Status**

Pollutant	Attainment Status	
	Federal Standards	State Standards
Ozone (1-hour)	No Federal Standard	Nonattainment
Ozone (8-hour)	Nonattainment/Extreme	Nonattainment
PM <sub>10</sub>	Attainment/Maintenance	Nonattainment
PM <sub>2.5</sub>	Nonattainment	Nonattainment
Carbon Monoxide	Attainment/Maintenance	Attainment
Nitrogen Dioxide	Attainment/Maintenance	Attainment
Sulfur Dioxide	Attainment	Attainment
Sulfates	N/A	Attainment
Lead	Attainment	Attainment
Hydrogen Sulfide	N/A	Unclassified
Visibility Reducing Particles	N/A	Unclassified
Vinyl	N/A	Unclassified

Source: ARB, 2013; EPA, 2016.

### 2.2.6.3 Environmental Consequences

An evaluation of potential air quality impacts associated with each alternative is presented below.

#### ***Regional Conformity***

The Basin is in nonattainment of NAAQS for O<sub>3</sub> and PM<sub>2.5</sub>; thus, the project is not exempt from conformity, nor is it exempt from regional conformity. However, the project site is located within an area that has an MPO (i.e., SCAG). The proposed project is listed in the 2012-2035 financially constrained RTP/SCS, which was found to conform by SCAG on April 4, 2012, and FHWA and FTA made a regional

conformity determination finding on July 15, 2013. The proposed project is also included in the SCAG financially constrained 2017 FTIP listed on page 6 of the San Bernardino County Project Listings. The SCAG 2015 FTIP was also determined to conform by FHWA and FTA on December 15, 2014. The design concept and scope of the proposed project are consistent with the project description in the 2012-2035 RTP, the 2015 FTIP, and the “open to traffic” assumptions of SCAG’s regional emission analysis.

The proposed project would not conflict with or obstruct implementation of the SCAQMD 2016 Air Quality Management Plan (AQMP). Construction and operation of the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation.

### ***Project-Level Conformity***

Widening the Grove Avenue corridor would relieve traffic congestion and delay time at local intersections and would improve circulation to accommodate future traffic increases. These project improvements are considered to provide a minimal impact to air quality in the surrounding area. The pollutants of concern when analyzing transportation project-level impacts are CO, PM<sub>10</sub>, and PM<sub>2.5</sub> because these pollutants have a tendency to accumulate around intersections with heavy traffic congestion where vehicles are traveling at slower speeds.

### ***Carbon Monoxide Analysis***

The project is located in a CO maintenance area; therefore, federal air quality conformity standards must demonstrate that transportation activities associated with the project would not cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS. The proposed project is not included in the exempt projects list from Table 2 of the 40 CFR 93.126. Therefore, to determine the CO modeling requirements for a new project, the proposed project must utilize the first flow chart provided in the Caltrans’ guidance document, *Transportation Project-Level Carbon Monoxide Protocol (CO Protocol)* (UCD, 1997). The results of the flow chart are provided in the *Air Quality Report* (February 2017); however, the questions relevant to the project and the answers to those questions are as follows:

- Is the project exempt from all emissions analysis? NO. This project is not exempt from all emissions analysis. This proposed project type is not listed in Table 2 of 40 CFR 93.126

- Is the project exempt from regional emissions analysis? NO. This project is not exempt from all regional emissions analysis. This proposed project type is not listed in Table 3 of 40 CFR 93.126.
- Is the project defined as regionally significant? YES. This project is defined as a regionally significant project.
- Is the project located in a federal attainment area? NO. The project alignment is located in the Basin, which is a federal attainment/maintenance area with respect to CO; however, the Basin is classified nonattainment for pollutants O<sub>3</sub> and PM<sub>2.5</sub>. If a project area is not classified attainment for all transportation-related criteria pollutants, the project is subject to a regional conformity determination.
- Is there a currently conforming RTP and RTIP? YES. The 2012-2035 RTP and 2015 FTIP.
- Is the project included in the regional emissions analysis supporting the currently conforming RTP and TIP? YES. The proposed project is listed in both the SCAG 2012–2035 RTP and the SCAG 2015 FTIP Amendment 4 under project ID number 2002160. The 2012–2035 RTP was approved by FHWA on April 4, 2012. The 2015 FTIP was approved by FHWA on April 8, 2015.
- Has the project design concept and/or scope changed significantly from that in the regional analysis? NO. Neither the project design concept nor scope has changed from that in the regional analysis.

The conclusion from this flow chart of questions and answers is that the project needs to be examined for its local air quality impacts. Based on the answers to the first flow chart, a second flow chart is used to determine the level of local CO impact analysis required for the project. The second flow chart is provided in the *Air Quality Report* (February 2017). The questions applicable to the project in the second flow chart and the answers to those questions are as follows.

- Level 1: Is the project in a CO nonattainment area? NO. As shown previously in Table 2-1, the Basin is classified as an attainment/maintenance area for the federal CO standards.
- Level 1: Was the area redesignated as “attainment” after the 1990 Clean Air Act? YES. The Basin was redesignated to attainment/maintenance from serious nonattainment, effective June 11, 2007.
- Level 1: Has “continued attainment” been verified with the local Air District, if appropriate? YES. The Basin has continually met the federal ambient air quality standards for CO. (Proceed to Level 7)

- Level 7: Does the project worsen air quality? NO. There is zero percent increase in VMT from no-build and build conditions for the proposed project; however, there is a 30 and 51 percent increase from existing to future 2025 and 2045 conditions, respectively. In addition, there are signalized intersections within the project corridor that operate at LOS E or F. Therefore, to satisfy air quality conformity requirements, air quality modeling was used to demonstrate whether any new violations are likely to occur or if existing conditions would worsen as a result of the project.

### ***No Build Alternative***

No project improvements are proposed under the No Build Alternative. Therefore, the No Build Alternative was not required to address the flow chart provided in the Caltrans' guidance. However, under the Build Alternative CO hot-spot analysis, emissions generated from the Build Alternative will be compared to no-build conditions to determine project impacts.

### ***Build Alternative (Proposed Project)***

For the Build Alternative, there is zero percent increase in VMT from no-build and build conditions; however, there is a 30 and 51 percent increase from existing to future 2025 and 2045 conditions, respectively. In addition, there are signalized intersections within the project corridor that operate at LOS E or F. Therefore, to satisfy air quality conformity requirements, air quality modeling was used to demonstrate whether any new violations are likely to occur or if existing conditions would worsen as a result of the project.

Seven intersections were screened using LOS and traffic data estimates to identify their potential to create a CO hot spot. In general, the project would improve traffic flow and increase average vehicle speeds along Grove Avenue relative to the no-build condition. The project would either improve or have little to no effect on the overall performance of the screened intersections based on VMT volumes. Although one intersection (Grove Avenue/State Street-Airport Drive) would experience a slight (3.5 percent) increase in VMT, the project is anticipated to have a minimal impact on existing air quality.

The CO Protocol recommends performing further analysis at signalized intersections where the LOS is downgraded to E or F as a result of the project. Using this criterion and considering overall peak-hour volumes of traffic through the intersections, the following seven intersections were identified as areas where potential CO hot spots could occur:

- Grove Avenue/4<sup>th</sup> Street
- Grove Avenue/I Street
- Grove Avenue/G Street
- Grove Avenue/D Street
- Grove Avenue/Holt Boulevard
- Grove Avenue/State Street-Airport Drive
- Grove Avenue/Mission Boulevard

Intersection LOS and traffic delay in the AM and PM peak hour under the No Build Alternative and Build Alternative in 2045 are shown in Table 2.2.6-3.

**Table 2.2.6-3. 2045 Intersections LOS and Traffic Delay**

	AM Peak Hour		PM Peak Hour	
	Delay (seconds)	LOS	Delay (seconds)	LOS
<b>No Build</b>				
Grove Avenue/4 <sup>th</sup> Street	51.2	D	117.4	F
Grove Avenue/I Street	8.0	A	7.5	A
Grove Avenue/G Street	11.1	B	20.6	C
Grove Avenue/D Street	18.3	B	14.8	B
Grove Avenue/Holt Boulevard	213.8	F	352.9	F
Grove Avenue/State Street-Airport Drive	88.3	F	83.2	F
Grove Avenue/Mission Boulevard	117.1	F	265.6	F
<b>Build Alternative (Proposed Project)</b>				
Grove Avenue/4 <sup>th</sup> Street	49.4	D	47.8	D
Grove Avenue/I Street	5.9	A	5.0	A
Grove Avenue/G Street	11.5	B	10.9	B
Grove Avenue/D Street	7.6	A	6.9	A
Grove Avenue/Holt Boulevard	61.3	E	59.5	E
Grove Ave/State Street-Airport Drive	39.2	D	71.8	E
Grove Avenue/Mission Boulevard	95.5	F	233.7	F

Out of the seven intersections that were screened, three intersections were identified as the worst-case scenario and required hot-spot modeling analysis to determine CO concentrations. It is assumed that if these intersections show CO concentrations are below the NAAQS, then all other affected intersections would not cause hot spots.

- Grove Avenue/Holt Boulevard
- Grove Ave/State Street-Airport Drive
- Grove Avenue/Mission Boulevard

The CO hot spot modeling was performed according to the methodology outlined in the CO Protocol. The CO emission factors were calculated with ARB's EMFAC2011. CO concentrations were calculated using Caltrans' CALINE4. CO concentrations were estimated using traffic data obtained from the *Traffic Operations Analysis* prepared by Iteris (January 2015). CALINE4 models were created for existing and future no-build and build conditions (2025 and 2045). CALINE4 modeling output results are presented in Appendix A of the *Air Quality Report* prepared for this project.

Maximum 1-hour and 8-hour CO concentrations were estimated at each of the three intersections for existing year (2015) and for the No Build Alternative and Build Alternative during the year of opening 2025 and the horizon year 2045. Modeled CO concentrations were combined with current ambient CO background concentrations (obtained from SCAQMD Web site) and compared to the 1-hour and 8-hour CO NAAQS, as shown in Table 2.2.6-4.

**Table 2.2.6-4. Maximum Predicted CO Concentrations with Background**

Intersections	Existing	2025	2025	2045	2045
		No Build	Build	No Build	Build
	1-hour CO Concentrations				
	State Standards – 20 ppm				
	Federal Standards – 35 ppm				
Grove Avenue/Holt Boulevard	3.6	3.5	3.4	3.7	3.4
Grove Avenue/State Street-Airport Drive	3.8	3.5	3.5	3.5	3.5
Grove Avenue/Mission Boulevard	3.5	3.4	3.4	3.5	3.5
Intersections	8-hour CO Concentrations				
	Federal Standards – 9 ppm				
Grove Avenue/Holt Boulevard	2.2	2.2	2.1	2.3	2.1
Grove Avenue/State Street-Airport Drive	2.4	2.2	2.2	2.2	2.2
Grove Avenue/Mission Boulevard	2.2	2.1	2.1	2.2	2.2

Results from the CO hot-spot modeling analysis demonstrate that under the No Build Alternative and Build Alternative, CO concentrations are expected to remain generally unchanged and are below the 1-hour and 8-hour NAAQS of 35 parts per million (ppm)



and 9 ppm, respectively. Because improvements from the project are not expected to noticeably change overall traffic volumes, vehicular flow near intersections is improved, which reduces the accumulation of localized concentrations of CO. It is anticipated that the project would not contribute to a violation of CO standards; therefore, local CO project-level transportation conformity requirements would be satisfied. Detailed CO hot-spot modeling files are shown in Appendix B of the *Air Quality Report*; associated emission factor output is also included in Appendix B of the *Air Quality Report*.

### ***Particulate Matter Analysis***

The project is located in San Bernardino County, which is designated as nonattainment for PM<sub>2.5</sub> and a maintenance area for PM<sub>10</sub>; therefore, the proposed project must undergo transportation conformity requirements for PM<sub>10</sub> and PM<sub>2.5</sub>. The analysis was performed following the guidance provided by Caltrans and EPA's *Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM<sub>2.5</sub> and PM<sub>10</sub> Nonattainment and Maintenance Areas* (EPA, 2013) to satisfy conformity requirements. To determine if a project would require a PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot analysis, EPA specifies in 40 CFR 93.123(b)(1) that only Projects of Air Quality Concern (POAQC) are required to undergo a PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot analysis.

### ***No Build Alternative***

No project improvements are proposed under the No Build Alternative. Therefore, the No Build Alternative was not required to undergo a PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot analysis. However, under the Build Alternative PM<sub>2.5</sub> and PM<sub>10</sub> hot-spot analysis, emissions generated from the Build Alternative will be compared to no-build conditions to determine project impacts.

### ***Build Alternative (Proposed Project)***

A discussion of the proposed project compared to projects of air quality concern, as defined by 40 CFR 93.123(b)(1), is provided in the *Air Quality Report* (February 2017).

Upon reviewing the project's traffic data, it was determined that the average daily traffic (ADT) estimated for the future Build Alternative does not classify the project as a POAQC. However, due to the nonattainment status of PM<sub>2.5</sub> and maintenance status of PM<sub>10</sub>, the proposed project was required to undergo interagency consultation with SCAG's Transportation Conformity Working Group (TCWG). On April 28, 2015, the TCWG provided concurrence that the project was not a POAQC based on the PM<sub>2.5</sub> and PM<sub>10</sub> review forms that were submitted, as shown in Appendix A of the *Air Quality Report* (February 2017). Also provided in Appendix A of the *Air Quality Report* is the

TCWG’s confirmation that the proposed project is not a POAQC and does not require a hot-spot analysis to be performed.

Traffic volumes at the intersections of Grove Avenue/Holt Boulevard and Grove Avenue/State Street-Airport Drive would exceed the 125,000 average daily trips criteria for a POAQC, as shown in Table 2.2.6-5; however, the total vehicles and truck average annual daily traffic (AADT) would decrease from the Build Alternative at these intersections. The total truck percentages along Grove Avenue from 4<sup>th</sup> Street to State Street-Airport Drive would not exceed the 8 percent criteria, and the total truck AADT would not exceed the 10,000-vehicle criteria for POAQC. Truck percentages are 4 percent on Grove Avenue between 4<sup>th</sup> Street and State Street-Airport Drive, as land uses within this area are primarily residential, outdoor recreational use areas, and a few commercial properties. The future traffic volumes along Grove Avenue are shown in Tables 2.2.6-5 and 2.2.6-6.

**Table 2.2.6-5. 2025 Average Daily Traffic Volumes**

2025 Conditions	AADT	Truck AADT	Diesel Truck Percentage
<b>No Build</b>			
Grove Avenue/4 <sup>th</sup> Street	86,276	3,710	4
Grove Avenue/I Street	49,892	2,145	4
Grove Avenue/G Street	59,478	2,260	4
Grove Avenue/D Street	57,953	2,202	4
Grove Avenue/Holt Boulevard	120,918	4,595	4
Grove Avenue/State Street-Airport Drive	100,656	3,825	4
<b>Build Alternative</b>			
Grove Avenue/4 <sup>th</sup> Street	93,030	4,000	4
Grove Avenue/I Street	56,428	2,426	4
Grove Avenue/G Street	62,964	2,393	4
Grove Avenue/D Street	61,003	2,318	4
Grove Avenue/Holt Boulevard	118,957	4,520	4
Grove Avenue/State Street-Airport Drive	104,142	3,957	4

**Table 2.2.6-6. 2045 Average Daily Traffic Volumes**

2045 Conditions	AADT	Truck AADT	Diesel Truck Percentage
<b>No Build</b>			
Grove Avenue/4 <sup>th</sup> Street	111,332	4,787	4
Grove Avenue/I Street	64,060	2,755	4
Grove Avenue/G Street	80,830	3,072	4
Grove Avenue/D Street	78,433	2,980	4
Grove Avenue/Holt Boulevard	175,385	6,665	4
Grove Avenue/State Street-Airport Drive	134,643	5,116	4
<b>Build Alternative</b>			
Grove Avenue/4 <sup>th</sup> Street	103,052	4,431	4
Grove Avenue/I Street	69,507	2,989	4
Grove Avenue/G Street	79,522	3,022	4
Grove Avenue/D Street	77,562	2,947	4
Grove Avenue/Holt Boulevard	168,413	6,400	4
Grove Avenue/State Street-Airport Drive	131,811	5,009	4

Even though the project is not a POAQC, the project area is designated as nonattainment for PM<sub>2.5</sub> and maintenance for PM<sub>10</sub>; therefore, further evaluation was performed to assess the project's influence on the change in PM emissions at a localized level from existing to future no build and build. This emissions trend information will be utilized to predict whether the project would cause or contribute to any new localized PM<sub>10</sub> or PM<sub>2.5</sub> violations, or increase the frequency or severity of any existing violations, or delay timely attainment of the PM<sub>10</sub> or PM<sub>2.5</sub> NAAQS. Caltrans' CT-EMFAC was used to estimate PM<sub>2.5</sub> and PM<sub>10</sub> emissions generated from operation of the project.

As shown in Table 2.2.6-7, predicted PM emission levels trend lower from existing to the future no-build years 2025 and 2045. These PM emission decreases are attributable to enhanced fuel emission control programs implemented on a federal, State, and local level. The project provides further reductions in PM emissions by enhancing traffic flow and reducing the wait time at signalized intersections minimizing brake use and tire wear under the Build Alternative. It is anticipated that the project would not worsen existing air quality, cause an exceedance, or cause any new violations of the PM<sub>2.5</sub> and PM<sub>10</sub> standards. PM project-level transportation conformity requirements are satisfied. Detailed EMFAC2011 PM hot-spot modeling output results are shown in Appendix B of the *Air Quality Report*.

**Table 2.2.6-7. Maximum PM<sub>10</sub>/PM<sub>2.5</sub> Emissions (pounds per day)**

Pollutant	Existing	2025 No Build	2025 Build	2045 No Build	2045 Build
Grove Avenue/Holt Boulevard	329	163	161	187	149
Grove Avenue/State Street-Airport Drive	297	117	121	119	117
Grove Avenue/Mission Boulevard	396	171	162	169	162

### ***Mobile Source Air Toxics Analysis***

FHWA recommends a range of options deemed appropriate for addressing and documenting the mobile source air toxics (MSAT) issue in NEPA documents. These include:

- No analysis required for projects with no potential for meaningful MSAT effects—Applicable for categorically excluded projects under CFR Chapter 23, Section 771.17(c); exempt projects under CFR Chapter 40, Section 93.126; or projects with no meaningful impacts on traffic volumes or vehicle mix.
- Qualitative analysis required for projects with low potential MSAT effects—Projects that serve to improve operations of highway, transit, or freight without adding substantial new capacity or without creating a facility that is likely to meaningfully increase emissions.
- Quantitative analysis for projects that have the potential for meaningful differences in MSAT emissions among project alternatives. To fall into this category, a project should:
  - Create or significantly alter a major intermodal freight facility that has the potential to concentrate high levels of diesel particulate matter (DPM) in a single location, involving a significant number of diesel vehicles for new projects, or accommodating with a significant increase in the number of diesel vehicles for expansion projects; or
  - Create new capacity or add significant capacity to urban highways such as interstates, urban arterials, or urban collector-distributor routes with traffic volumes where the AADT is projected to be in the range of 140,000 to 150,000 or greater by the design year; and also
  - Proposed to be located in proximity to populated areas.

Upon review of the Build Alternative and the FHWA guidance categories described above, the project is classified as a minor widening project and may have potential

MSAT effects, but it has a low potential for MSAT effects; therefore, a qualitative analysis is appropriate for assessing MSAT impacts from operation of the project.

#### ***No Build Alternative***

No project improvements are proposed under the No Build Alternative. Therefore, an MSAT analysis was not required for the No Build Alternative.

#### ***Build Alternative (Proposed Project)***

For the Build Alternative, the amount of MSAT emitted would be proportional to the AADT, assuming that other variables, such as fleet mix, are the same for each alternative. Because the AADT estimated for the No Build Alternative is higher than for the Build Alternative, higher levels of MSAT are not expected from the Build Alternative compared to the No Build Alternative, as previously shown in Tables 2.2.6-5 and 2.2.6-6. In addition, emissions from the Build Alternative would likely be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce annual MSAT emissions by more than 80 percent from 2010 to 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures; however, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions are likely to be lower in the future in virtually all locations.

In sum, under the Build Alternative in the design year, it is expected there would be reduced MSAT emissions in the immediate area of the project, relative to the No Build Alternative, due to the reduced AADT associated with more direct routing and due to EPA's MSAT reduction programs.

#### ***CEQ Provisions (Incomplete/Unavailable Information, Project-Specific MSAT Health Impacts)***

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the FCAA and its amendments and have specific statutory obligations with respect to

hazardous air pollutants and MSAT. EPA is in the continual process of assessing human health effects, exposures, and risks posed by air pollutants. They maintain IRIS, which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects" (EPA, <http://www.epa.gov/iris/>). Each report contains assessments of noncancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's *Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents*. Among the adverse health effects linked to MSAT compounds at high exposures are cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations (HEI, <http://pubs.healtheffects.org/view.php?id=282>) or in the future as vehicle emissions substantially decrease (HEI, <http://pubs.healtheffects.org/view.php?id=306>).

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts – each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70-year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology, which affects emissions rates, over that time frame because such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSATs because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI (<http://pubs.healtheffects.org/view.php?id=282>).

As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds and, in particular, for DPM. EPA (<http://www.epa.gov/risk/basicinformation.htm#g>) and HEI (<http://pubs.healtheffects.org/getfile.php?u=395>) have not established a basis for quantitative risk assessment of DPM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by EPA as provided by the FCAA to determine whether more stringent controls are required to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

### ***Ozone Analysis***

The project is located in an area designated as nonattainment for O<sub>3</sub>. SCAQMD has established thresholds of significance for O<sub>3</sub> precursors for the operation of transportation projects. In addition, regional plans, programs, and documents that have been federally approved will be utilized in identifying the Basin's proposed activities to reduce O<sub>3</sub> precursor emissions. Additionally, transportation conformity requirements

are satisfied through the inclusion of the project in the conforming regional Interim FTIP.

#### ***No Build Alternative***

No project improvements are proposed under the No Build Alternative. Therefore, an O<sub>3</sub> analysis was not required for the No Build Alternative.

#### ***Build Alternative (Proposed Project)***

Operation of the project would have a minimal impact on the Basin with implementation of control measures incorporated from the plans and programs discussed above. Furthermore, the project was incorporated in the conforming Interim 2015 FTIP; therefore, it is anticipated that the project would not worsen existing air quality, or cause an exceedance, or cause any new violations of the O<sub>3</sub> standards. Regional transportation conformity requirements are satisfied through inclusion of the project in the conforming regional Interim 2015 FTIP.

#### ***Asbestos***

##### ***No Build Alternative***

No project improvements are proposed under the No Build Alternative. Therefore, the No Build Alternative was not required to address naturally occurring asbestos.

##### ***Build Alternative (Proposed Project)***

San Bernardino County is not among the counties listed as containing serpentine and ultramafic rock (Governor's Office of Planning and Research, October 26, 2000); therefore, the impact from naturally occurring asbestos during construction of the project would be minimal to none.

#### ***Short-Term Construction Impacts***

##### ***No Build Alternative***

No project improvements are proposed under the No Build Alternative. Therefore, no construction impacts were analyzed for the No Build Alternative.

##### ***Build Alternative (Proposed Project)***

Construction is anticipated to begin in 2024 and last approximately 1 year. During construction, the project would generate pollutants, such as hydrocarbons, NO<sub>x</sub>, CO, and suspended PM. A major source of PM would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses.



Relocation/modification of utilities and drainage facilities within the proposed ROW would include power poles, underground utilities, and storm drains. Utility relocations are expected to be accomplished without interrupting service. Drainage improvements would include installation of operational BMPs.

Construction activities of the project would include limited excavation, grading, hauling, and various other activities needed to construct the project. These activities would generate short-term increases in PM. Dust and odors at some residences very close to the ROW could probably cause occasional annoyance and complaints. In addition, the limited construction activities would limit ROG emissions during the construction period of the project. Therefore, construction of the project is not expected to exceed the ROG thresholds of significance established by SCAQMD.

Other individual projects in the Basin may be under construction simultaneously with the project. Depending on construction schedules and implementation of other projects in the region, fugitive dust and pollutant emissions generated during construction may result in substantial short-term increases in air pollutants. This would contribute to short-term cumulative air quality impacts; however, implementation of construction Best Available Control Measures (BACMs) during site grading activities would reduce fugitive dust emissions to a level that is considered minor.

#### **2.2.6.4 Avoidance, Minimization, and/or Mitigation Measures**

Caltrans' Standard Specifications pertaining to dust control and dust palliative requirement is required to be part of all construction contracts and should effectively reduce and control emission impacts during construction. The provisions of the Caltrans' Standard Specifications, Section 7-1.0F "Air Pollution Control" and Section 10 "Dust Control" require the contractor to comply with SCAQMD rules, ordinances, and regulations. SCAQMD Rule 403 (Fugitive Dust) specifies actions or control measures to prevent, reduce, or mitigate PM emissions generated from construction, demolition, excavation, extraction, and other earth-moving activities. With implementation of these standard specifications, no additional avoidance, minimization and/or mitigation measures are required.

Because the project is included in and consistent with the 2012-2035 RTP that conforms to federal and State air quality requirements, the project would not degrade CO ambient air quality and is not a POAQC; the project would not result in substantial air quality impacts from operation of the project; and no mitigation measures are proposed.

#### **2.2.6.5 Climate Change**

Neither EPA nor FHWA have issued explicit guidance or methods to conduct project-level GHG analysis. FHWA emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and EOs on climate change, the issue is addressed in Chapter 3, CEQA Evaluation, of this document. The CEQA analysis may be used to inform the NEPA determination for the project.

### **2.2.7 Noise and Vibration**

This section addresses potential noise impacts on nearby noise-sensitive areas along the project corridor resulting from the proposed project. For detailed analysis, please refer to the *Noise Study Report* (NSR) (December 2017).

#### **2.2.7.1 Regulatory Setting**

NEPA and CEQA provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between NEPA and CEQA.

#### ***California Environmental Quality Act***

CEQA requires a strictly baseline versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the NEPA 23 CFR 772 noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

Pursuant to Caltrans Traffic Noise Analysis Protocol (dated May 2011), Section 7, CEQA and NEPA Considerations, a 12-decibel (dB) increase between existing and design-year with-project conditions is considered a significant impact. If a proposed project is determined to have a significant noise impact under CEQA, then abatement measures must be incorporated into the project unless those measures are not feasible.

#### ***National Environmental Policy Act and 23 CFR 772***

For highway transportation projects with FHWA (and Caltrans, as assigned) involvement, the federal-Aid Highway Act of 1970 and the associated implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria (NAC) that are used to determine when a noise impact would occur. The NAC differ depending on the type of land use under analysis. For example, the NAC for residences (67 A-weighted decibels [dBA]) is lower than the NAC for commercial areas (72 dBA). Table 2.2.7-1 lists the NAC for use in the NEPA 23 CFR 772 analysis.

**Table 2.2.7-1. Noise Abatement Criteria**

Activity Category	NAC, Hourly A-Weighted Noise Level, $L_{eq}(h)$ <sup>1</sup>	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B <sup>2</sup>	67 (Exterior)	Residential.
C <sup>2</sup>	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings.
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A–D or F.
F	No NAC—reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No NAC—reporting only	Undeveloped lands that are not permitted.
<sup>1</sup> The $L_{eq}(h)$ activity criteria values are for impact determination only and are not design standards for noise abatement measures. All values are A-weighted decibels (dBA). <sup>2</sup> Includes undeveloped lands permitted for this activity category.		

Figure 2.2.7-1 shows a range of noise levels for common activities so that a comparison can be made between the predicted traffic noise levels discussed in this section with common activities.

According to Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects* (May 2011), a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more increase) or when the future noise level with the project approaches or exceeds the NAC. Approaching the NAC is defined as coming within 1 dBA of the NAC.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be

reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

**Figure 2.2.7-1. Noise Levels of Common Activities**

Caltrans' Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is basically an engineering concern. A minimum 7-dBA reduction in the future noise level must be achieved for an abatement measure to be considered feasible. Other considerations include topography, access requirements, other noise sources, and safety considerations. The reasonableness determination is basically a cost-benefit analysis. Factors used in determining whether a proposed noise abatement measure is reasonable include residents' acceptance and the cost per benefited residence.

### 2.2.7.2 Affected Environment

Information in this section is from the NSR (December 2017) and the *Noise Abatement Decision Report* (December 2017).

Developed and undeveloped land uses in the project vicinity were identified through inspection of aerial photography and a detailed field investigation.

Existing land uses in the project area are described below and in further detail starting at 4<sup>th</sup> Street (the northern terminus of the project area) and continuing south along Grove Avenue to E. State Street/E. Airport Drive (the southern terminus of the project area).

**Grove Avenue between 4<sup>th</sup> Street and I Street:** This is the northernmost area in the project corridor and consists of recreational parks on the east and west sides of Grove Avenue.

**Grove Avenue between I Street and G Street:** This area consists of single-family residences west of Grove Avenue and single-family residences approximately 150 feet east of Grove Avenue.

**Grove Avenue between G Street and Nocta Street:** This area consists of single- and multi-family residences, west and east of Grove Avenue. There is also a place of worship, the Sovereign Grace Baptist Church, at the southwest corner of Grove Avenue and G Street.

**Grove Avenue between Nocta Street and E. State Street/E. Airport Drive:** This area consists of several single-family residences (permanent and mobile homes) that are located approximately 100 feet or more from Grove Avenue. There are several hotels along Holt Boulevard. In addition, an outdoor waiting area for the Car Wash El Chavo was identified. Furthermore, there are several parcels of undeveloped land in this area.

The generalized land use data and location of particular noise-sensitive receivers were the basis for the selection of representative analysis sites. A total of 97 receiver locations were modeled to represent existing uses in the project vicinity. Figures 2.2.7-2 through 2.2.7-4 show the locations that were analyzed, as well as receiver and soundwall locations. The following land uses occur along the Grove Avenue Corridor:

- Category B – Single-family and multi-family residences
- Category C – Sovereign Grace Baptist Church, walking trail benches, John Galvin Park, and Jay Littleton Ballpark
- Category E – Knights Inn Ontario, Capri Motel, Pepper Tree Motel, and Car Wash El Chavo
- Category G – Undeveloped lands



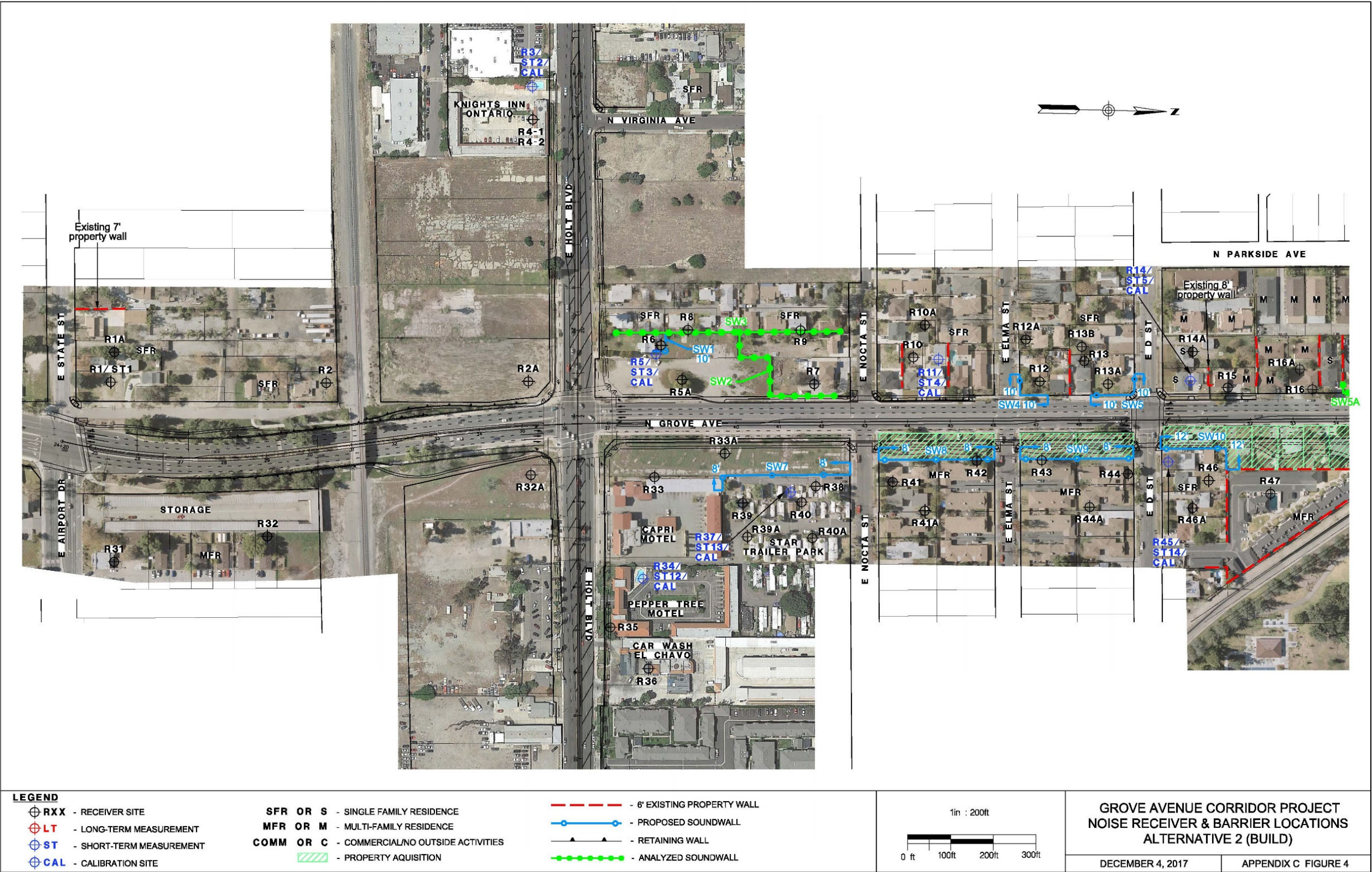


Figure 2.2.7-2. Noise Receiver and Barrier Locations (Build Alternative)



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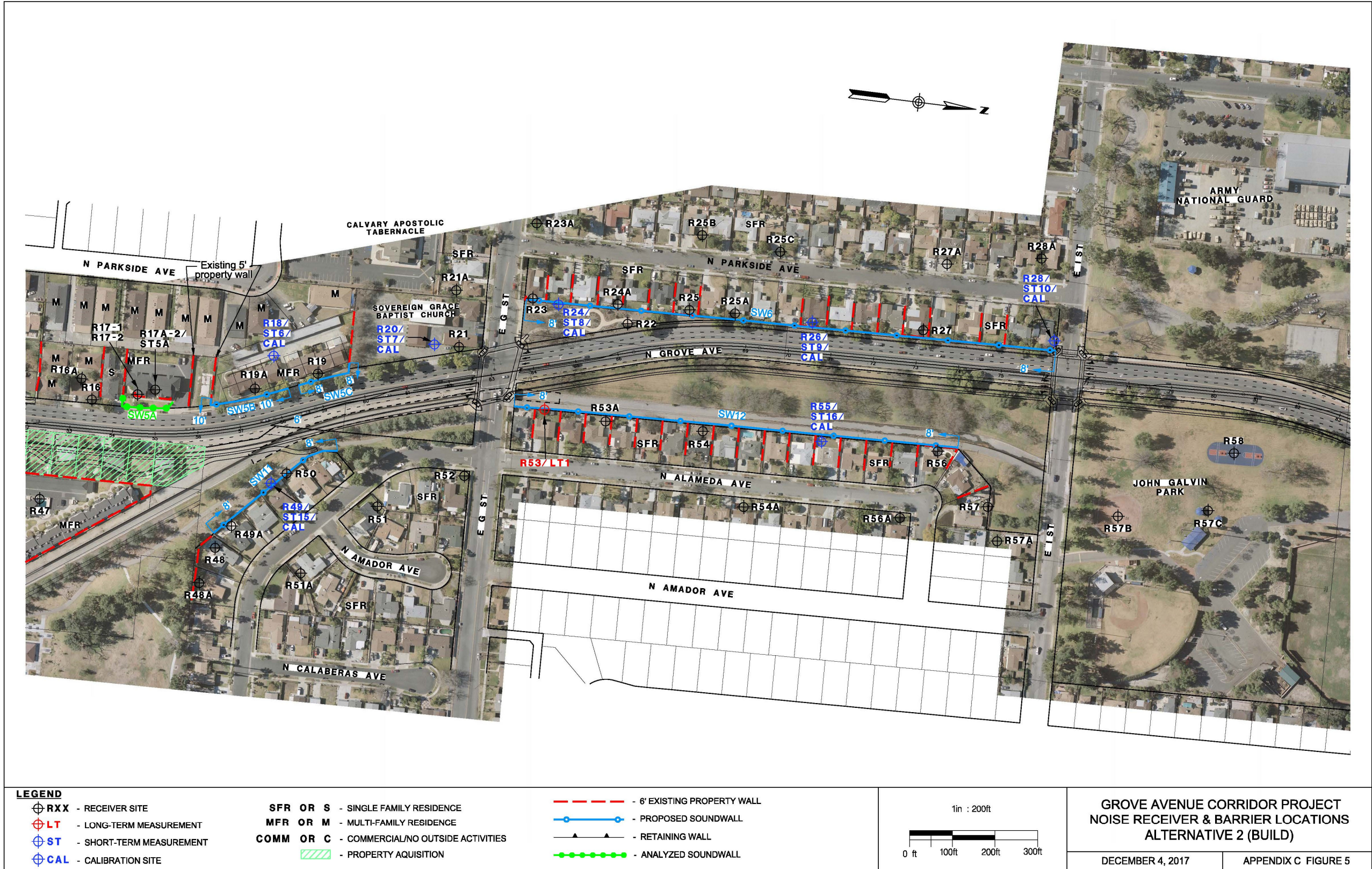


Figure 2.2.7-3. Noise Receiver and Barrier Locations (Build Alternative)



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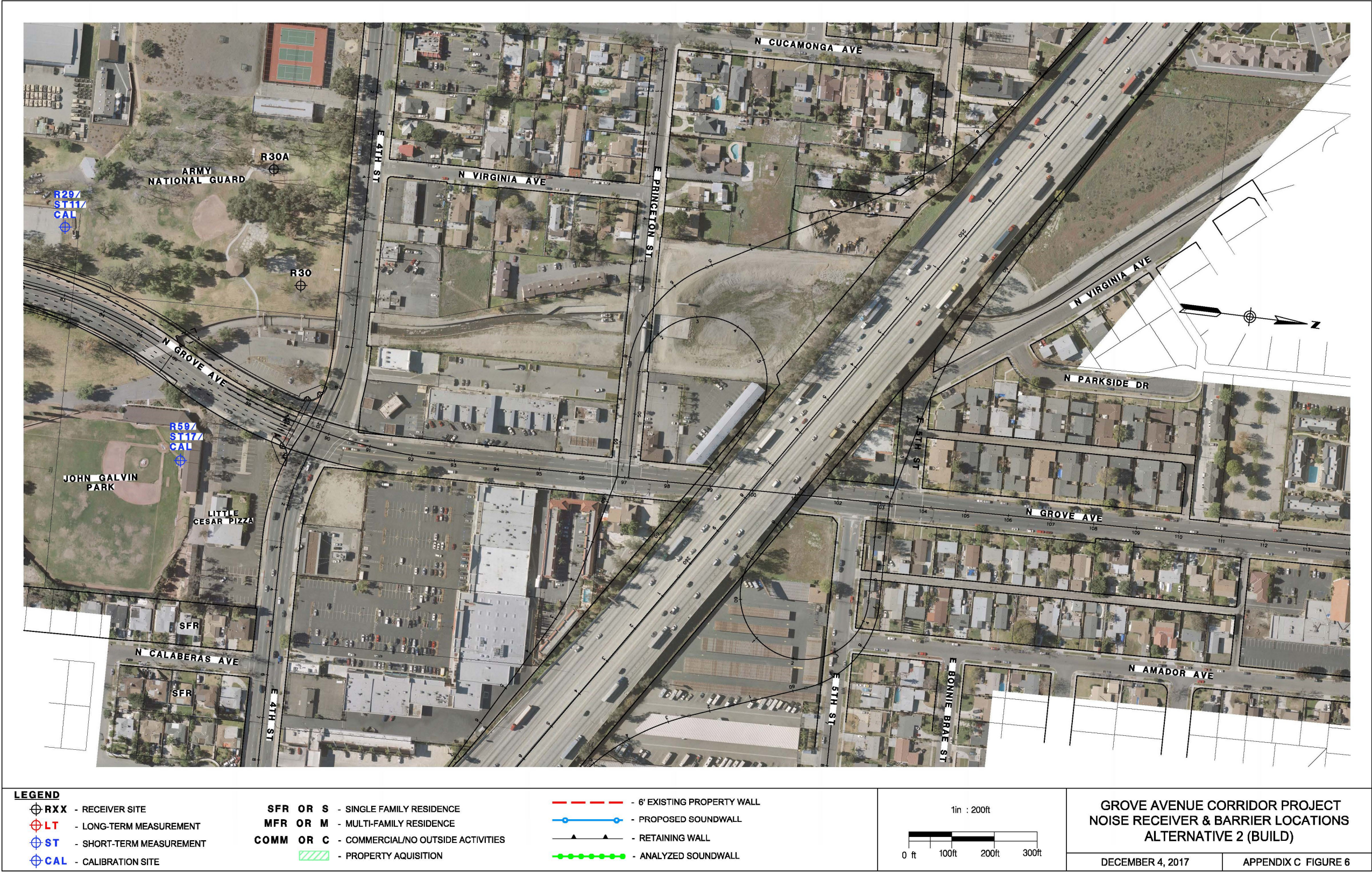


Figure 2.2.7-4. Noise Receiver and Barrier Locations (Build Alternative)



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### 2.2.7.3 Environmental Consequences

The project is considered a Type I project by 23 CFR 772 because the proposed construction that would widen Grove Avenue would add lanes and shift traffic closer to adjacent receivers.

The following paragraphs explain the steps in predicting traffic noise levels along the project corridor as a result of the proposed project.

#### ***Existing Noise Level Measurements***

The existing noise environment in the project area is characterized below based on short-term (20-minute) noise level measurements (and traffic counts) completed at 17 locations in May 2015 and at 1 additional location in February 2017, and subsequent modeling of traffic noise levels at 97 representative receiver locations. Table 2.2.7-2 summarizes the results of the short-term noise measurement conducted in the project area.

**Table 2.2.7-2. Summary of Short-Term Measurements**

Receiver	Address	Land Uses	Start Time	Duration (minutes)	Measured $L_{eq}$
ST1	1197 E. State Street	Residential	10:20 a.m.	20	61.9
ST2	1120 E. Holt Boulevard	Residential	3:00 p.m.	20	66.6
ST3	1179 E. Holt Boulevard	Residential	10:50 a.m.	20	64.7
ST4	213 N. Grove Avenue	Recreation	11:20 a.m.	20	56.5
ST5	1195 E. D Street	Recreation	1:20 p.m.	20	60.7
ST5A	501 N. Grove Avenue #203	Residential	2:00 p.m.	20	66.9
ST6	533 N. Grove Avenue	Residential	1:00 p.m.	20	59.0
ST7	1168 E. G Street	Residential	12:20 p.m.	20	63.4
ST8	710 N. Parkside Drive	Residential	9:40 a.m.	20	60.2
ST9	804 N. Parkside Drive	Recreation	4:15 p.m.	20	62.0
ST10	1156 E. I Street	Residential	3:20 p.m.	20	67.8
ST11	John Galvin Park	Park	2:20 p.m.	20	58.9
ST12	1241 E. Holt Boulevard	Recreation	11:00 a.m.	20	59.4
ST13	1230 E. Nocta Street	Residential	12:20 p.m.	20	57.9
ST14	1213 E. D Street	Residential	10:40 a.m.	20	61.6
ST15	1210 E. Flora Street	Recreation	4:25 p.m.	20	63.7
ST16	809 N. Alameda Avenue	Residential	11:25 a.m.	20	58.7
ST17	John Galvin Park	Park	2:30 p.m.	20	57.8

Source: Noise Study Report, Grove Avenue Corridor Project (December 2017).

### ***Future Noise-Level Modeling***

Traffic noise levels were predicted using the FHWA Traffic Noise Model Version 2.5 (TNM 2.5). Key inputs to the traffic noise model were the locations of roadways, shielding features, existing soundwalls, ground types, and receiver locations. Receivers, defined as single points, were at frequent outdoor use areas such as residences, schools, and recreational areas.

A comparison of existing noise levels to the projected noise levels in 2045 under the No Build Alternative and the Build Alternative is provided. Comparison to existing conditions indicates traffic noise impacts to the receptors; comparison of the build and no-build conditions indicates the direct effect of the project.

Where noise levels met the NAC, soundwalls were evaluated to determine if they were reasonable and feasible. The criteria for determining when an abatement measure is reasonable and feasible are provided above in the Regulatory Setting.

Reasonableness of noise abatement (for each noise barrier found to be acoustically feasible) must then be determined based on the cost allowance calculation procedure identified in the *Caltrans Traffic Noise Analysis Protocol for New Highway Construction, Reconstruction, and Retrofit Barrier Projects*. A soundwall is considered reasonable if it costs less than the reasonable allowance for that barrier (described in more detail in the December 2017 *Noise Abatement Decision Report*), meets the design goal, and the viewpoints of benefited receivers have been taken into consideration. The preliminary determination of reasonableness is discussed later in this section.

### ***Thresholds of Significance***

An evaluation of potential noise impacts associated with each alternative is presented below.

#### ***No Build Alternative***

Table 2.2.7-3 shows the results of the traffic noise modeling for the design-year No Build Alternative range from 49 to 74 dBA  $L_{eq}(h)$ . Noise levels for design-year no-build conditions are expected to increase up to 3 dB over existing noise levels due to projected traffic volume increases over existing conditions. Estimated no-build traffic noise levels were found to approach or exceed the applicable NAC at representative land use locations.

**Table 2.2.7-3. Traffic Noise Impact Analysis**

Receiver	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)						Reasonable and Feasible
					6-foot Wall	8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R1/ST1	68	70	70	No	--	--	--	--	--	--	--
R1A	62	64	65	No	--	--	--	--	--	--	--
R2	61	62	63	No	--	--	--	--	--	--	--
R2A	72	74	74	No	--	--	--	--	--	--	--
R3/ST2	66	68	68	No	--	--	--	--	--	--	--
R4-1	59	61	61	No	--	--	--	--	--	--	--
R4-2	60	62	62	No	--	--	--	--	--	--	--
R5/ST3	68	70	70	No	--	--	--	--	--	--	--
R5A	70	72	72	No	--	--	--	--	--	--	--
R6	67	68	69	Yes	64	63	62	61	61	61	Yes
R7	67	68	68	Yes	67	65	65	64	64	63	No
R8	65	67	67	Yes	64	64	64	63	63	63	No
R9	60	62	63	No	--	--	--	--	--	--	--
R10	62	63	65	No	--	--	--	--	--	--	--
R10A	55	56	57	No	--	--	--	--	--	--	--
R11/ST4	59	61	62	No	--	--	--	--	--	--	--
R12	69	70	71	Yes	65	64	63	63	63	62	Yes
R12A	62	64	64	No	63	63	62	62	62	62	No
R13	61	62	62	No	60	60	60	60	59	--	No
R13A	71	73	73	Yes	67	65	64	64	63	--	Yes
R13B	59	61	61	No	58	57	56	56	56	--	Yes
R14/ST5	67	68	68	Yes	--	--	--	--	--	--	--
R14A	59	61	61	No	--	--	--	--	--	--	--

**Table 2.2.7-3. Traffic Noise Impact Analysis**

Receiver	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)						Reasonable and Feasible
					6-foot Wall	8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R15	72	73	73	Yes	--	--	--	--	--	--	--
R16	72	74	74	Yes	--	--	--	--	--	--	--
R16A	61	62	62	No	--	--	--	--	--	--	--
R17-1	62	64	64	No	63	60	59	59	59	59	No
R17-2	71	72	72	Yes	72	72	72	70	68	66	No
R17A/ST5A	70	72	72	Yes	72	71	70	68	67	66	No
R18/ST6	61	62	63	No	--	--	--	--	--	--	--
R19	71	73	73	Yes	66	64	62	61	60	60	Yes
R19A	71	73	73	Yes	66	64	63	62	61	61	No
R20/ST7	71	72	72	No	--	--	--	--	--	--	--
R21	47	49	49	No	--	--	--	--	--	--	--
R21A	54	56	56	No	--	--	--	--	--	--	--
R22	72	74	74	Yes	--	--	--	--	--	--	--
R23	61	64	64	No	64	62	61	60	60	--	No
R23A	60	62	62	No	62	62	62	62	61	--	No
R24/ST8	68	70	70	No	--	--	--	--	--	--	--
R24A	68	69	70	Yes	64	61	59	57	56	--	Yes
R25	62	64	64	No	64	61	60	58	57	--	No
R25A	71	72	73	Yes	67	64	62	60	59	--	Yes
R25B	56	57	59	No	57	56	55	55	54	--	No
R25C	57	58	60	No	58	57	56	55	54	--	No
R26/ST9	64	65	66	Yes	66	64	62	60	59	--	No
R27	63	65	69	Yes	67	64	62	61	59	--	Yes



**Table 2.2.7-3. Traffic Noise Impact Analysis**

Receiver	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)						Reasonable and Feasible
					6-foot Wall	8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R27A	58	59	60	No	59	59	58	57	57	--	No
R28/ST10	70	72	74	Yes	71	71	71	71	71	--	No
R28A	62	63	64	No	63	63	63	63	63	--	No
R29/ST11	66	68	69	Yes	--	--	--	--	--	--	--
R30	66	68	68	Yes	--	--	--	--	--	--	--
R30A	61	63	63	No	--	--	--	--	--	--	--
R31	53	54	54	No	--	--	--	--	--	--	--
R32	49	51	51	No	--	--	--	--	--	--	--
R32A	72	73	75	No	--	--	--	--	--	--	--
R33	69	70	72	No	--	--	--	--	--	--	--
R33A	70	71	74	No	--	--	--	--	--	--	--
R34/ST12	67	68	68	No	--	--	--	--	--	--	--
R35	71	72	72	No	--	--	--	--	--	--	--
R36	66	67	68	No	--	--	--	--	--	--	--
R37/ST13	65	67	69	Yes	62	61	60	59	58	58	Yes
R38	66	67	70	Yes	64	62	61	60	59	58	Yes
R39	57	58	61	No	59	58	58	57	57	56	No
R39A	57	58	61	No	57	57	56	56	55	55	No
R40	64	65	67	Yes	62	61	60	60	59	59	Yes
R40A	55	56	58	No	56	56	56	56	56	56	No
R41	58	59	62	No	62	62	62	61	61	--	No
R41A	55	57	61	No	59	59	58	58	58	--	No
R42	64	65	72	Yes	67	62	59	58	57	--	Yes

**Table 2.2.7-3. Traffic Noise Impact Analysis**

Receiver	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)						Reasonable and Feasible
					6-foot Wall	8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R43	64	65	73	Yes	67	62	60	58	57	--	Yes
R44	67	68	72	Yes	69	69	68	68	68	--	No
R44A	53	54	57	No	56	56	56	56	56	--	No
R45/ST14	67	69	72	Yes	70	70	70	70	70	--	No
R46	62	64	69	Yes	64	63	63	62	62	--	No
R46A	56	57	60	No	57	56	56	55	55	--	No
R47	57	58	63	No	--	--	--	--	--	--	--
R48	54	56	58	No	--	--	--	--	--	--	--
R48A	51	52	54	No	--	--	--	--	--	--	--
R49/ST15	67	68	70	No	--	--	--	--	--	--	--
R49A	63	65	66	Yes	61	59	57	57	56	56	Yes
R50	67	68	70	Yes	61	59	58	57	57	56	Yes
R51	62	64	65	No	--	--	--	--	--	--	--
R51A	58	59	61	No	--	--	--	--	--	--	--
R52	66	68	69	No	--	--	--	--	--	--	--
R53/LT1	69	71	73	Yes	69	63	61	60	59	59	No
R53A	66	67	69	Yes	64	61	60	59	58	57	No
R54	64	66	67	Yes	60	59	57	56	55	54	No
R54A	57	59	61	No	56	57	56	56	55	55	No
R55/ST16	64	65	67	Yes	61	59	57	56	54	54	No
R56	58	60	61	No	61	59	57	56	55	54	No
R56A	57	59	60	No	58	59	58	58	58	58	No
R57	61	62	64	No	--	--	--	--	--	--	--

**Table 2.2.7-3. Traffic Noise Impact Analysis**

Receiver	Existing Noise Level (dBA)	Predicted Noise Level without Project (dBA)	Predicted Noise Level with Project (dBA)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with Abatement (dBA)						Reasonable and Feasible
					6-foot Wall	8-foot Wall	10-foot Wall	12-foot Wall	14-foot Wall	16-foot Wall	
R57A	60	61	62	No	--	--	--	--	--	--	--
R57B	61	63	64	No	--	--	--	--	--	--	--
R57C	62	63	64	No	--	--	--	--	--	--	--
R58	67	69	70	Yes	--	--	--	--	--	--	--
R59/ST17	62	63	63	No	--	--	--	--	--	--	--
dBA: A-weighted decibels. --: Not Evaluated 1 - Receivers that are noise measurement sites that are not located at an outdoor use area, or those subject to acquisitions, are not listed in this table because they do not represent a future outdoor use area and do not qualify for noise abatement.											

Source: Developed from the Noise Study Report, 2017.

### ***Build Alternative (Proposed Project)***

Under the Build Alternative, traffic noise modeling results range from 49 to 75 dBA  $L_{eq}(h)$ . Noise levels for the design-year 2045 Build Alternative are expected to increase by up to 8 dB over design-year no-build noise levels. Under future design-year 2045 build conditions, most of the receiver locations have traffic noise levels that were found to approach or exceed the applicable NAC. Where possible, noise abatement was considered at these receiver locations. Figures 2.2.7-2 through 2.2.7-4 show the locations that were analyzed, as well as receiver and soundwall locations.

Implementation of Caltrans Standard Special Provisions for vibration would ensure that the project has none to very little potential for ground-borne vibration or ground-borne noise levels during construction or operation of the project. The project is located near the Ontario International Airport but would not change the exposure of residents or other persons in the area to airport noise nor conflict with an airport land use plan; therefore, no airport-associated noise impacts would occur.

### ***Future Noise-Level Modeling***

Traffic noise impacts would occur along the various roadways even without project implementation, as shown in Table 2.2.7-4, because traffic noise levels would approach or exceed NAC; however, no noise abatement would be considered without the project.

### ***Short-Term Construction Impacts***

#### ***No Build Alternative***

No project improvements are proposed under the No Build Alternative; therefore, no construction impacts were analyzed for the No Build Alternative.

### ***Build Alternative (Proposed Project)***

During construction of the project, noise from construction activities may intermittently dominate the noise environment in the immediate area of construction. Noise associated with construction is controlled by Caltrans Standard Specification Section 14-8.02, "Noise Control."

No adverse noise impacts from construction are anticipated because construction would be conducted in accordance with Standard Specification 14-8.02, SSP 14-8.02, and applicable local noise standards.

Table 2.2.7-4. Predicted Future Traffic Noise and Soundwall Analysis – Alternative 2 (Build Alternative)

Receiver I.D.	Barrier I.D. and Location	Land Use <sup>2</sup>	Number of Dwelling Units	Existing Noise Level Leq(h), dBA <sup>1</sup>	I-10 Grove Avenue Project Future Worst Hour Noise Levels - L <sub>eq</sub> (h), dBA <sup>1</sup>																							
					Design Year No-Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year No-Build Noise Level Minus Existing Conditions, dB	Design Year Build Noise Level Minus No-Build Conditions, dB	Activity Category (NAC)	Impact Type <sup>3</sup>	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																	
											6 feet			8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R1/ST1 <sup>4</sup>	No Barrier	UND	--	68	70	70	2	0	G (--)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R1A		SFR	1	62	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R2		SFR	2	61	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R2A		UND	--	72	74	74	2	0	G (--)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R3/ST2		HOT	1	66	68	68	2	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R4-1		HOT	--	59	61	61	2	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R4-2		HOT	--	60	62	62	2	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R5/ST3 <sup>4</sup>		--	--	68	70	70	2	0	--	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R5A		UND	--	70	72	72	2	0	G (--)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R6	SW1	SFR	1	67	68	69	1	1	B (67)	A/E	64 <sup>T</sup>	5	1	63	6	1	62 <sup>R</sup>	7	1	61	8	1	61	8	1	61	8	1
R7	SW2	SFR	2	67	68	68	1	0	B (67)	A/E	67	1	0	65	3	0	65 <sup>T</sup>	3	0	64	4	0	64	4	0	63	5	2
R8	SW3	SFR	6	65	67	67	2	0	B (67)	A/E	64	3	0	64 <sup>T</sup>	3	0	64	3	0	63	4	0	63	4	0	63	4	0
R9	No Barrier	SFR	4	60	62	63	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R10		SFR	2	62	63	65	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R10A		SFR	2	55	56	57	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R11/ST4		SFR	3	59	61	62	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R12	SW4	SFR	1	69	70	71	1	1	B (67)	A/E	65	6	1	64	7	1	63 <sup>R,T</sup>	8	1	63	8	1	63	8	1	62	9	1
R12A		SFR	1	62	64	64	2	0	B (67)	NONE	63	1	0	63	1	0	62	2	0	62	2	0	62	2	0	62	2	0
R13	SW5	SFR	2	61	62	62	1	0	B (67)	NONE	60	2	0	60	2	0	60	2	0	60	2	0	59	3	0	-- <sup>5</sup>	--	--
R13A		SFR	1	71	73	73	2	0	B (67)	A/E	67	6	1	65	8	1	64 <sup>R,T</sup>	9	1	64	9	1	63	10	1	-- <sup>5</sup>	--	--
R13B		SFR	1	59	61	61	2	0	B (67)	NONE	58	3	0	57	4	0	56	5	1	56	5	1	56	5	1	-- <sup>5</sup>	--	--

Notes:

- 1 - Leq(h) are A-weighted, peak hour noise levels in decibels. Noise levels are calculated using PM peak hour traffic volumes, based on the results of long-term measurement site LT1 and the project traffic study.
- 2 - Land Use: SFR - single-family residence; MFR - multi-family residence; UND - undeveloped; SCH - educational center; COM - commercial; REC - recreational; HOT - hotel/motel; POW - place of worship; MH - mobile home.
- 3 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
- 4 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is acoustically representative of nearby outdoor use areas.
- 5 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from the edge of traveled way.

- 6 - Soundwalls were not analyzed at public parks maintained by the City of Ontario.
- W - Includes the benefit of an existing soundwall or property wall.
- T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
- R - Minimum height required to meet feasibility requirements and design goal.
- STxx - Short-term measurement / model calibration site.
- LTxx - Long-term measurement site.
- Int - Interior noise level determined using a building structure noise reduction of 25 dB, based on visual inspection of building and FHWA *Highway Traffic Noise: Analysis and Abatement Guidance* Table 6.
- - A soundwall was not evaluated for this receiver.

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Table 2.2.7-4. Predicted Future Traffic Noise and Soundwall Analysis – Alternative 2 (Build Alternative)

Receiver I.D.	Barrier I.D. and Location	Land Use <sup>2</sup>	Number of Dwelling Units	Existing Noise Level Leq(h), dBA <sup>1</sup>	I-10 Grove Avenue Project Future Worst Hour Noise Levels - L <sub>eq</sub> (h), dBA <sup>1</sup>																								
					Design Year No-Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year No-Build Noise Level Minus Existing Conditions, dB	Design Year Build Noise Level Minus No-Build Conditions, dB	Activity Category (NAC)	Impact Type <sup>3</sup>	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																		
											6 feet			8 feet			10 feet			12 feet			14 feet			16 feet			
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	
R14/ST5	No Barrier	SFR	1	67	68	68	1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R14A		SFR	1	59	61	61	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R15		MFR	2	72	73	73	1	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R16		MFR	2	72	74	74	2	0	B (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R16A		MFR	1	61	62	62	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R17-1	SW5A	MFR	2	62	64	64	2	0	B (67)	NONE	63	1	0	60	4	0	59	5	2	59	5	2	59	5	2	59	5	2	
R17-2		MFR	2	71	72	72	1	0	B (67)	A/E	72	0	0	72	0	0	72	0	0	70	2	0	68	4	0	66 <sup>T</sup>	6	2	
R17A/ST5A		MFR	2	70	72	72	2	0	B (67)	A/E	72	0	0	71	1	0	70	2	0	68	4	0	67	5	2	66 <sup>T</sup>	6	2	
R18/ST6	No Barrier	MFR	8	61	62	63	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R19	SW5C	MFR	1	71	73	73	2	0	B (67)	A/E	66 <sup>R</sup>	7	1	64 <sup>R,T</sup>	9	1	62	11	1	61	12	1	60	13	1	60	13	1	
R19A	SW5B	MFR	1	71	73	73	2	0	B (67)	A/E	66 <sup>R</sup>	7	1	64	9	1	63 <sup>R,T</sup>	10	1	62	11	1	61	12	1	61	12	1	
R20 <sup>4</sup>	No Barrier	--	--	71	72	72	1	0	--	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R21 <sup>Ext</sup>		POW	--	72	74	74	2	0	--	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R21 <sup>Int</sup>		POW	1	47	49	49	2	0	D (52)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R21A		SFR	1	54	56	56	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
R22	No Barrier <sup>6</sup>	REC	1	72	74	74	2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		

**Notes:**

- 1 - Leq(h) are A-weighted, peak hour noise levels in decibels. Noise levels are calculated using PM peak hour traffic volumes, based on the results of long-term measurement site LT1 and the project traffic study.
- 2 - Land Use: SFR - single-family residence; MFR - multi-family residence; UND - undeveloped; SCH - educational center; COM- commercial; REC - recreational; HOT - hotel/motel; POW - place of worship; MH - mobile home.
- 3 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
- 4 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is acoustically representative of nearby outdoor use areas.
- 5 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from the edge of traveled way.

- 6 - Soundwalls were not analyzed at public parks maintained by the City of Ontario.
- W - Includes the benefit of an existing soundwall or property wall.
- T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
- R - Minimum height required to meet feasibility requirements and design goal.
- STxx - Short-term measurement / model calibration site.
- LTxx - Long-term measurement site.
- Int - Interior noise level determined using a building structure noise reduction of 25 dB, based on visual inspection of building and FHWA *Highway Traffic Noise: Analysis and Abatement Guidance* Table 6.
- - A soundwall was not evaluated for this receiver.



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Table 2.2.7-4. Predicted Future Traffic Noise and Soundwall Analysis – Alternative 2 (Build Alternative)

Receiver I.D.	Barrier I.D. and Location	Land Use <sup>2</sup>	Number of Dwelling Units	Existing Noise Level Leq(h), dBA <sup>1</sup>	I-10 Grove Avenue Project Future Worst Hour Noise Levels - L <sub>eq</sub> (h), dBA <sup>1</sup>																							
					Design Year No-Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year No-Build Noise Level Minus Existing Conditions, dB	Design Year Build Noise Level Minus No-Build Conditions, dB	Activity Category (NAC)	Impact Type <sup>3</sup>	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																	
											6 feet			8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R23 <sup>W</sup>	SW6	SFR	1	61	64	64	3	0	B (67)	NONE	64	0	0	62	2	0	61	3	0	60	4	0	60	4	0	-- <sup>5</sup>	--	--
R23A		SFR	1	60	62	62	2	0	B (67)	NONE	62	0	0	62	0	0	62	0	0	62	0	0	61	1	0	-- <sup>5</sup>	--	--
R24/ST8 <sup>4</sup>		--	--	68	70	70	2	0	--	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	-- <sup>5</sup>	--	--	
R24A		SFR	2	68	69	70	1	1	B (67)	A/E	64	6	2	61 <sup>R,T</sup>	9	2	59	11	2	57	13	2	56	14	2	-- <sup>5</sup>	--	--
R25		SFR	4	62	64	64	2	0	B (67)	NONE	64	0	0	61	3	0	60	4	0	58	6	4	57	7	4	-- <sup>5</sup>	--	--
R25A		SFR	4	71	72	73	1	1	B (67)	A/E	67	6	4	64 <sup>R,T</sup>	9	4	62	11	4	60	13	4	59	14	4	-- <sup>5</sup>	--	--
R25B		SFR	1	56	57	59	1	2	B (67)	NONE	57	2	0	56	3	0	55	4	0	55	4	0	54	5	1	-- <sup>5</sup>	--	--
R25C		SFR	1	57	58	60	1	2	B (67)	NONE	58	2	0	57	3	0	56	4	0	55	5	1	54	6	1	-- <sup>5</sup>	--	--
R26/ST9		SFR	4	64	65	66	1	1	B (67)	A/E	66	0	0	64 <sup>T</sup>	2	0	62	4	0	60 <sup>R</sup>	6	4	59	7	4	-- <sup>5</sup>	--	--
R27		SFR	5	63	65	69	2	4	B (67)	A/E	67	2	0	64 <sup>R,T</sup>	5	5	62	7	5	61	8	5	59	10	5	-- <sup>5</sup>	--	--
R27A		SFR	1	58	59	60	1	1	B (67)	NONE	59	1	0	59	1	0	58	2	0	57	3	0	57	3	0	-- <sup>5</sup>	--	--
R28/ST10		SFR	1	70	72	74	2	2	B (67)	A/E	71	3	0	71	3	0	71	3	0	71	3	0	71	3	0	-- <sup>5</sup>	--	--
R28A		SFR	1	62	63	64	1	1	B (67)	NONE	63	1	0	63	1	0	63	1	0	63	1	0	63	1	0	-- <sup>5</sup>	--	--
R29/ST11	No Barrier <sup>6</sup>	REC	1	66	68	69	2	1	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R30		REC	1	66	68	68	2	0	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R30A		REC	1	61	63	63	2	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R31	No Barrier	SFR	3	53	54	54	1	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R32		SFR	4	49	51	51	2	0	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R32A		UND	--	72	73	75	1	2	G ( -- )	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R33		--	--	69	70	72	1	2	--	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R33A		UND	--	70	71	74	1	3	G ( -- )	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R34/ST12		HOT	1	67	68	68	1	0	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R35		--	--	71	72	72	1	0	--	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R36		COM	1	66	67	68	1	1	E (72)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Notes:

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- 2 - Land Use: SFR - single-family residence; MFR - multi-family residence; UND - undeveloped; SCH - educational center; COM- commercial; REC - recreational; HOT - hotel/motel; POW - place of worship; MH - mobile home.
- 3 - S = Substantial Increase (12 dBA or more); A/E = Approach or exceed NAC.
- 4 - This noise measurement site was chosen for monitoring purposes and was not located at an outdoor use area; however, this site is acoustically representative of nearby outdoor use areas.
- 5 - Per the Highway Design Manual, the maximum height of a noise barrier should not exceed 14 feet in height when located 15 feet or less from the edge of traveled way.

- 6 - Soundwalls were not analyzed at public parks maintained by the City of Ontario.
- W - Includes the benefit of an existing soundwall or property wall.
- T - Minimum height required to block the line-of-sight from the receiver to truck exhaust stacks.
- R - Minimum height required to meet feasibility requirements and design goal.
- STxx - Short-term measurement / model calibration site.
- LTxx - Long-term measurement site.
- Int - Interior noise level determined using a building structure noise reduction of 25 dB, based on visual inspection of building and FHWA *Highway Traffic Noise: Analysis and Abatement Guidance* Table 6.
- - A soundwall was not evaluated for this receiver.

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Table 2.2.7-4. Predicted Future Traffic Noise and Soundwall Analysis – Alternative 2 (Build Alternative)

Receiver I.D.	Barrier I.D. and Location	Land Use <sup>2</sup>	Number of Dwelling Units	Existing Noise Level Leq(h), dBA <sup>1</sup>	I-10 Grove Avenue Project Future Worst Hour Noise Levels - L <sub>eq</sub> (h), dBA <sup>1</sup>																							
					Design Year No-Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year No-Build Noise Level Minus Existing Conditions, dB	Design Year Build Noise Level Minus No-Build Conditions, dB	Activity Category (NAC)	Impact Type <sup>3</sup>	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																	
											6 feet			8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R37/ST13	SW7	MH	4	65	67	69	2	2	B (67)	A/E	62	7	4	61 <sup>R,T</sup>	8	4	60	9	4	59	10	4	58	11	4	58	11	4
R38		MH	4	66	67	70	1	3	B (67)	A/E	64	6	4	62 <sup>R,T</sup>	8	4	61	9	4	60	10	4	59	11	4	58	12	4
R39		MH	5	57	58	61	1	3	B (67)	NONE	59	2	0	58	3	0	58	3	0	57	4	0	57	4	0	56	5	5
R39A		MH	4	57	58	61	1	3	B (67)	NONE	57	4	0	57	4	0	56	5	4	56	5	4	55	6	4	55	6	4
R40		MH	4	64	65	67	1	2	B (67)	A/E	62	5	4	61 <sup>R,T</sup>	6	4	60	7	4	60	7	4	59	8	4	59	8	4
R40A		MH	3	55	56	58	1	2	B (67)	NONE	56	2	0	56	2	0	56	2	0	56	2	0	56	2	0	56	2	0
R41	SW8	MFR	2	58	59	62	1	3	B (67)	NONE	62	0	0	62	0	0	62	0	0	61	1	0	61	1	0	-- <sup>5</sup>	--	--
R41A		MFR	3	55	57	61	2	4	B (67)	NONE	59	2	0	59	2	0	58	3	0	58	3	0	58	3	0	-- <sup>5</sup>	--	--
R42		MFR	3	64	65	72	1	7	B (67)	A/E	67	5	3	62 <sup>R,T</sup>	10	3	59	13	3	58	14	3	57	15	3	-- <sup>5</sup>	--	--
R43	SW9	MFR	3	64	65	73	1	8	B (67)	A/E	67	6	3	62 <sup>R,T</sup>	11	3	60	13	3	58	15	3	57	16	3	-- <sup>5</sup>	--	--
R44		MFR	3	67	68	72	1	4	B (67)	A/E	69	3	0	69 <sup>T</sup>	3	0	68	4	0	68	4	0	68	4	0	-- <sup>5</sup>	--	--
R44A		MFR	1	53	54	57	1	3	B (67)	NONE	56	1	0	56	1	0	56	1	0	56	1	0	56	1	0	-- <sup>5</sup>	--	--
R45/ST14	SW10	SFR	1	67	69	72	2	3	B (67)	A/E	70	2	0	70 <sup>T</sup>	2	0	70	2	0	70	2	0	70	2	0	-- <sup>5</sup>	--	--
R46		SFR	1	62	64	69	2	5	B (67)	A/E	64	5	1	63	6	1	63 <sup>T</sup>	6	1	62 <sup>R</sup>	7	1	62	7	1	-- <sup>5</sup>	--	--
R46A		SFR	1	56	57	60	1	3	B (67)	NONE	57	3	0	56	4	0	56	4	0	55	5	1	55	5	1	-- <sup>5</sup>	--	--

Notes:

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Table 2.2.7-4. Predicted Future Traffic Noise and Soundwall Analysis – Alternative 2 (Build Alternative)

Receiver I.D.	Barrier I.D. and Location	Land Use <sup>2</sup>	Number of Dwelling Units	Existing Noise Level Leq(h), dBA <sup>1</sup>	I-10 Grove Avenue Project Future Worst Hour Noise Levels - L <sub>eq</sub> (h), dBA <sup>1</sup>																							
					Design Year No-Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year Build Noise Level Leq(h), dBA <sup>1</sup>	Design Year No-Build Noise Level Minus Existing Conditions, dB	Design Year Build Noise Level Minus No-Build Conditions, dB	Activity Category (NAC)	Impact Type <sup>3</sup>	Noise Prediction with Barrier, Barrier Insertion Loss (I.L.), and Number of Benefitted Receivers (NBR)																	
											6 feet			8 feet			10 feet			12 feet			14 feet			16 feet		
											Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR	Leq(h)	I.L.	NBR
R47	No Barrier	MFR	1	57	58	63	1	5	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R48		SFR	1	54	56	58	2	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R48A		SFR	1	51	52	54	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R49/ST15		--	--	67	68	70	1	2	--	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R49A	SW11	SFR	2	63	65	66	2	1	B (67)	A/E	61	5	2	59 <sup>R,T</sup>	7	2	57	9	2	57	9	2	56	10	2	56	10	2
R50		SFR	3	67	68	70	1	2	B (67)	A/E	61 <sup>T</sup>	9	3	59 <sup>R</sup>	11	3	58	12	3	57	13	3	57	13	3	56	14	3
R51	No Barrier	SFR	6	62	64	65	2	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R51A		SFR	2	58	59	61	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R52		SFR	--	66	68	69	2	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R53/LT1	SW12	SFR	1	69	71	73	2	2	B (67)	A/E	69	4	0	63 <sup>R,T</sup>	10	1	61	12	1	60	13	1	59	14	1	59	14	1
R53A		SFR	4	66	67	69	1	2	B (67)	A/E	64	5	4	61 <sup>R,T</sup>	8	4	60	9	4	59	10	4	58	11	4	57	12	4
R54		SFR	5	64	66	67	2	1	B (67)	A/E	60	7	5	59 <sup>R,T</sup>	8	5	57	10	5	56	11	5	55	12	5	54	13	5
R54A		SFR	1	57	59	61	2	2	B (67)	NONE	56	5	1	57	4	0	56	5	1	56	5	1	55	6	1	55	6	1
R55/ST16		SFR	5	64	65	67	1	2	B (67)	A/E	61 <sup>T</sup>	6	5	59 <sup>R</sup>	8	5	57	10	5	56	11	5	54	13	5	54	13	5
R56		SFR	2	58	60	61	2	1	B (67)	NONE	61	0	0	59	2	0	57	4	0	56	5	2	55	6	2	54	7	2
R56A		SFR	2	57	59	60	2	1	B (67)	NONE	58	2	0	59	1	0	58	2	0	58	2	0	58	2	0	58	2	0
R57	No Barrier	SFR	1	61	62	64	1	2	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
R57A		SFR	1	60	61	62	1	1	B (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R57B	No Barrier <sup>6</sup>	REC	1	61	63	64	2	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R57C		REC	1	62	63	64	1	1	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R58		REC	1	67	69	70	2	1	C (67)	A/E	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
R59/ST17		REC	1	62	63	63	1	0	C (67)	NONE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

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However, construction noise can vary greatly depending on the construction process, type and condition of equipment used, and layout of the construction site. Many of these factors are traditionally left to the contractor's discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment. Temporary construction noise impacts would be unavoidable at areas located immediately adjacent to the proposed project alignment.

#### **2.2.7.4 Avoidance, Minimization, and/or Mitigation Measures**

Based on the studies completed to date, Caltrans intends to incorporate noise abatement minimization measures in the form of barriers at:

- Soundwall SW-1 would be approximately 73 feet in length and 10 feet in height and would be located within the private property of the single-family residence located at 1179 East Holt Boulevard, along the side and back yard. Calculations based on preliminary design data show that Soundwall SW-1 would reduce noise levels by 7 dBA for 1 receptor and is estimated to cost \$43,900.
- Soundwall SW-5C would be approximately 145 feet in length and 8 feet in height and would be located along the property line of the multi-family residence located at 549 Grove Avenue. Calculations based on preliminary design data show that Soundwall SW-5C would reduce noise levels by 9 dBA for 1 receptor and is estimated to cost \$65,200.
- Soundwall SW-6 on the eastern property line between the residences on Parkside Avenue and Grove Avenue, with length and average height of 1,243 and 12 feet, respectively. Calculations based on preliminary design data show that the barriers would reduce noise levels by up to 9 dBA for 20 residences at a cost of \$722,400.
- Soundwall SW-7 on the western and southern property lines between the mobile homes at the Star Trailer Park community at 1212 East Nocta Street and Grove Avenue, with length and average height of 332 and 8 feet, respectively. Calculations based on preliminary design data show that the barriers would reduce noise levels by up to 8 dBA for 12 receptors at a cost of \$148,600.
- Soundwall SW-8 on the western property line between the residences at 250 North Grove Avenue along the east side of Grove Avenue, with length and average height of 270 and 8 feet, respectively. Calculations based on preliminary design data show that the barriers would reduce noise levels by 10 dBA for 3 receptors at a cost of \$125,000.
- Soundwall SW-9 on the western property line between the residences and Grove Avenue, with length and average height of 264 and 8 feet, respectively.

Calculations based on preliminary design data show that the barriers would reduce noise levels by up to 11 dBA for 3 receptors at a cost of \$110,400.

- Soundwall SW-11 on the western property line between the residences on Flora Street and east of Grove Avenue, with length and average height of 356 and 8 feet, respectively. Calculations based on preliminary design data show that the barriers would reduce noise levels by up to 11 dBA for 5 receptors at a cost of \$159,200.
- Soundwall SW-12 on the western property lines between the residences on the west side of Alameda Avenue and east of Grove Avenue, with length and average height of 1,042 and 8 feet, respectively. Calculations based on preliminary design data show that the barriers would reduce noise levels by up to 10 dBA for 15 receptors at a cost of \$484,400.

Minimization Measure N-1, which is related to soundwall construction, may change based on input received from the public. If, during final design, conditions have substantially changed, noise abatement may not be necessary. The final decision on noise abatement will be made upon completion of the project design.

For the Build Alternative, Soundwalls SW-1 through SW-12 (including SW-5A, SW-5B, and SW-5C) were evaluated on private property lines in the proposed project corridor, which was the optimum location for breaking the line of site between Grove Avenue and impacted receiver locations. All 15 soundwalls were evaluated in 2-foot increments ranging in height from 6 to 16 feet for feasibility. The results of the soundwall analysis are provided below.

### ***Soundwall SW-1***

The future build noise level at Receiver R6, representing a single-family residence, is predicted to be 69 dBA  $L_{eq}(h)$ . This receiver would experience an estimated 1-dB increase from existing to no-build conditions and a 1-dB increase in noise levels from no-build to build conditions; however, because the predicted build noise level in the design year exceeds 67 dBA  $L_{eq}(h)$  for NAC Activity Category B, noise abatement was evaluated.

Soundwall SW-1 was evaluated for Receiver R6, representing one single-family residence. This residence has driveway access via E. Holt Boulevard; therefore, Soundwall SW-1 was placed on the eastern and northern property lines between the residence and Grove Avenue. Soundwall SW-1 was found to be feasible and break the line of sight of an 11.5-foot-high truck exhaust stack at a minimum height of 10 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans

Traffic Noise Analysis Protocol, is \$92,000. The current estimated cost is \$43,900; therefore, the soundwall would be reasonable.

### ***Soundwall SW-2***

The estimated future build noise level for Receiver R7 is expected to be 68 dBA  $L_{eq}(h)$  in the design-year. There is a 1-dB increase from existing to no-build conditions and no estimated increase in noise levels from no-build to build conditions; however, because the predicted noise level in the design-year exceeds 67 dBA  $L_{eq}(h)$  for NAC Activity Category B, traffic noise impacts are predicted at this receiver, and noise abatement was evaluated.

Soundwall SW-2 was evaluated for Receiver R7, representing two single-family residences. These residences have driveway access via E. Nocta Street; therefore, Soundwall SW-2 was placed on the eastern and southern property lines between the residences and Grove Avenue. At a maximum height of 16 feet, Soundwall SW-2 provides feasible noise reduction of 5 dB, but it would not achieve the Caltrans acoustical design goal of 7-dB noise reduction for at least one benefited receptor; therefore, the soundwall would not be feasible.

### ***Soundwall SW-3***

Build noise levels at Receiver R8 are predicted to be 67 dBA  $L_{eq}(h)$ . Build noise levels are expected to increase by 2 dB from existing conditions and no increase in noise levels from no-build to build conditions. Predicted noise levels in the design-year meets the 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-3 was evaluated for Receiver R8, representing seven single-family residences. Soundwall SW-3 was placed on the eastern property lines between the residential homes and Grove Avenue. Soundwall SW-3 would not provide feasible noise reduction of at least 5 dB at any evaluated height; therefore, the soundwall would not be feasible.

### ***Soundwall SW-4***

Noise modeling results indicate that future build noise levels experienced at Receiver R12 are predicted to be 71 dBA  $L_{eq}(h)$ . No-build noise levels are expected to increase by 1 dB from existing conditions and a 1-dB increase in noise levels from no-build to build conditions. The predicted noise level in the design-year build condition exceeds 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-4 was evaluated for Receiver R12, representing a single-family residence. Soundwall SW-4 was placed to the maximum extent of the eastern and southern property lines without restricting driveway access. Soundwall SW-4 was found to be feasible at a minimum height of 6 feet. To meet the Caltrans acoustical design goal of a 7-dB reduction to break the line of sight of an 11.5-foot-high truck exhaust stack, Soundwall SW-4 is required to be at a minimum height of 10 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$92,000. The current estimated cost is \$71,300; therefore, the soundwall would be reasonable. However, Soundwall SW-4 was found to be infeasible due to nonacoustical factors related to the City of Ontario Development and Subdivision Regulations. These regulations state that the maximum height of a fence on a front property line is 3 feet, and a 6-foot-tall fence may be constructed, provided it is set back 5 feet from the property line and at least 90 percent of the vertical surface above 3 feet is non-view-obstructing.

#### ***Soundwall SW-5***

The traffic noise modeling results indicate that build noise levels at Receivers R13, R13A, and R13B are predicted to range from 61 dBA to 73 dBA  $L_{eq}(h)$ . Noise levels from existing to no-build conditions would increase by a maximum of 2 dB, and noise levels from no-build to build conditions would not increase. The predicted noise level at Receiver R13A during the design-year exceeds 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-5 was evaluated for Receiver R13A, representing one of the single-family residences. Soundwall SW-5 was placed on the northern and eastern property lines of two residential properties at Receivers R13A and R13B. Soundwall SW-5 was found to be feasible at a minimum height of 6 feet. To meet the Caltrans acoustical design goal of a 7-dB reduction at one or more benefited receptors and to break the line of sight of an 11.5-foot-high truck exhaust stack, Soundwall SW-5 is required to be at a minimum height of 10 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$184,000. The current estimated cost is \$95,700; therefore, the soundwall would be reasonable. However, Soundwall SW-5 was found to be infeasible due to nonacoustical factors related to the City of Ontario Development and Subdivision Regulations. These state that the maximum height of a fence on a front property line is 3 feet, and a 6-foot-tall fence may be constructed, provided it is set back 5 feet from the property line and at least 90 percent of the vertical surface above 3 feet is non-view-obstructing.

### ***Soundwall SW-5A***

Noise modeling results indicate that design-year build noise levels at Receivers R17-1, R17-2, and R17A are predicted to range from 64 to 72 dBA  $L_{eq}(h)$ . Noise levels from existing to no-build conditions are predicted to increase by a maximum of 2 dB, while noise levels from no-build to build conditions are not expected to increase. The predicted noise levels for the design-year with-project conditions exceed the 67 dBA  $L_{eq}(h)$  NAC for Activity Category B at Receivers R17-2 and R17A; therefore, noise abatement must be evaluated.

Soundwall SW-5A was evaluated along the property line of the six multi-family residences represented by Receivers R17-1, R17-2, and R17A and would be located west of Grove Avenue. This soundwall would provide feasible noise reduction for the frequent outdoor human use areas represented by Receivers R17-2 and R17A at minimum heights of 16 and 14 feet, respectively. However, Soundwall SW-5A would not achieve the Caltrans acoustical design goal of at least 7 dB of noise reduction for at least one benefited receptor; therefore, the soundwall would not be feasible.

### ***Soundwall SW-5B***

Noise modeling results indicate the future build noise level at Receiver R19A, which represents one multi-family residence, is predicted to be 73 dBA  $L_{eq}(h)$ . The noise level from existing to no-build conditions is predicted to increase by 2 dB at Receiver R19A; however, there is no difference in predicted noise level between the no-build and build conditions. Because the predicted worst-hour traffic noise level exceeds the 67-dBA  $L_{eq}(h)$  NAC for this Activity Category B land use, consideration of noise abatement is required.

Soundwall SW-5B would provide feasible noise reduction for the multi-family residence represented by Receiver R19A. This soundwall would be placed at the eastern property line of the property. Soundwall SW-5B would provide feasible noise reduction and achieve the Caltrans acoustical design goal of at least 7 dB of noise reduction at a minimum height of 6 feet; however, to break the line-of-sight to an 11.5-foot-high truck exhaust stack, the height of Soundwall SW-5B would need to be increased to 10 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$92,000. The current estimated cost is \$97,600. Therefore, the soundwall would not be reasonable.

### ***Soundwall SW-5C***

The design-year build traffic noise level at Receiver R19 is predicted to be 73 dBA  $L_{eq}(h)$ . The worst-hour exterior noise level from existing to no-build conditions is

predicted to increase by 2 dB, and the noise level from no-build to build conditions is predicted not to increase. Predicted traffic noise levels exceed the 67-dBA  $L_{eq}(h)$  NAC at Receiver R19, which is an Activity Category B land use; therefore, noise abatement must be considered.

Soundwall SW-5C would provide feasible noise reduction for the formalized outdoor activity area of the multi-family residence represented by Receiver R19. This soundwall would be located on the eastern property line of the property at Receiver R19. Soundwall SW-5C would provide feasible noise reduction and achieve the Caltrans acoustical design goal of at least 7 dB of noise reduction at a minimum height of 6 feet. However, to break the line-of-sight to an 11.5-foot-high truck exhaust stack, the height of Soundwall SW-5C would need to be increased to 8 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$92,000. The current estimated cost is \$65,200; therefore, the soundwall would be reasonable.

#### ***Soundwall SW-6***

Noise modeling results indicate that design-year build noise levels at Receivers R23 through R28A are predicted to range from 59 dBA to 74 dBA  $L_{eq}(h)$ . Noise levels from existing to no-build conditions would increase by up to 3 dB, and noise levels from no-build to build conditions would increase by 2 dB. The predicted noise level in the design-year approaches or exceeds 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-6 was evaluated for Receivers R23 to R28, representing 25 single-family residences. Soundwall SW-6 was placed on the eastern property lines between the residences and Grove Avenue. Soundwall SW-6 was found to be feasible and break the line of sight of an 11.5-foot-high truck exhaust stack at a minimum height of 8 feet. To meet the Caltrans acoustical design goal of a 7-dB reduction, Soundwall SW-6 is required to be at a minimum height of 12 feet in front of the residences represented by Receivers R26 and R27. It is not possible to provide feasible noise reduction for the single-family residence represented by Receiver R28 at any height analyzed. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$1,840,000. The current estimated cost of a 12-foot-tall wall is \$722,400; therefore, the soundwall would be reasonable.

#### ***Soundwall SW-7***

Noise modeling results indicate that design-year build noise levels at Receivers R37 and R40A are predicted to range from 58 dBA to 70 dBA  $L_{eq}(h)$ . Noise levels from

existing to no-build conditions would increase by up to 4 dB, and noise levels from no-build to build conditions would increase by up to 2 dB. Predicted noise levels in the design-year exceed 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-7 was evaluated for Receivers R37, R38, and R40, representing 12 mobile homes within the Star Trailer Park community. Soundwall SW-7 was placed on the western and southern property lines between the mobile homes and Grove Avenue. To meet the Caltrans acoustical design goal of a 7-dB reduction and to break the line of sight of an 11.5-foot-high truck exhaust stack, Soundwall SW-7 is required to be at a minimum height of 8 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$1,104,000. The current estimated cost is \$148,600; therefore, the soundwall would be reasonable.

#### ***Soundwall SW-8***

Noise modeling results indicate that design-year build noise levels at Receiver R42 are predicted to be 72 dBA  $L_{eq}(h)$ . No-build noise levels are expected to increase by 1 dB from existing conditions. There is an estimated 7-dB increase in noise levels from no-build to build conditions. The predicted noise level in the design year exceeds 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-8 was evaluated for Receiver R42, representing three multi-family residences. The soundwall would also provide some benefit to Receiver R41. Soundwall SW-8 was placed on the western property line between the residences and Grove Avenue. Soundwall SW-8 was found to be feasible at a minimum height of 6 feet. To meet the Caltrans acoustical design goal of a 7-dB reduction, Soundwall SW-8 is required to be at a minimum height of 8 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$276,000. The current estimated cost is \$125,000; therefore, the soundwall would be reasonable.

#### ***Soundwall SW-9***

The traffic noise modeling results indicate that design-year build noise levels at Receivers R43 and R44A are predicted to range from 57 dBA to 73 dBA  $L_{eq}(h)$ . Noise levels from existing to no-build conditions would increase up to 1 dB, and noise levels from no-build to build conditions would increase up to 8 dB. Predicted noise levels in the design year exceed 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.



Soundwall SW-9 was evaluated for Receiver R43, representing three multi-family residences. Soundwall SW-9 was placed on the western property line between the residences and Grove Avenue. Soundwall SW-9 was found to be feasible at a minimum height of 6 feet. To meet the Caltrans acoustical design goal of a 7-dB reduction, Soundwall SW-9 is required to be at a minimum height of 8 feet. Analysis results indicate that Soundwall SW-9 would not provide feasible noise reduction at impacted Receiver R44, even at the maximum height of 14 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$276,000. The current estimated cost is \$110,400; therefore, the soundwall would be reasonable.

#### ***Soundwall SW-10***

The traffic noise modeling results indicate that design-year build noise levels at Receivers R45 through R46A are predicted to range from 60 dBA to 72 dBA  $L_{eq}(h)$ . Noise levels from existing to no-build conditions would increase up to 2 dB, and noise levels from no-build to build conditions would increase up to 5 dB. Predicted noise levels in the design year exceed 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-10 was evaluated for Receiver R46, representing a single-family residence. Soundwall SW-10 was placed on the western and northern property lines between the residence and Grove Avenue. Although Soundwall SW-10 would provide feasible noise reduction at a minimum height of 6 feet, a height of 12 feet is needed for Soundwall SW-10 to meet the Caltrans acoustical design goal of a 7-dB reduction. The analysis results indicate that Soundwall SW-10 would not provide feasible noise reduction at impacted Receiver R45, even at the maximum height of 14 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$92,000. The current estimated cost is \$119,700; therefore, the soundwall would not be reasonable.

#### ***Soundwall SW-11***

Noise modeling results indicate that design-year noise levels at Receivers R49A and R50 are predicted to be 61 and 70 dBA  $L_{eq}(h)$ , respectively. No-build noise levels are expected to increase by 3 dB from existing to no-build conditions, and there is an estimated 2-dB increase in noise levels from no-build to build conditions. The predicted noise level in the design year exceeds 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-11 was evaluated for Receivers R49A and R50, representing five single-family residences. Soundwall SW-11 was placed on the western property line between the residences and Grove Avenue. Soundwall SW-11 was found to be feasible and meet the Caltrans acoustical design goal of a 7-dB reduction at a minimum height of 6 feet. Soundwall SW-11 breaks the line of sight of an 11.5-foot-high truck exhaust stack at a minimum height of 8 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$460,000. The current estimated cost is \$159,200; therefore, the soundwall would be reasonable.

### ***Soundwall SW-12***

Noise modeling results indicate that design-year build noise levels at Receivers R53 through R56A are predicted to range from 60 dBA to 73 dBA  $L_{eq}(h)$ . Noise levels from existing to no-build conditions would increase up to 2 dB, and noise levels from no-build to build conditions would increase up to 2 dB. Predicted noise levels in the design year meet or exceed 67 dBA  $L_{eq}(h)$  for NAC Activity Category B; therefore, noise abatement was evaluated.

Soundwall SW-12 was evaluated for Receivers R53, R53A, R54, and R55, representing 15 single-family residences. Soundwall SW-12 was placed on the western property lines between the residences and Grove Avenue. Soundwall SW-12 was found to be feasible and meet the Caltrans acoustical design goal of a 7-dB reduction at a minimum height of 8 feet. The total cost allowance for this soundwall, calculated in accordance with the Caltrans Traffic Noise Analysis Protocol, is \$1,472,000. The current estimated cost is \$484,400. Therefore, the soundwall would be reasonable.

The noise abatement evaluation indicates that feasible soundwalls placed at the modeled locations in the Grove Avenue corridor require heights ranging from 6 to 16 feet. Soundwalls SW-1, SW-4, SW-5, SW-5B, and SW-5C through SW-12 were found to be feasible and meet the Caltrans design criteria at heights ranging from 6 to 16 feet. Soundwalls SW-2, SW-3, and SW-5A do not meet the Caltrans acoustical design goal at any evaluated height. Soundwalls SW-1, SW-5C, SW-6, SW-7, SW-8, SW-9, SW-11, and SW-12 were found to be both feasible and reasonable.

The design of the feasible soundwalls presented in the NSR that meet the Caltrans design goal are preliminary and have been conducted at a level appropriate for environmental review and not for the final design of the project. Preliminary information on the physical location, length, and height of soundwalls is provided in the NSR. If pertinent parameters change substantially during the final design,

preliminary soundwall designs may be modified or eliminated from the final project. A final decision on the construction of noise abatement will be made upon completion of the project design.

The following noise abatement minimization measure would apply to the project:

**N-1:** Based on the studies completed, Caltrans and the City will incorporate noise abatement in the form of soundwalls that meet the criteria for reasonableness and feasibility. The recommended soundwalls would reduce the traffic noise by at least 5 dB at the impacted receivers, would meet the design goal by providing a 7-dB reduction for at least one receiver, and would cost less than the reasonable cost allowance. If, during final design, conditions have substantially changed, noise abatement may change or not be necessary, depending on the results of the updated noise analysis using final design information. The final decision of the noise abatement will be made upon completion of the project design and the public involvement process.

During circulation of the draft environmental document, soundwall surveys will be conducted with all property owners and residents of benefited receptors located with the footprint of the Build Alternative. If more than 50 percent of the responding benefited receptors oppose the soundwall, then the soundwall will not be constructed.

### ***Construction Noise Abatement***

There are many measures that can be taken to minimize noise intrusion without placing unreasonable constraints on the construction process or substantially increasing costs. The following are possible control measures that can be implemented under standard condition SC-CI-23 to minimize noise disturbances at sensitive areas during construction:

- All equipment shall have sound-control devices no less effective than those provided on the original equipment. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the jobsite without an appropriate muffler.
- Construction methods or equipment that will provide the lowest level of noise impact (e.g., avoid impact pile driving near residences and consider alternative methods that are also suitable for the soil condition) shall be used.

- Idling equipment shall be turned off.
- Truck loading, unloading, and hauling operations shall be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest possible extent.
- Construction activities shall be coordinated to build recommended permanent soundwalls during the first phase of construction to protect sensitive receivers from subsequent construction noise, dust, light, glare, and other impacts, to the extent feasible.
- Temporary noise barriers shall be used and relocated, as needed, to protect sensitive receivers against excessive noise from construction activities involving large equipment and by small items such as compressors, generators, pneumatic tools, and jackhammers. Noise barriers can be made of heavy plywood, moveable insulated sound blankets, or other best available control techniques.
- Newer equipment with improved noise muffling shall be used, and all equipment items shall have the manufacturers' recommended noise abatement measures (e.g., mufflers, engine covers, and engine vibration isolators) intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment shall be inspected at periodic intervals to ensure proper maintenance and presence of noise-control devices (e.g., mufflers and shrouding).
- Construction activities shall be minimized in residential areas during evening, nighttime, weekend, and holiday periods. Noise impacts are typically minimized when construction activities are performed during daytime hours; however, nighttime construction may be desirable (e.g., in commercial areas where businesses may be disrupted during daytime hours) or necessary to avoid major traffic disruption. Coordination with the City shall occur before construction can be performed in noise-sensitive areas.
- Construction laydown or staging areas shall be selected in industrially zoned districts. If industrially zoned areas are not available, commercially zoned areas may be used, or locations that are at least 100 feet from any noise-sensitive land use (e.g., residences).
- Contractor shall prepare a Noise and Vibration Monitoring and Mitigation Plan by a qualified Acoustical Engineer and submit it for approval. The Plan must outline noise and vibration monitoring procedures at predetermined noise- and vibration-sensitive sites, as well as historic properties. The Plan also must

include calculated noise and vibration levels for various construction phases and mitigation measures that may be needed to meet the project specifications. The Contractor shall not start any construction work or operate any noise-generating construction equipment at the construction site before approval of the Plan. The Plan must be updated every 3 months or sooner if there are any changes to the construction activities.

Certain construction activities could cause intermittent localized concern from vibration in the project area. Processes such as earth moving with bulldozers, the use of vibratory compaction rollers, impact pile driving, demolitions, or pavement braking may cause construction-related vibration impacts such as human annoyance or, in some cases, building damage. There are cases where it may be necessary to use this type of equipment near residential buildings. The following are procedures that can be used to minimize the potential impacts from construction vibration:

- Restrict the hours of vibration-intensive equipment or activities, such as vibratory rollers, so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible would be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.
- Conduct vibration monitoring during vibration-intensive activities.

A combination of the mitigation techniques for equipment vibration control, as well as administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity. Application of these measures as standard condition SC-CI-24 will reduce the construction impacts; however, temporary increases in vibration may occur at some locations.

## **2.2.8 Energy**

Energy is consumed during construction and operation of transportation projects. This section provides an assessment of the potential impacts of the proposed project on transportation-related energy consumption in the study corridor. The analysis considers direct (operational) and indirect (construction and maintenance) energy requirements.

### **2.2.8.1 Regulatory Setting**

NEPA (42 U.S.C. Part 4332) requires the identification of all potentially significant impacts to the environment, including energy impacts.

CEQA Guidelines, Appendix F, Energy Conservation, state that EIRs are required to include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

### **2.2.8.2 Affected Environment**

The California Energy Commission (CEC) is California's primary energy policy and planning agency. SCAG's responsibilities include tracking and forecasting energy use in southern California. An Energy Working Group, as part of SCAG's Energy Planning Program, assists in developing energy policies consistent with the adopted plans, such as the RTP and the RCP and Guide. Over the past 50 years, energy supplies in southern California have sufficiently served the rapid growth in population and development (SCAG, 2008).

Energy resources for transportation include petroleum, natural gas, liquefied petroleum gas electricity, hydrogen, and biofuel. Transportation is the single largest contributor to California's GHG emissions, producing approximately 39 percent of the state's total emissions in 2009. In addition, Californians consumed more than 18 billion gallons of gasoline and diesel fuel in 2010, resulting in the estimated emission of more than 200 million metric tons of GHG equivalence. California has long been regulating the criteria pollutants from automobiles. The State adopted stringent tailpipe emission standards as early as 1996 and in 1971 adopted nitrogen oxides (NO<sub>x</sub>) standards, both the first such standards in the nation. The California Smog Check Program, which assured the effectiveness of vehicle emission control systems, went into effect in 1984. In 1992, California began the first phase of reformulated clean-burning gasoline, and in 1993, the State enacted new standards for cleaner diesel fuel. However, reducing GHG emissions is a new, more difficult challenge for a state so heavily dependent on automobiles.

Currently, California's gas and diesel markets are characterized by increasing demands, tight supplies, and volatile supplies. California imports more than 50 percent of its crude oil and more than 15 percent of its refined products. Demand for gasoline and diesel is projected to increase in California by 1 to 2 percent each year as a growing population registers more vehicles and drives more miles. California is the third largest consumer of transportation fuels in the world (behind the United States as a whole and China); almost 16 billion gallons of gasoline and more than 4 billion gallons of diesel fuels are consumed each year. California would like to improve efficiency of the transportation fuel; however, federal law has prohibited states from setting the minimum number of miles per gallon (mpg) that new cars and light trucks must achieve. In 2003, the CEC and ARB reviewed the technical and economic aspects of a major reduction in the petroleum dependence of California's transportation sector. Based on this research, in 2005, Governor Schwarzenegger appealed to the United States House of Representatives "to establish new fuel economy standards that double the fuel efficiency of new cars, light trucks and SUVs." In June 2007, the United States Senate voted to raise the fuel efficiency standards for cars to 35 mpg by 2020. The proposed 35-mpg standard pales in comparison with Japan's current standard of 45 mpg and Europe's more than 50 mpg standard by 2012.

California's population is estimated to exceed 44 million by 2020, which would result in substantial increases in transportation fuel demand for the State. Table 2.2.8-1 indicates a projected 149 million-barrel increase in transportation fuel demand from 2005 by the year 2020.

**Table 2.2.8-1. California Transportation Fuel Demand**

Year	Demand Level Range (Million Barrels per Year)	Daily Energy Consumption (Billions BTU)
2005	553	8,787
2010	580-617	9,804
2015	608-661	10,504
2020	638-702	11,155
Values derived from Figure 7-5 in 2007 IEPR (CEC, 2007).		

Source: CEC, 2007.

The CEC-proposed energy needs are measured in petroleum and equivalent British Thermal Units (BTU). A BTU is the quantity of heat required to raise the temperature of water 1 degree Fahrenheit (°F) at sea level. Other units of energy can be converted into equivalent BTU units, and BTU is used as the basis for comparing energy consumption associated with different resources. Table 2.2.8-2 shows comparisons of types of energy and their equivalent BTU units.



**Table 2.2.8-2. Energy Value (BTU) of Various Energy Sources**

Energy Source	Measurement Unit	Equivalent BTU <sup>a</sup>
Electricals	Kilowatt-hour	3,412
Natural Gas	Cubic Feet	1,034
Petroleum (Crude Oil)	Barrel (42 Gallons)	5,800,000
Gasoline	Gallon	125,000
<sup>a</sup> One BTU is the quantity of energy necessary to raise the temperature of one pound of water by 1 °F		

Source: CEC, 2007.

Transportation sector energy consumption reflects the types and numbers of vehicles, the extent of their use (i.e., VMT), and their fuel economy (i.e., mpg). Implementation of the proposed project would allow capacity in the project corridor, thereby facilitating improved efficiency in energy use. Changes in VMT would affect traffic fuel and energy consumption. VMT and vehicle hours traveled (VHT) are also important in determining the demand for infrastructure improvements. Urban growth patterns have caused California's VMT to increase at a rate of more than 3 percent per year between 1975 and 2004. In 2005, SCAG data showed automobile VMT in California at 372 million, which is equivalent to 2.14 trillion BTUs or approximately 369,000 barrels of oil.

### **2.2.8.3 Environmental Consequences**

Based on CEQA Guidelines, Appendix F, energy impacts would be considered significant if implementation of the proposed project would result in:

- Wasteful, inefficient, and unnecessary usage of energy; or
- Placing a significant demand on regional energy supply or requirement for substantial additional capacity.

Energy consumption includes direct and indirect energy use. Direct use is the energy consumed in the actual propulsion of the vehicles traveling within the project corridor. Indirect use includes the energy consumed for project construction and maintenance activities. The impact of the proposed project in context of the countywide travel is too small to demonstrate energy impacts quantitatively; therefore, a qualitative energy analysis was conducted.

#### ***No Build Alternative***

Under the No Build Alternative, fuel consumption by motor vehicle traffic would change as vehicle traffic volumes, driving speed, and the vehicle type changes year by year. Fuel efficiency would decrease due to projected future growth as more vehicles

would be traveling with reduced average speeds on an increasingly congested roadway. There would be no construction activities except for regular maintenance operations.

### **Build Alternative (Proposed Project)**

The proposed project would not affect traffic volume or traffic mix, and it would not affect the diesel truck percentage along the project corridor. The project traffic study indicates that currently the project corridor traffic is not significantly affected by the delays at the intersections (see Table 2.2.8-3); however, traffic flow would continue deteriorating in the future with the No Build Alternative. The proposed addition of a new traffic lane on each side of Grove Avenue, within the proposed limits, would relieve traffic congestion along the project corridor. Furthermore, as a result of the project, LOS at intersections would improve, and delay due to traffic congestions at the project intersections would be greatly reduced. The effects would translate into more efficient energy consumption for the proposed Build Alternative compared to the No Build Alternative.

**Table 2.2.8-3. Comparison of Traffic LOS  
for Existing and Future Build Years 2025 and 2045**

Grove Avenue Segments and Intersections	Peak Hour LOS (AM/PM)		
	Existing	2025	2045
<b>No Build</b>			
Grove Avenue/4 <sup>th</sup> Street	D/C	D/E	D/F
Grove Avenue/I Street	A/A	A/A	A/A
Grove Avenue/G Street	A/A	A/A	B/C
Grove Avenue/D Street	A/A	A/A	B/B
Grove Avenue/Holt Boulevard	C/C	F/F	F/F
Grove Avenue/State Street-Airport Drive	C/C	C/C	F/F
<b>Build Alternative</b>			
Grove Avenue/4 <sup>th</sup> Street	--	<b>D/D</b>	<b>D/D</b>
Grove Avenue/I Street	--	A/A	A/A
Grove Avenue/G Street	--	A/A	<b>B/B</b>
Grove Avenue/D Street	--	A/A	<b>A/A</b>
Grove Avenue/Holt Boulevard	--	<b>D/D</b>	<b>E/E</b>
Grove Avenue/State Street-Airport Drive	--	C/C	<b>D/E</b>
Improved LOS is shown in <b>bold</b> .			

Source: Iteris, 2015.

Maintenance of the Build Alternative can potentially generate indirect energy impacts within the proposed project corridor; however, operation of the Build Alternative

would translate into more efficient energy consumption and higher energy savings for the project corridor. These high energy savings from operation of the Build Alternative would offset the potential indirect energy impacts generated from maintenance of the improved facility.

Furthermore, it should be noted that while the No Build Alternative does not require immediate consumption of energy for construction activities, it may use larger quantities of energy in the future as traffic worsens; as such, savings in operational energy requirements would more than offset construction energy requirements, and thus, in the long term, result in a new savings in energy usage.

When balancing energy used during construction and operation against energy saved by relieving congestion and other transportation efficiencies, the project would not have substantial energy impacts.

#### **2.2.8.4 Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, or mitigation measures are required; however, as discussed in Section 3.5.1.6, GHG Reduction Strategies, several measures will be included in the proposed project to reduce GHG emissions. A few of these GHG measures will also aid in reducing energy consumption for the Build Alternative. These measures include the following:

1. **Use of Reclaimed Water:** Use of reclaimed water helps conserve energy, which reduces GHG emissions from electricity production.
2. **Lighting:** Use of energy-efficient lighting, such as light-emitting diode (LED) traffic signals.
3. **Idling Restrictions:** Turning off the engines of trucks and construction equipment when not in use will assist in conserving energy during construction.

In addition to the measures listed above, the following measure will also be included to further conserve energy usage from the proposed project:

- The solicitation for construction bids shall include language requiring the use of energy and fuel-efficient fleets and zero-emission technologies for vehicles where possible.

## 2.3 Biological Environment

The analysis of potential impacts of the Grove Avenue Corridor Project on the biological environment is based on the *Natural Environment Study (Minimal Impacts)* (September 2016) prepared for this project.

### 2.3.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act (FESA) are discussed below in Section 2.3.5, Threatened and Endangered Species. Wetlands and other waters are also discussed below in Section 2.3.2, Wetlands and Other Waters.

#### 2.3.1.1 Affected Environment *Biological Study Area*

The Biological Study Area (BSA) for the project is located along an approximately 116.27-acre study area along Grove Avenue in Ontario. The BSA consists of Caltrans ROW, anticipated TCEs, proposed construction staging areas (CSAs), and areas within a 50-foot-wide buffer immediately adjacent to the ROW and CSAs. The BSA includes all areas anticipated to be disturbed during construction of the proposed project.

The BSA consists of entirely developed land. Vegetation within the BSA is limited to non-native ornamental landscaping for existing roads, homes, and parks, in addition to non-native ruderal (weedy) elements within vacant lots. Surveyed trees within the BSA that overlap with the parkway are, at a minimum, 10 feet tall; therefore, these trees qualify as parkway trees under the City's Municipal Code Sections 10-2 *et seq.* A total of 484 trees occur within the BSA. All trees with a minimum trunk diameter of 4 inches were surveyed within the BSA permanent impact area. All trees were noted for their species, size (trunk diameter at breast height in inches), crown radius (in feet), and general health and vigor.

### ***Natural Communities of Special Concern***

As identified in the California Natural Diversity Database (CNDDDB) and summarized in Table 2.3.1-1, no sensitive natural communities, one special-status plant species, and three special-status animal species have been reported within 1.0 mile of the BSA between the years 1905 and 2001. Based on the current developed condition and lack of suitable habitat within the BSA, regional species of concern are not likely to occur within the BSA.

**Table 2.3.1-1. Regional Species of Concern**

Scientific Name	Common Name	Status	Species Present/ Absent
<b>Plants</b>			
<i>Uneatekelia cuneata</i> var. <i>puberula</i>	Mesa Horkelia	--/-- CRPR 1B.1	Absent
<b>Wildlife</b>			
<i>Rhaphiomidas terminates abdominalis</i>	Delhi Sands Flower-loving Fly	FE/--	Absent
<i>Anniella pulchra pulchra</i>	Silvery Legless Lizard	--/SSC	Absent
<i>Antrozous pallidus</i>	Pallid bat	--/SSC	Absent
<b>FE:</b> Federally Endangered <b>CRPR 1B.1:</b> California Rare Plant Rank listing designates plants that are rare, with most of them endemic to California, that present populations throughout their range, are seriously threatened in California (more than 80 percent of occurrences threatened/high degree and immediacy of threat). <b>SSC:</b> Species of Special Concern These designations are to be considered during the State and federal environmental review process, as applicable (e.g., CEQA [PRC Section 21000 <i>et seq.</i> ] and NEPA [50 CFR 402.12]).			

### ***Habitat Connectivity***

Habitat connectivity is established when there is a wildlife movement corridor that connects two blocks of native habitat. A wildlife corridor between such habitats functions to allow genetic interchange between populations. Movement corridors allow dispersal of young and allow animals to flee one patch of habitat in the event of a fire or other large-scale disturbance. Viable connections between habitat areas act as a linkage between those habitats contained in each connected habitat, effectively expanding the usable areas for wildlife that use both the habitats and the corridors connecting them. Wildlife movement connections between these features are generally limited by urbanization.

With that being considered, it should be mentioned that there are some wildlife species that are well adapted to urban environments and will thrive among residential and

commercial developments. Most of the species that are commonly observed in urban environments do not have specific movement corridor requirements, instead using nonspecific movement patterns across these urban areas.

The BSA is situated within a transportation corridor and highly urbanized area that provides no connectivity of habitat in the region.

### **2.3.1.2 Environmental Consequences**

The City has not established significance thresholds for use in evaluating the proposed project's natural community impacts; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used. The guidelines suggest that a project-related significant impact would occur if the project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or United States Fish and Wildlife Service (USFWS).
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFW or USFWS.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

An evaluation of potential impacts to natural communities associated with each alternative is presented below.

#### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in permanent impacts to natural communities.

#### ***Build Alternative (Proposed Project)***

Project implementation would result in no impacts to sensitive habitats or natural communities.

The project would result in permanent unavoidable impacts to approximately 174 trees. Permanent impacts were determined if at least 50 percent of the tree occurred within

the permanent impact area. This number includes tree trimming, as well as tree removals.

No special-status plants or wildlife have potential to occur within the BSA due to lack of suitable habitat.

Implementation of the Build Alternative would not conflict with the provisions of any habitat conservation plan or local biological resource protection ordinances.

Given the high level of existing development within the BSA and minimal opportunity for regional wildlife movement, no permanent impacts to wildlife movement are anticipated to result.

### **2.3.1.3 Avoidance, Minimization, and/or Mitigation Measures**

Although avoidance, minimization, or compensatory mitigation is not required, the following minimization measure is proposed to reduce impacts:

**NC-1:** The project shall preserve as many mature trees as practicable. Although there is no City or County ordinance for tree removal, the project's landscape plan will incorporate a tree replacement plan with a replacement ratio of 2:1 – for every mature tree removed, two trees will be planted to be consistent with Measure VA-2. Mature trees (larger than 20 feet high) that are to be removed shall be replaced with two 24-inch box trees. Design plans shall indicate locations of existing mature trees (larger than 20 feet high) to be preserved in place. Tree replacement shall meet all Caltrans and City standards and policies, and near John Galvin Park, the replacement tree species will incorporate species that have been identified as those of the original planting of John Galvin Park in the 1930s.



## **2.3.2 Wetlands and Other Waters**

### **2.3.2.1 Regulatory Setting**

#### ***Clean Water Act: Section 404***

Wetlands and other waters are protected under several laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the CWA (33 U.S.C. 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by USACE with oversight by EPA.

USACE issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of USACE's Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the USACE decision to approve is based on compliance with EPA's Section 404(b)(1) Guidelines (40 CFR Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by EPA in conjunction with USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that USACE may not issue a permit if there is an LEDPA to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the State level, wetlands and waters are regulated primarily by the SWRCB, the RWQCBs, and CDFW. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the CFG Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by WDRs and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see Section 2.2.2, Water Quality and Stormwater Runoff, for more details

### ***California Fish and Game Code: Section 1602***

CFG Code Section 1602 requires any person, state, or local government agency, or public utility proposing a project that may affect a river, stream, or lake to notify CDFW before beginning the project. If activities will result in the diversion or obstruction of the natural flow of a stream; substantially alter its bed, channel, or bank; impact riparian vegetation; or adversely affect existing fish and wildlife resources, then a Streambed Alteration Agreement is required.

A Streambed Alteration Agreement lists the CDFW conditions of approval relative to the project, and it serves as an agreement between an applicant and CDFW for a term

of not more than 5 years for the performance of activities subject to this section. A CDFW Streambed Alteration Notification is required for all activities potentially affecting streambeds and/or their associated riparian habitats. Subsequently, implementation of the project may require a 1602 Streambed Alteration Agreement if these areas are determined to be jurisdictional by CDFW. A Streambed Alteration Agreement will be required for potential impacts to drainages within the study area.

### **2.3.2.2 Affected Environment**

This section discusses wetlands and other waters and summarizes the *Jurisdictional Delineation Letter Report* completed in September 2016 and the *Natural Environment Study (Minimal Impacts)* completed in September 2016.

A delineation of jurisdictional waters and wetlands within the BSA was conducted in accordance with regulation set forth in 33 CFR Part 328 and the USACE guidance documents as referenced in the *Jurisdictional Delineation Letter Report* (September 2016) and *Natural Environment Study (Minimal Impacts)* (September 2016).

#### ***Jurisdictional Delineation Methodology***

Prior to conducting the field delineation for potential jurisdictional Waters of the U.S. (including wetlands), all available biological reports, historical land use of the property, local and regional climactic data, and areas with topographical configurations and vegetative signatures occurring within the survey area that may suggest the potential or presence of jurisdictional Waters of the U.S. at the time of the field survey were reviewed. The National Hydrography Dataset (USGS, 2015), National Wetlands Inventory (NWI) Interactive Wetlands Mapper (USFWS, 2015), NRCS (2015a, 2015b), Office of Water Programs, Water Quality Planning Tool (CSUS, 2015), and SBCFCD System Facilities (SBCFCD, 2014) were consulted.

A field survey and formal jurisdictional delineation of potentially regulated waters of the U.S and State, including wetlands, within the project study area were conducted on March 26, 2015. All acquired field data were obtained by recording the presence, including extents, types, and boundaries, of potential jurisdictional waters using a handheld global positioning system (GPS) unit. Geographic Information System (GIS) post-processing of the data was conducted for further analysis.

The survey and field reconnaissance determined that the study area did not have potential for the presence of wetlands as defined in 33 CFR 328.3[b], 40 CFR 230.3[t] and USACE guidance documents.

The formal field delineation for field indicators of all potential nonwetland waters of the U.S and the identification of the jurisdictional lateral extent of the ordinary high water mark (OHWM) utilized all relevant guidance, methodologies, and procedural documents. OHWM indicators were used to delineate the lateral jurisdictional extent of potential nonwetland waters of the U.S.

The formal field delineation for field indicators of all potential nonwetland waters of the U.S. yielded approximately 1.76 acres of jurisdictional waters of the U.S. and State in the form of a concrete-lined ephemeral channel for the West Cucamonga Channel, which is a previously permitted and serviceable facility owned and operated by SBCFCD (Table 2.3.2-1).

**Table 2.3.2-1. Potential Waters of the U.S. and State  
occurring within the Study Area**

Geomorphic Feature	Type of Habitat	Regulatory Authority	USACE Jurisdiction		
			Non- wetland Waters (acres)	Non- wetland Waters (linear feet)	Wetland Waters Acres (linear feet)
West Cucamonga Channel	Riverine; Intermittent Stream Bed, Temporarily Flooded, Artificial Substrate, Fresh	USACE, CDFW, and RWQCB	1.76	2,031	0.00 (0)
Total			1.76	2,031	0.00 (0)

The West Cucamonga Channel is still representative of riverine features that present a hydrologic regime and have the potential to support aquatic-dependent life and/or aquatic functions in semi-arid environments, albeit related to downstream receiving waters (namely the Prado Flood Control Basin and the Santa Ana River). Therefore, the West Cucamonga Channel is a valuable cement-lined channel with regard to flood control protection. As an abiotic feature that presents no hydroperiod or biological activity, it can be considered to provide low ecological functions. However, the West Cucamonga Channel conveys stormwater into the Prado Flood Control Basin and, in turn, the Santa Ana River. The Prado Flood Control Basin, as a receiving waterbody, supports extensive and important aquatic habitats.

### **2.3.2.3 Environmental Consequences**

The City has not established significance thresholds for use in evaluating the proposed project's wetland impacts; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used. The guidelines suggest that a project-related significant impact would occur if the project would:

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (e.g., marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means.

An evaluation of potential impacts to wetlands associated with each alternative is presented below.

#### ***Permanent Impacts***

##### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in permanent impacts to wetlands or other jurisdictional waters.

##### ***Build Alternative (Proposed Project)***

The Build Alternative would result in no permanent impacts to wetlands or nonwetland waters of the U.S.

#### ***Temporary/Construction Impacts***

##### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in temporary impacts to wetlands or other jurisdictional waters.

##### ***Build Alternative (Proposed Project)***

The Build Alternative would result in approximately 0.46 acre (795 linear feet) of temporary impacts to nonwetland waters of the U.S. as a result of improvements to existing, enclosed box culverts for Grove Avenue (Table 2.3.2-2). Temporary impacts would not result in the permanent loss of jurisdictional acreage or permanent loss of function or value of these areas. The affected jurisdictional features would be restored to their approximate original contours and conditions.

**Table 2.3.2-2. Impacts to Nonwetland Waters of the U.S.**

Geomorphic Feature Number	Impact Acres (Linear Feet)	
	Temporary	Permanent
West Cucamonga Channel	0.46 (795)	0.00 (0)

#### **2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures**

The project has been designed to avoid and minimize impacts to waters of the U.S. and State as practicable. Complete avoidance is not possible due to the need to widen Grove Avenue at the existing West Cucamonga Channel crossing locations. The project would minimize impacts by maintaining the existing drainage course and channel width through culverts. The project would implement BMPs to prevent stormwater runoff, sedimentation, and pollutants from entering the channel during construction. Temporary impact areas would be restored to preconstruction contours and conditions.

The project proposes no permanent impacts to waters of the U.S. or waters of the State. No permanent fill would be placed within the channel (concrete would be removed and replaced resulting in no net import of fill), channel elevation would not be altered, and drainage functions would be conserved and returned to pre-project conditions. The effects of shading the channel would be negligible because it is an abiotic feature and resources are not present that could be adversely affected by shading; therefore, compensatory mitigation is not required.

During construction, the following minimization measure will be implemented to avoid and minimize potential project impacts:

**WET-1:** Construction activities within the West Cucamonga Channel and Princeton Basin will be designed and conducted to maintain downstream flow conditions. All construction activities will be effectively isolated from water flows to the greatest extent feasible. This may be accomplished by working in the dry season or dewatering the work area in the wet season. When work in standing or flowing water is required, structures for isolating the in-water work area and/or diverting the water flow must not be removed until all disturbed areas are cleaned and stabilized. The diverted water flow must not be contaminated by construction activities. Structures used to isolate the in-water work area and/or diverting the water flow (e.g., coffer dam, geotextile silt curtain) must not be removed until all disturbed areas are stabilized.

### **2.3.3 Plant Species**

#### **2.3.3.1 Regulatory Setting**

USFWS and CDFW have regulatory responsibility for the protection of special-status plant species. “Special-status” species are selected for protection because they are rare and/or subject to population and habitat declines. Special status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the FESA and/or the California Endangered Species Act (CESA). Please see Section 2.3.5, Threatened and Endangered Species, for detailed information about these species.

This section of the document discusses all other special-status plant species, including CDFW species of special concern, USFWS candidate species, and California Native Plant Society (CNPS) rare and endangered plants.

The regulatory requirements for FESA can be found at 16 U.S.C., Section 1531, *et seq.* See also 50 CFR Part 402. The regulatory requirements for CESA can be found at CFG Code, Section 2050, *et seq.* Caltrans projects are also subject to the Native Plant Protection Act, found at CFG Code, Section 1900-1913, and CEQA, CA PRC, Sections 2100-21177.

#### **2.3.3.2 Affected Environment**

The analysis of potential for the Grove Avenue Corridor Project to result in adverse impacts on special-status plant species is described in the *Natural Environment Study (Minimal Impacts)* (September 2016).

In developing the *Natural Environment Study (Minimal Impacts)*, the BSA was surveyed by biologists in June 2013 and March 2015 to determine the extent of plant communities and assess the presence of suitable habitat for sensitive plant species. Plant identifications were made in the field or in the lab through comparison with voucher specimens or photographs. Data from the field maps were digitized into GIS using ArcGIS 9.2. In addition to conducting biological surveys, a review of existing literature and biological databases was conducted to identify the existence or potential occurrence of special-status species plants and vegetation communities in or within the vicinity of the BSA. Primary databases consulted included the CNDDDB information (version 5), which is administered by CDFW, and CNPS’ On-line Inventory of Rare and Endangered Plants of California (Version 8-02, CNPS Inventory [2016]). Additionally, USFWS’s Information, Planning, and Conservation (IPaC) System was used to generate a list of species to be considered in the effects analysis for the project.

The general biological surveys confirmed that the entirety of the BSA is developed. Vegetation within the BSA is limited to non-native ornamental landscaping for existing roads, homes, and parks, in addition to non-native ruderal (weedy) elements within vacant lots.

According to the CNDDDB, two special-status plant species have been reported within 1.0 mile of the BSA between 1905 and 1917. Based on the current developed condition and lack of suitable habitat within the BSA, regional species of concern are not likely to occur within the BSA (Table 2.3.3-1).

**Table 2.3.3-1. Special-Status Plant Species**

Scientific Name/ Common Name	Status	General Habitat Description	Species Present/ Absent	Rationale
<i>Dodecahema leptoceras</i>  Slender-horned Spineflower	FE/SE CRPR 1B.1	<b>Distribution:</b> Riverside Los Angeles, and San Bernardino counties.  <b>Habitat:</b> Chaparral, cismontane woodland, coastal scrub on alluvial fans.	Absent	No suitable habitat occurs within the BSA. Most recent report to the CNDDDB of this species within 1 mile of the BSA was 1905.
<i>Uneatekelia cuneata</i> <i>var. puberula</i>  Mesa Horkelia	--/-- CRPR 1B.1	<b>Distribution: Coastal southern California from San Luis Obispo County south.</b>  <b>Habitat:</b> Sandy or gravelly soils in maritime chaparral, cismontane woodland, or coastal scrub.	Absent	No suitable habitat occurs within the BSA. Most recent report to the CNDDDB of this species within 1 mile of the BSA was in 1917.
<b>FE:</b> Federally Endangered <b>SE:</b> State Endangered <b>CRPR 1B.1:</b> California Rare Plant Rank listing designates plants that are rare, with most of them endemic to California, that present populations throughout their range, are seriously threatened in California (more than 80 percent of occurrences threatened/high degree and immediacy of threat). These designations are to be considered during the State and federal environmental review process, as applicable (e.g., CEQA [PRC Section 21000 <i>et seq.</i> ] and NEPA [50 CFR 402.12]).				

### 2.3.3.3 Environmental Consequences

#### ***Permanent Impacts***

##### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in permanent impacts to special-status plant species.



***Build Alternative (Proposed Project)***

Botanical surveys conducted in June 2013 and March 2015 confirmed that the entirety of the BSA is developed and has been determined as not suitable for special-status plant species. None of the two special-status plant species were observed during the surveys; therefore, no permanent impacts to these special-status plants would occur as a result of the project.

***Temporary/Construction Impacts***

***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in temporary impacts to special-status plant species.

***Build Alternative (Proposed Project)***

None of the two special-status plant species were observed during the surveys; therefore, no temporary impacts to these special-status plants would occur as a result of the project.

**2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, or mitigation measures are warranted because no special-status plant species occur in the BSA.

## **2.3.4 Animal Species**

### **2.3.4.1 Regulatory Setting**

Many State and federal laws regulate impacts to wildlife. USFWS, National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service), and CDFW are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under FESA or CESA. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5, Threatened and Endangered Species. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- NEPA
- Migratory Bird Treaty Act (MBTA)
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- CEQA
- Sections 1600–1603 of the CFG Code
- Sections 4150 and 4152 of the CFG Code

### **2.3.4.2 Affected Environment**

The BSA is situated within a transportation corridor and highly urbanized area. According to the CNDDDB (CDFW, 2015), three special-status animal species have been reported within 1.0 mile of the BSA between the dates of 1951 and 1997. Based on the current developed condition and lack of suitable habitat within the BSA, special-status wildlife species are not likely to occur within the BSA (Table 2.3.4-1).

Although not specifically listed in Table 2.3.4-1, the project site contains trees, shrubs, and other vegetation that provide suitable nesting habitat for common birds, including raptors, protected under the MBTA and CFG Code.

**Table 2.3.4-1. Special-Status Wildlife Species**

Scientific Name/ Common Name	Status	General Habitat Description	Species Present/ Absent	Rationale
<b>Invertebrates</b>				
<i>Rhaphiomidas terminates abdominalis</i>  Delhi Sands Flower-loving Fly	FE/--	<b>Distribution:</b> Endemic to the Colton Dunes of southwestern San Bernardino and northwestern Riverside counties. <b>Habitat:</b> Sandy substrates (Delhi soil series) with sparse cover (less than 50 percent, usually 10 to 20 percent) of perennial shrubs and other vegetation. Three indicator plant species are usually present in occupied habitat: California buckwheat, telegraph weed, and croton; only a few individuals of telegraph weed occur in the BSA.	Absent	No suitable habitat occurs within the BSA. The soils within the BSA are not associated with this species. Most recent report to the CNDDDB of this species within 1 mile of the BSA was in 2001. The Ontario Recovery Unit occurs approximately 3 miles east of the BSA (USFWS, 1997).
<b>Reptiles</b>				
<i>Anniella pulchra pulchra</i>  Silvery Legless Lizard	--/SSC	<b>Distribution:</b> Occurs from the Bay Area south through the Coast and Peninsular Ranges to northern Baja California. Occurrences scattered through the San Joaquin Valley and southern Sierra Nevada. <b>Habitats:</b> Loose soil, particularly in sand dunes or otherwise sandy soil. Generally found in leaf litter, under rocks, logs, or driftwood in oak woodland, chaparral, and desert scrub.	Absent	No suitable habitat occurs within the BSA. Most recent report to the CNDDDB of this species within 1 mile of the BSA was 1993.
<b>Mammals</b>				
<i>Antrozous pallidus</i>  Pallid bat	--/SSC	<b>Distribution:</b> Mexico and extreme southwestern U.S. north through Oregon, Washington, and western Canada. <b>Habitats:</b> Deserts and canyons with daytime roosts in buildings, crevices; less often in caves, mines, hollow trees, and other shelters.	Absent	No suitable habitat occurs within the BSA. The existing railroad bridge overcrossing in the southern portion of the BSA does not provide suitable roosting habitat. Most recent report to the CNDDDB of this species within 1 mile of the BSA was in 1951.
<b>FE:</b> Federally Endangered <b>SSC:</b> Species of Special Concern These designations are to be considered during the State and federal environmental review process, as applicable (e.g., CEQA [PRC Section 21000 <i>et seq.</i> ] and NEPA [50 CFR 402.12]).				

### **2.3.4.3 Environmental Consequences**

The City has not established significance thresholds for use in evaluating the proposed project's impacts to animal species; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used. The guidelines suggest that a project-related significant impact would occur if the project would:

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

An evaluation of potential impacts to animal species associated with each alternative is presented below.

#### ***Permanent Impacts***

##### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in permanent impacts to special-status animal species.

##### ***Build Alternative (Proposed Project)***

The June 2013 and March 2015 general biological surveys confirmed that the entirety of the BSA is developed and is not suitable for special-status wildlife species. As such, project implementation would result in no impacts on special-status wildlife species.

Raptors and migratory birds potentially using shrubs within the BSA could be affected by their removal and/or proximity to construction activities. Construction of the proposed project could result in the removal or trimming of trees during the general bird nesting season (i.e., February 15 through August 31); therefore, it could result in impacts to nesting birds in violation of the MBTA and CFG Code. Direct impacts could occur as a result of removal of vegetation supporting an active nest. Impacts would be considered significant. Implementation of Mitigation Measure AS-1 would reduce potentially significant impacts on nesting birds and raptors to less than significant levels.

#### ***Temporary/Construction Impacts***

##### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in temporary impacts to special-status animal species.

### ***Build Alternative (Proposed Project)***

None of the three special-status animal species were observed during the surveys; therefore, no temporary impacts to these special-status animals would occur as a result of the project.

Raptors and migratory birds potentially using shrubs within the BSA could be affected by their removal and/or proximity to construction activities. Temporary effects include increased noise and vibration that may result in an alteration in bird behavior and the potential to abandon nests and/or alter nesting locations. In addition, increased dust on vegetation from construction may alter bird behavior for preferred nest sites.

#### **2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures**

The following mitigation measure will be implemented prior to construction to avoid and reduce potential impacts related to special-status animal species:

**Mitigation Measure AS-1:** To avoid effects to nesting birds, the Project Engineer will require the contractor to conduct vegetation removal or tree-trimming activities outside of the nesting bird season (i.e., February 15 through August 31).

If vegetation clearing is necessary during the nesting season, the Project Engineer will require the contractor to have a qualified biologist conduct a preconstruction survey within 150 feet of construction areas no more than 10 days prior to construction at the location to identify the location of nests, if any. A qualified biologist is one that has previously surveyed for nesting bird species within Southern California.

Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist around each nest site. The buffer will be clearly marked in the field by construction personnel under guidance of the contractor's qualified biologist, and construction or clearing will not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active.

The qualified biologist will monitor the nests on a weekly basis to ensure that construction activities do not disturb or disrupt nesting activities.

If the qualified biologist determines that construction activities are disturbing or disrupting nesting activities, then the biologist will notify the Project Engineer, who has the authority to stop or modify construction to reduce the noise and/or disturbance to the nests. Responses may include, but are not limited to, increasing the size of the exclusionary buffer, curtailing nearby work activities, turning off vehicle engines and other equipment wherever possible to reduce noise, installing a protective noise barrier between the nest and the construction activities, and/or working in other areas until the young have fledged.

## **2.3.5 Threatened and Endangered Species**

### **2.3.5.1 Regulatory Setting**

The primary federal law protecting threatened and endangered species is the FESA: 16 U.S.C., Section 1531, *et seq.* See also 50 CFR Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as FHWA, are required to consult with USFWS and NOAA Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence, and/or documentation of a No Effect finding. Section 3 of FESA defines take as “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct.”

California has enacted a similar law at the state level, the CESA, CFG Code, Section 2050, *et seq.* CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. CDFW is the agency responsible for implementing CESA. Section 2081 of the CFG Code prohibits “take” of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the CFG Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by CDFW. For species listed under both FESA and CESA requiring a Biological Opinion under Section 7 of FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the CFG Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such

anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

### **2.3.5.2 Affected Environment**

The analysis of the project's potential effects on threatened and endangered species is based on the *Natural Environment Study (Minimal Impacts)* (September 2016). The findings of the *Natural Environment Study (Minimal Impacts)* related to threatened and endangered species are summarized in this section.

Prior to performing field surveys for threatened and endangered species, existing documentation relevant to the BSA was reviewed. The most recent records of the CNDDDB (CDFW, 2015) and the CNPS' Electronic Inventory of Rare and Endangered Vascular Plants of California were reviewed for the United States Geological Survey (USGS) quadrangles containing these resources surrounding the BSA. Two special-status plant species and three special-status animal species have been reported within 1.0 mile of the BSA between the dates of 1905 and 2001 (Tables 2.3.3-1 and 2.3.4-1). Based on the current developed conditions and lack of suitable habitat within the BSA, threatened or endangered species are not likely to occur within the BSA.

### **2.3.5.3 Environmental Consequences**

#### ***Permanent Impacts***

##### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in permanent impacts to threatened or endangered species.

##### ***Build Alternative (Proposed Project)***

The June 2013 and March 2015 general biological surveys confirmed that the entirety of the BSA is developed and has been determined as not suitable for threatened or endangered species. As such, no threatened or endangered species have potential to occur within the BSA due to lack of suitable habitat. Project implementation would result in no permanent impacts on threatened or endangered species.

#### ***Temporary Impacts***

##### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in temporary effects to threatened or endangered species.



***Build Alternative (Proposed Project)***

Because the BSA is in an urbanized setting, any potential indirect effects/impacts of construction would be no greater than they would be under existing conditions. As such, no temporary effects to threatened or endangered species would occur as a result of the Build Alternative.

**2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures**

No avoidance, minimization, and/or mitigation measures are required because no threatened or endangered species have the potential to occur in the project area.

## **2.3.6 Invasive Species**

### **2.3.6.1 Regulatory Setting**

On February 3, 1999, President William J. Clinton signed EO 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” FHWA guidance issued August 10, 1999, directs the use of the State’s invasive species list, maintained by the California Invasive Plant Council (Cal-IPC) to define the invasive plants that must be considered as part of NEPA analysis for a proposed project.

### **2.3.6.2 Affected Environment**

This section discusses invasive species with the potential to occur within the BSA as discussed in the *Natural Environment Study (Minimal Impacts)* (September 2016). The *Natural Environment Study (Minimal Impacts)* determined that the study area is dominated by non-native species, most of which are non-native plants that occur within portions of the Grove Avenue corridor, adjacent developments, and basin bottoms. Ornamental vegetation is also present for aesthetic reasons.

Highway corridors provide opportunities for the movement of invasive species through the landscape. Invasive species can move on vehicles and in the loads they carry. Invasive plants can be moved from site to site during spraying and mowing operations. Weed seed can be inadvertently introduced into the corridor on equipment during construction and through the use of mulch, imported soil or gravel, and sod. In erosion control, landscape, or wildflower projects, some invasive plant species might be planted deliberately. Transportation corridor ROWs provide ample opportunity for weeds in adjacent lands to spread along corridors that span, on a national scale, millions of miles along highways.

The Cal-IPC Invasive Plant Inventory is based on information submitted by members, land managers, botanists, and researchers throughout California, as well as published sources. The inventory highlights nonnative plants that are serious problems in wildlands (i.e., natural areas that support native ecosystems, including national, State, and local parks; ecological reserves; wildlife areas; national forests; and Bureau of Land Management lands). The Invasive Plant Inventory categorizes plants as High, Moderate, or Limited based on the species’ negative ecological impact in California. Plants categorized as “High” have severe ecological impacts. Plants categorized as “Moderate” have substantial and apparent, but not severe, ecological impacts. Plants

categorized as “Limited” are invasive, but their ecological impacts are minor on a statewide level.

### **2.3.6.3 Environmental Consequences**

#### ***No Build Alternative***

The No Build Alternative does not propose any construction or other disturbance in the BSA; therefore, this alternative would not result in long-term impacts related to the introduction or spread of invasive species to or from the BSA and would not cause permanent direct or indirect adverse impacts regarding invasive species.

#### ***Build Alternative (Proposed Project)***

Implementation of the Build Alternative would have the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasives, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that seed is spread along the highway. The plant palette used for revegetation would not include invasive species; therefore, the Build Alternative for the proposed project would not have a substantial effect on invasive species. With implementation of Avoidance Measure IS-1, temporary invasive species impacts are not anticipated.

### **2.3.6.4 Avoidance, Minimization, and/or Mitigation Measures**

The following avoidance measure will avoid potential temporary and permanent impacts related to invasive species:

**IS-1:** In compliance with the Executive Order on Invasive Species (EO 13112), and guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity (i.e., near or adjacent to drainages), extra precautions will be taken if invasive species are found in or next to the construction areas. This includes the inspection and cleaning of construction equipment and eradication strategies, as required by the Caltrans Biological Monitor, to be implemented should an invasion occur. Any cleaning of equipment or site watering will be conducted in adherence to any applicable drought conditions and related regulations. A Caltrans biologist or landscape Architect will approve any seed lists (for planting).

## **2.4 Cumulative Impacts**

### **2.4.1 Regulatory Setting**

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of the proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under NEPA can be found in 40 CFR Section 1508.7 of the CEQ Regulations.

### **2.4.2 Environmental Consequences**

This section discusses potential impacts to various resources that could occur as a result of the Grove Avenue Corridor Project.

#### ***Cumulative Impacts***

##### ***Land Use***

Cumulative projects and planned growth in Ontario will lead to changes in land use and an increase in development intensity of the area. With this growth, there would be pressure for urbanized areas to expand to vacant lands and agricultural lands next to existing urban development. Historically, this has happened in the Ontario area, but future development would be managed to be consistent with adopted general plans.

The proposed project, which is widening an existing road, would provide support to the existing and planned developments. Therefore, the project would not cumulatively contribute to considerable cumulative land use impacts.

### ***Farmlands***

No farmlands occur within or immediately adjacent to the proposed improvements along the Grove Avenue corridor; therefore, there would be no cumulative effect to farmlands as a result of this project.

### ***Growth***

Given the existing level of growth to Ontario and the continuing traffic congestion in the project area, construction of the proposed project is judged unlikely to have a substantial effect on residential or commercial growth in the area. The project would not contribute to growth or expansion but would instead alleviate existing and future traffic congestion.

### ***Parks and Recreational Facilities***

The Build Alternative is not expected to have an adverse cumulative impact on parks when considered with any transportation, commercial, industrial, or residential projects because the overall parkland acquisition area would only minimally reduce the overall size of Grove Memorial Park and John Galvin Park and would not inhibit existing recreational facilities within the parks.

### ***Community Character and Cohesion***

As previously discussed in Section 2.1.4.1, the Build Alternative would result in the acquisition and removal of several residential properties requiring the displacement of residents. Some of the other projects considered in the cumulative impacts analysis, identified in Table 2.1.1-1, are also expected to result in the acquisition and removal of residential properties and the displacement of residents in the surrounding area. Although there would likely be some residential displacements throughout Ontario connected to the various projects, due to the dispersed locations of the projects and their associated displacements, there would not be an overall cumulative effect to one distinct neighborhood or localized community. Efforts would be made to relocate the displaced residents within the same general neighborhood or local vicinity as the affected property.

### ***Relocation***

The Build Alternative is not expected to have an adverse cumulative impact on relocations when considered with any transportation, commercial, industrial, or

residential projects because adequate replacement properties are available within close proximity.

### *Environmental Justice*

Construction cumulative impacts on community disruption could occur if multiple projects in the same locality are scheduled to undergo construction at the same time. The City, through community outreach described earlier, would continue to work closely with the cities and communities within the project area to identify such potential consequences and adjust construction schedules to avoid construction, to the extent practicable, of multiple projects occurring simultaneously within the same locality.

Because implementation of the Build Alternative would not cause disproportionately high and adverse effects on minority or low-income populations, no permanent cumulative impacts are anticipated.

### *Utilities and Emergency Services*

Utilities and emergency services are actively planned for and developed based on service needs of the area in which they are provided. Related transportation and public infrastructure project impacts would be beneficial because they normally improve circulation in their respective project areas. Emergency services would benefit from improved access and circulation. The Build Alternative is not expected to have an adverse cumulative impact on utilities when considered with any transportation, commercial, industrial, or residential projects.

### *Traffic*

Implementation of the proposed project, together with the other transportation projects located within the cumulative projects study area, would accommodate future traffic demand during peak periods resulting in the reduction of traffic congestion conditions at various segments and interchanges. Other cumulative transportation projects would also provide alternative transportation modes and pedestrian connectivity, resulting in additional beneficial congestion impacts. The impacts to circulation and access systems are beneficial on a cumulative basis.

### *Visual/Aesthetics*

Visual impacts during construction would be typical of roadway construction projects, including construction fencing, construction equipment, material stockpiles, and vegetation removal, which would collectively temporarily disturb the park's existing landscape aesthetic. Temporarily disturbed areas would be returned to pre-project

conditions once construction is completed; therefore, the minor visual changes associated with the Build Alternative would not be considered a cumulative effect.

### ***Cultural Resources***

The proposed project is not expected to affect any cultural resources in the project area; therefore, the project would not have an adverse cumulative impact on cultural resources.

### ***Groundwater***

The geographic context for the analysis of cumulative impacts associated with groundwater is the area underlain by the Chino Basin groundwater basin within the project corridor. The proposed project is not located within an identified recharge area. Construction activities, such as pile driving and dewatering, that would encounter groundwater could potentially occur and may reduce the storage capacity of groundwater. The displaced volume, however, would not be substantial relative to the volume of the basin. Likewise, the volume of water used during construction for dust control and other uses would be nominal; therefore, construction activities would not substantially deplete groundwater supplies nor interfere substantially with groundwater recharge. Thus, there would be no potential impacts to groundwater recharge in the area of the proposed project. Although implementation of the project would not have a cumulatively considerable contribution to the adverse effects on groundwater recharge in the basin, the overall development associated with transportation infrastructure projects that may be planned within the basin could directly and/or indirectly result in the loss of groundwater volume and recharge areas. This loss would be mitigated by groundwater recharge programs that have already been designed and implemented within the basin areas to ensure that groundwater will continue to be a viable water supply in the future. In addition, all of the projects would be required to implement BMP techniques to the MEP. BMP techniques, such as infiltration basins, augment groundwater by retaining stormwater runoff, which subsequently infiltrates into the groundwater regime.

Due to the volume of traffic and the nature of materials that are transported on roadways, sources of groundwater contamination would be associated with hazardous and nonhazardous materials that are transported through the area that could result in accidental spills, leaks, toxic releases, fire, or explosion. The transport of hazardous materials is regulated by the CHP. Hazardous materials and waste transporters are responsible for complying with all applicable packaging, labeling, and shipping regulations, which reduce the potential for a spill to impact water quality. The Office of Emergency Services also provides emergency response services involving

hazardous material incidents. The United States Federal Aviation Administration's Office of Hazardous Materials Safety prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR and implemented by Title 13 of the CCR. Appropriate documentation for all hazardous waste that is transported would be provided as required for compliance with existing hazardous materials regulations codified in Titles 8, 22, and 26 of the CCR, and their enabling legislation set forth in Chapter 6.95 of the California Health and Safety Code. Compliance with all applicable federal and State laws related to the transportation of hazardous materials would reduce the likelihood and severity of accidents during transit. Furthermore, any spill (i.e., hazardous and nonhazardous) would generate an immediate, local response to report, contain, and mitigate the incident.

Pollutants associated with roadway runoff that are considered treatable by BMP techniques include sediment, metals (i.e., total and dissolved fractions of zinc, Pb, and copper), nitrogen (e.g., ammonia), phosphorus, and general metals. Stormwater runoff from the project ROW would be conveyed to BMP facilities; therefore, roadway runoff conveyed to BMPs would be treated to the MEP and not create any groundwater quality impacts.

Furthermore, the City conducts roadway activities (i.e., sweeping operations and litter and debris removal) on a regular basis to correct situations that could cause water pollution; therefore, implementation of these nonstructural source control BMPs would reduce the discharge of potential pollutants to the stormwater drainage system and watercourses and not create any groundwater quality impacts.

Therefore, there would be no groundwater impacts associated with the Grove Avenue Corridor Project, and the proposed project would not have a cumulatively considerable contribution to the cumulative effects related to groundwater.

### ***Water Quality***

The geographic context for the analysis of cumulative impacts associated with water quality is the area covered by the HSA within the proposed project corridor. Development of the proposed project, in combination with all other development that would occur in the watershed area, would involve construction activities, increases in stormwater runoff from new impervious surface area, and possibly reduction in groundwater recharge areas. Construction of new development throughout the watershed area could result in the erosion of soil, thereby cumulatively degrading water quality. In addition, the increase in impervious surface area resulting from future development may also adversely affect water quality by increasing the amount of



stormwater runoff, transportation-related pollutants, and associated roadway runoff chemical pollutants entering the storm drain system. New development, however, would have to comply with existing regulations regarding construction practices that minimize risks of erosion and runoff. Among the various regulations are the applicable provisions of the County of San Bernardino MS4 NPDES Permit; municipal codes related to control of stormwater quality for transportation projects; municipal grading permits; and other NPDES permits. This would minimize degradation of water quality at individual project construction sites. Consequently, cumulative water quality impacts would be minimized during the construction and operational phases. Compliance with applicable SWRCB and Santa Ana RWQCB regulations would ensure that water quality is maintained to the MEP for potential development projects within the watershed areas. Therefore, there would be no water quality impacts associated with implementation of the project. The proposed project would not have a considerable contribution to the cumulative effects related to water quality.

#### ***Geology/Soils/Seismic/Topography***

The project area generally has a low to negligible potential for geologic hazards such as landslides, expansive soil, collapsible soil, tsunamis, seismic slope instability, and subsidence. The proposed project would not increase the risk of exposing people or structures to potential adverse effects because of seismic activities or seismic-related ground failure beyond the existing level already present with the Grove Avenue configuration. Therefore, the proposed project is not expected to contribute to the cumulative effects related to geology, soils, seismic hazards, or topography.

#### ***Paleontology***

While the Build Alternative does have the potential to affect paleontological resources during construction, the potential for such impacts is moderate undemonstrated to low. Appropriate monitoring in certain areas of the project would reduce the potential for any impacts to paleontological resources; therefore, there would be no cumulative effects related to paleontological resources.

#### ***Hazardous Waste/Materials***

The proposed project would not create a significant hazard to the public or environment through transport, use, or disposal of hazardous materials because the project is not expected to produce a large amount of hazardous waste, and BMPs and industry standards would be utilized while handling and transporting any project-related hazardous materials; therefore, the project is not expected to contribute to the cumulative effects to hazardous wastes or materials.

### *Air Quality*

Other individual projects in the Basin may be under construction simultaneously with the project. Depending on construction schedules and implementation of other projects in the region, fugitive dust and pollutant emissions generated during construction may result in substantial short-term increases in air pollutants. This would contribute to short-term cumulative air quality impacts; however, implementation of construction BACMs during site grading activities would reduce fugitive dust emissions to a level that is considered minor.

### *Noise*

Under no-build conditions for the design year (2045), noise levels are expected to increase up to 2 dBA (all project noise levels include traffic projections from other regional projects). Under build conditions for the design year, traffic noise modeling results indicate that noise levels are expected to increase by up to 8 dB over design-year no-build noise levels. Increases in noise levels are due to the addition of two lanes (one in each direction) within the Grove Avenue corridor. The additional lanes would shift traffic closer to representative receivers within the proposed project area. Under future design-year 2045 build conditions, most of the receiver locations have traffic noise levels that were found to approach or exceed the applicable NAC. Where possible, noise abatement was considered at these receiver locations.

No exceedances of the applicable NAC were identified at any of the existing or planned commercial uses located within the project study area. Field monitoring confirmed that none of the existing commercial properties with outdoor areas of frequent human use within 500 feet of Grove Avenue would benefit from lower noise levels. As a result, consideration of noise abatement was not warranted for the commercial land uses located within the study area.

### *Energy*

Maintenance of the Build Alternative can potentially generate indirect energy impacts within the proposed project corridor; however, operation of the Build Alternative would translate into more efficient energy consumption and higher energy savings for the project corridor. These high energy savings from operation of the Build Alternative would offset the potential indirect energy impacts generated from maintenance of the improved facility. Thus, the project is not expected to contribute to the cumulative effects to energy impacts.

### *Natural Communities*

Project implementation would result in no impacts to sensitive habitats or natural communities. The project would result in permanent unavoidable impacts to

approximately 174 trees. Permanent impacts were determined if at least 50 percent of the tree occurred within the permanent impact area, which is not the case. This number includes tree trimming, as well as tree removals. No special-status plants or wildlife have potential to occur within the BSA due to lack of suitable habitat. Implementation of the Build Alternative would not conflict with the provisions of any habitat conservation plan or local biological resource protection ordinances. Given the high level of existing development within the BSA and minimal opportunity for regional wildlife movement, no permanent impacts to wildlife movement are anticipated to result. Given that the project impacts to natural communities are so small, it is doubtful that it would contribute to the cumulative effects to natural communities in the project area.

### *Wetlands and Other Waters*

The Build Alternative would result in no permanent impacts to wetlands or nonwetland waters of the U.S. The Build Alternative would result in approximately 0.46 acre (795 linear feet) of temporary impacts to nonwetland waters of the U.S. as a result of improvements to existing, enclosed box culverts for Grove Avenue. Temporary impacts would not result in the permanent loss of jurisdictional acreage or permanent loss of function or value of these areas. The affected jurisdictional features would be restored to their approximate original contours and conditions. Thus, the proposed project would not contribute to cumulative impacts to wetlands and other waters.

### *Plant Species*

Botanical surveys conducted in June 2013 and March 2015 confirmed that the entirety of the BSA is developed and has been determined as not suitable for special-status plant species; therefore, no cumulative impacts to special-status plants would occur as a result of the project.

### *Animal Species*

The June 2013 and March 2015 general biological surveys confirmed that the entirety of the BSA is developed and is not suitable for special-status wildlife species. As such, project implementation would result in no impacts on special-status wildlife species. Raptors and migratory birds potentially using shrubs within the BSA could be affected by their removal and/or proximity to construction activities. Construction of the proposed project could result in the removal or trimming of trees during the general bird nesting season (i.e., February 15 through August 31); therefore, it could result in impacts to nesting birds in violation of the MBTA and CFG Code. Direct impacts could occur as a result of removal of vegetation supporting an active nest. If other projects in

the area also removed shrubs and trees during nesting season, then the proposed project could have a cumulative effect on animal species.

### *Threatened and Endangered Species*

The June 2013 and March 2015 general biological surveys confirmed that the entirety of the BSA is developed and has been determined as not suitable for threatened or endangered species. As such, no threatened or endangered species have potential to occur within the BSA due to lack of suitable habitat. Project implementation would result in no permanent impacts on threatened or endangered species; therefore, the project has no potential to provide a cumulative effect on threatened or endangered species.

### *Invasive Species*

Implementation of the Build Alternative would have the potential to spread invasive species by the entering and exiting of construction equipment contaminated by invasives, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species so that seed is spread along the highway. Therefore, this project has the potential to contribute to a cumulative effect to invasive species.

## **2.4.3 Avoidance, Minimization, and/or Mitigation Measures**

Avoidance, minimization, and/or mitigation measures identified in each topical section in this document would serve to minimize cumulative impacts to the extent feasible.

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## **Chapter 3** California Environmental Quality Act (CEQA) Evaluation

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### **3.1 Determining Significance under the California Environmental Quality Act**

The Grove Avenue Corridor Project (proposed project or project) is subject to federal, as well as City and State environmental review requirements because the City proposes the use of federal funds from FHWA and/or the project requires an approval from FHWA. Project documentation, therefore, has been prepared in compliance with CEQA and NEPA. The City is the project proponent and the lead agency under CEQA. FHWA's responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 U.S.C. 327.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an EIS, or a lower level of documentation, will be required. NEPA requires that an EIS be prepared when the proposed federal action (project) *as a whole* has the potential to “significantly affect the quality of the human environment.” The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, it is the magnitude of the impact that is evaluated, and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require Caltrans to identify each “significant effect on the environment” resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effects of the Build Alternative (preferred alternative or proposed project) and CEQA significance.

## 3.2 CEQA Environmental Checklist

This checklist identifies physical and biological factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include design elements of the project and standardized measures that are applied to all or most Caltrans projects, such as BMPs and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

### 3.2.1 Aesthetics

The City has not established significance thresholds for use in evaluating the proposed project's visual impacts; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### ***CEQA Significance Determinations for Aesthetics***

#### **a) No Impact**

The proposed project would not result in impacts to scenic vistas and would not provide new sources of glare. The evaluation of this resource is provided in Section 2.1.7.3, Environmental Consequences.

#### **b, c, d) Less than Significant Impact**

The project would be located in an urbanized area. The proposed project would require removal of mature trees at John Galvin Park, as well as parkway trees along Grove Avenue. The removal of trees could, in the short term, increase light trespass from streetlights along the widened road into adjacent neighborhoods. It is anticipated that this effect would be reduced over time as the newly planted trees in the new parkway strips grow; however, it would be many years before the new trees reach the stature to achieve the previously existing character along Grove Avenue. Given the number of trees in the project area (484 trees within the BSA) to the number that are being removed/replanted (174 trees to be removed and replaced at a 2:1 ratio or 348 replacement trees), an increase in the number of trees in the BSA would occur with the project.

In addition, the new, widened corridor is not anticipated to create any new sources of glare because no glass or mirrored surfaces are proposed. The existing roadway is already lit with 41 streetlights (excluding traffic signal lights or lights on traffic signal poles that would remain in place), of which 34 would be removed and replaced with 76



new streetlights, for a total of 83 streetlights along the corridor. Streetlight poles would be located near the curb, with arms extending out and lights directed downward into travel lanes as part of the new configuration. Distance (i.e., width of sidewalks and parkways and yard setbacks) and obstructions (i.e., parkway trees and property walls) would reduce lighting levels at the adjacent residences. Also, while the increased number of vehicles on the widened roadway would add to vehicle headlights that may pose nighttime glare to adjacent properties, there are existing property walls and proposed soundwalls that would block light trespass into the adjacent residential uses. Thus, impacts would be less than significant.

Overall, the new widened roadway is not anticipated to change the overall visual character or quality of the corridor. While the widened pavement section would detract from existing views, the addition of planted medians, preserving as much of the existing trees in the corridor as feasible, and the addition of new street tree plantings would have the overall effect of maintaining the existing character and quality.

### 3.2.2 Agriculture and Forest Resources

The City has not established significance thresholds for use in evaluating the proposed project's impact to agricultural and forest resources; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Agriculture and Forest Resources***

#### **a, b, c, d, e) No Impact**

The proposed project would not result in impacts to agricultural or forest resources because none are in the project footprint.

### **3.2.3 Air Quality**

The City has not established significance thresholds for use in evaluating the proposed project's air quality impacts; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Air Quality***

#### **a, d) No Impact**

The evaluation of this resource is provided in Section 2.2.6, Air Quality. The proposed project would not conflict with or obstruct implementation of the SCAQMD 2016 AQMP because it is consistent with the 2012-2035 and 2016-40 RTP/SCS and the 2015 RTIP and 2019 FTIP.

The project is intended to alleviate existing and anticipated congestion along Grove Avenue, and Section 2.1.6 states that the average delays are forecast to significantly improve with implementation of the Build Alternative (proposed project). As discussed in Section 2.2.6, there would be no increase in VMT from no-build and build conditions. Thus, the associated vehicle emissions are expected to decrease due to decreased congestion and improved traffic flows. Table 2.2.6-4 in Section 2.2.6 also shows that the project would result in decreased 1-hour and 8-hour CO concentrations and would not exceed state and federal standards for CO. As shown in Table 2.2.6-7, predicted PM emission levels are also projected to trend lower from existing to the future years 2025 and 2045 under the No Build and Build Alternatives. As such, operation of the proposed project would not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Results from the CO hot-spot modeling analysis demonstrate that under the Build Alternative, CO concentrations are expected to remain generally unchanged and are below the 1-hour and 8-hour NAAQS of 35 ppm and 9 ppm, respectively. The project would not contribute to a violation of CO standards; therefore, local CO project-level transportation conformity requirements would be satisfied. In addition, predicted PM emission levels trend lower from existing to the future no-build years 2025 and 2045. The project provides further reductions in PM emissions by enhancing traffic flow and reducing the wait time at signalized intersections, minimizing brake use and tire wear under the Build Alternative. It is anticipated that the project would not worsen existing air quality, cause an exceedance, or cause any new violations of the PM<sub>2.5</sub> and PM<sub>10</sub> standards. PM project-level transportation conformity requirements are satisfied.

Furthermore, the project was incorporated in the conforming Interim 2015 FTIP; therefore, it is anticipated that the project would not worsen existing air quality, or cause an exceedance, or cause any new violations of the O<sub>3</sub> standards.

Operation of the project would not be a significant source of offensive odors. Any odors generated from the corridor after implementation of the project would be similar in nature to odors that would be generated from the corridor in the absence of the project. A site visit determined that there were no unusual or objectionable odors detected from nearby onsite or offsite land uses; therefore, the project is not anticipated to cause or substantially contribute to odor impacts. In addition, the City prepared a Health Risk Assessment (Appendix F) in accordance with CEQA guidelines.

### **b, c) Less Than Significant**

The proposed project would result in temporary air quality impacts during construction, with estimated pollutant emissions provided in Table 3-1 (also see Section 2.2.6, Air Quality). During construction, the project would generate pollutants, such as hydrocarbons (ROG), NO<sub>x</sub>, CO, and suspended PM. Construction activities of the project would include limited excavation, grading, hauling, and various other activities needed to construct the project.

Project construction emissions were estimated with the *Road Construction Emissions Model* (Version 9.0, Sacramento Metropolitan Air Quality Management District, May 2018). The results are presented below in Table 3-1.

**Table 3-1: Construction Emissions Estimates**

Parameter	ROG	CO	NO <sub>x</sub>	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>x</sub>	CO <sub>2e</sub>
Peak Day Construction Emissions (lb/day)	4.7	44.7	45.7	16.9	4.9	0.1	9,910
Total Construction Emissions (tons/year)	0.43	4.33	4.16	1.86	0.51	0.01	929
SCAQMD Mass Daily Thresholds (lb/day)	75	550	100	150	55	150	NA
Project Exceeds Threshold?	No	No	No	No	No	No	NA
SCAQMD Localized Significance Threshold	NA	1,232	170	6	5	NA	NA
Project Exceeds Threshold?	NA	No	No	<b>Yes</b>	No	NA	NA
<b>Notes:</b> lb – pound; ROG – reactive organic compounds; CO – carbon monoxide; NO <sub>x</sub> – nitrogen oxides; PM <sub>10</sub> – particulate matter less than 10 microns; PM <sub>2.5</sub> – particulate matter less than 2.5 microns; SO <sub>x</sub> – sulfur oxides; CO <sub>2e</sub> – carbon dioxide equivalent. LSTs are for Source-Receptor Area (SRA) 33 for a source-receptor distance of 25 meters.							

As shown in Table 3-1, the project's daily emissions during construction would not exceed SCAQMD's Mass Daily Thresholds; therefore, they are not regionally

significant. Except for PM<sub>10</sub> emissions, the project's daily emissions during construction would also not exceed the relevant Localized Significance Thresholds (LST). Project PM<sub>10</sub> emissions, however, would substantially exceed its LST. Dust and odors at some residences very close to the ROW could cause occasional annoyance and complaints; however, implementation of Standard Conditions SC-CI-21 and SC-CI-22, which includes an extensive list of air quality control measures, would reduce PM<sub>10</sub> emissions during construction. Impacts would be temporary and considered less than significant.

Other individual projects in the Basin may be under construction simultaneously with the project. Depending on construction schedules and implementation of other projects in the region, fugitive dust and pollutant emissions generated during construction may result in substantial short-term increases in air pollutants. This would contribute to short-term cumulative air quality impacts; however, implementation of construction BACMs during site grading activities would reduce fugitive dust emissions to a level that is considered minor. In addition, the City prepared a Health Risk Assessment (Appendix F) in accordance with CEQA guidelines.

### 3.2.4 Biological Resources

The City has not established significance thresholds for use in evaluating the proposed project's impact to biological resources; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Biological Resources***

#### **a) Less Than Significant with Mitigation Incorporated**

The removal and/or trimming of trees and shrubs along the corridor could result in impacts to nesting birds in violation of the MBTA and CFG Code. Implementation of Mitigation Measure AS-1 would reduce potentially significant impacts on nesting birds and raptors to less than significant levels because this measure includes guidelines on vegetation clearing, survey dates, and buffers. General biological surveys confirmed that the entire BSA is composed of developed land. No sensitive habitats, natural communities, special-status plant species, or special-status wildlife species have potential to occur within the BSA due to lack of suitable habitat.

#### **b, d, f) No Impact**

The Jurisdictional Delineation Letter Report for the project identifies 1.76 acres of jurisdictional waters of the U.S. and State in the West Cucamonga Channel. The channel is concrete-lined and abiotic, and it does not support riparian vegetation. As

such, the channel is not considered as wetland. No impacts to wetlands, riparian habitat, or other sensitive natural community would occur with the project.

No regional habitats and natural communities of special concern are known to occur on or within 1 mile of the BSA. Also, there is no habitat conservation plan or natural community conservation plan that is applicable to Grove Avenue or the surrounding area. Thus, the proposed project 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.

The proposed project would not interfere substantially with the movement of any wildlife species because the project does not have any wildlife corridors in its project footprint.

Two special-status plant species have been reported within 1 mile of the BSA between 1905 and 1917. Based on the current developed condition and lack of suitable habitat within the BSA, regional species of concern are not likely to occur within the BSA; thus, the proposed project would not result in impacts to special-status plant species.

**c, e) Less Than Significant**

The proposed project would result in temporary impacts to approximately 0.46 acre of nonwetland Waters of the U.S. The proposed project would not impact wetlands. The affected jurisdictional features would be restored to their approximate original contours and conditions and would not result in permanent loss of jurisdictional acreage, functionality, or value.

The City of Ontario, California Municipal Code, Volume II, Title 10 (Parks and Recreation), Chapter 2 (Parkway Trees), Sections 10-2 *et seq.* provides provisions for the protection of “Parkway Trees.” Section 10-2.03(e) states “Parkway” shall mean that portion of any public street ROW between the ROW boundary line and the curb line, and also the area enclosed within the curb lines of a median divider. Section 10-2.03(g) states “Tree” shall mean plant materials having a single upright woody stem or trunk, maturing at a height in excess of 10 feet. The City keeps a list of parkway trees. Pursuant to Section 10-2.06, the City requires approval and removal permits for parkway trees to be removed. To remove a parkway tree, it must meet criteria set forth by the City. The project would result in permanent unavoidable impacts to approximately 174 trees, of which 122 are parkway trees. This number includes tree trimming, as well as tree removals. As dictated by the municipal code, no person shall remove or relocate any parkway tree without prior authorization from the Public Works

Agency of the City. Tree removal by the project would require approval from the City, and replacement trees would be provided at a 2:1 ratio (or 348 replacement trees). Thus, no conflict with the City's parkway tree policy would occur, and impacts would be less than significant.

### 3.2.5 Cultural Resources

The City has not established significance thresholds for use in evaluating the proposed project's impact to cultural resources; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Cultural Resources***

#### **a, b, c) No Impact**

The proposed project would not result in impacts to any cultural resources because no NRHP-eligible archaeological resources were identified during the survey for the current project, the literature and records search did not reveal any known archaeological sites within a 1-mile radius, and the NAHC sacred lands file search did not reveal any results. Additionally, as a result of the cultural studies completed for this project, the APE contains one historic property that was determined eligible for listing in the NRHP and two additional historical resources for the purposes of CEQA only, as defined by CEQA Section 21084.1. Although Jay Littleton Ballpark is a historic property eligible for listing in the NRHP, the project improvements do not infringe on the physical aspects of any portion of the ballpark, and potential indirect effects to the ballpark would be minimal. The Fountain Winery and Cucamonga Valley Wine Company and Distillery are local historical resources, but the project would not require acquisition of any of these resources, and there are no project improvements proposed



that would physically impact or alter these buildings or properties. As a result, the project would not affect the qualities of historical and architectural significance that qualify these buildings as local historical resources. No historic properties would be affected as a result of the proposed project's construction or operation.

Lastly, the project is not expected to disturb any human remains. See Minimization Measures CR-1 and CR-2 in Section 2.1.8.4, Avoidance, Minimization, and/or Mitigation Measures, and CI-1 in Section 3.3.1 for the minimization of impacts due to any inadvertent discoveries. Standard Conditions SC-CI-6 and SC-CI-7 would also be implemented.

### 3.2.6 Energy

The City has not established significance thresholds for use in evaluating the proposed project's impact to energy; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### ***CEQA Significance Determinations for Energy***

#### **a, b) Less than Significant**

As discussed in Section 2.2.8.2, transportation fuel demand in California is expected to increase over time. However, the increase in the number of travel lanes on Grove Avenue would result in reductions in traffic congestion at the project intersections and the improvement of LOS, even with projected increases in the number of vehicles on Grove Avenue. Also, a slight decrease in VMT from the no-build to build conditions in 2025 and 2045 would occur with the project. This would translate into more efficient energy consumption and higher energy savings for vehicles traveling on Grove Avenue. Construction and future maintenance activities for the project would require energy sources, but this demand would be short-term and minimal. The project would

also comply with idling restrictions during construction, use reclaimed water for irrigation and energy-efficient lighting for streetlights, and use energy and fuel-efficient fleets and zero-emission technologies for vehicles during construction, where possible. The energy savings from operation of the Build Alternative would offset the potential energy impacts generated from construction of the project and maintenance of the improved facility. Thus, energy use during construction, operation, and maintenance of the project would not be wasteful, inefficient, or unnecessary, and no conflict with a renewable energy or energy efficiency plan would occur. Impacts related to energy would be less than significant.

### 3.2.7 Geology and Soils

The City has not established significance thresholds for use in evaluating the proposed project's geology-related impacts; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### ***CEQA Significance Determinations for Geology and Soils***

#### **a i, ii, iii, iv, b c, d, e) No Impact**

The site is not located in an Alquist-Priolo Fault Special Studies Zone, nor is it within 1,000 feet of any unzoned fault. It is also located outside designated earthquake zones of required investigations. Thus, fault rupture potential is remote, and the potential for liquefaction and earthquake-induced landslide is low. As with all of southern California, ground-shaking hazards may occur due to earthquake events in the region. With groundwater estimated at 375 to 475 feet below the ground surface, liquefaction hazards are unlikely. The project area is relatively flat, and no hazards related to landslides are expected. The preliminary geotechnical report states that liquefaction and scour potential are not a concern; hydrocollapse is unlikely; corrosion potential is low; and seismic design criteria and geotechnical recommendations are provided.

The project would increase impervious surfaces and reduce the potential for long-term erosion. Temporary constructed-related erosion would be minimized by the implementation of BMPs outlined in the SWPPP for the project. No septic tanks are needed or proposed by the project.

The project would be designed and constructed to meet the City's engineering design standards to minimize geologic and seismic hazards. Thus, the proposed project would not expose people or structures to substantial adverse effects of seismic activities or seismic-related ground failure beyond the existing level already present with the Grove

Avenue configuration. The evaluation of this resource is provided in Section 2.2.3.3, Environmental Consequences.

#### **f) Less Than Significant**

While the area is highly disturbed due to the original construction of Grove Avenue and existing adjacent developments and infrastructure, undisturbed native soils (i.e., Holocene and Pleistocene alluvial deposits) that underlie the project area have the potential to contain fossils. Grading and excavation are planned to be approximately 3 to 5 feet deep and confined to previously disturbed sediments, but retaining walls and soundwalls could require excavations up to 20 feet deep. Excavations deeper than 5 feet have the potential to encounter fossils in the Pleistocene portions of alluvial fan deposits. Thus, the proposed project has the potential to impact paleontological resources from excavation during construction. In accordance with the PMP for the project, to ensure that there would be no potential impacts to paleontological resources, monitoring would occur for all excavations greater than 10 feet deep in sediments mapped as Holocene at the surface and for all excavations greater than 5 feet deep in sediments mapped as Pleistocene at the surface, as part of construction specifications. Impacts would be less than significant.

### **3.2.8 Greenhouse Gas Emissions**

The City has not established significance thresholds for use in evaluating the proposed project's GHG emissions; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

<b>Would the project:</b>	<b>Significant and Unavoidable Impact</b>	<b>Less Than Significant with Mitigation Incorporated</b>	<b>Less Than Significant Impact</b>	<b>No Impact</b>
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### ***CEQA Significance Determinations for Greenhouse Gas Emissions***

Additional discussion of GHG is provided in Section 3.5, Climate Change.

**a, b) Less Than Significant Impact**

GHG emissions associated with construction equipment would be a direct effect during construction of the Grove Avenue Corridor Project. The proposed project is a roadway widening project, and the roadway itself would not directly generate GHG emissions. Rather, GHG emissions associated with vehicles traveling along the Grove Avenue corridor would be considered an indirect effect of the proposed project.

As analyzed in Section 3.2.3, Air Quality, and shown in Table 3-1 above, construction of the project would result in an estimated 929 tons of CO<sub>2</sub>e; however, it is anticipated that any increase in GHG emissions due to construction would be offset by the improvement in operational GHG emissions. In both 2025 and 2045, the estimated GHG emissions from vehicles using the project under the Build Alternative (proposed project) would be lower than the estimated GHG emissions under the No Build Alternative (see Table 3-2). Based on the project-related reduction in annual GHG emissions in 2025, the GHG emitted during construction would be recaptured in approximately 8 years. Based on the project-related reduction in annual GHG emissions in 2045, the GHG emitted during construction would be recaptured in less than 1 year.

**Table 3-2: Greenhouse Gases Emissions**

Year	Greenhouse Gas Emissions (tpy of CO <sub>2</sub> e)		
	No Build Alternative	Build Alternative	Change
Existing	3,686	NA	NA
2025	5,281	5,167	-114
2045	8,235	7,266	-969
Notes: CO <sub>2</sub> e – carbon monoxide equivalents; tpy – tons per year			

Therefore, GHG impacts associated with the proposed project would be less than significant. No mitigation is required.

The proposed project consists of widening Grove Avenue to alleviate existing and anticipated future congestion along Grove Avenue between 4<sup>th</sup> Street and Airport Drive and improve traffic operations along the corridor. With it being anticipated that any increase in GHG emissions due to construction would be offset by the improvement in operational GHG emissions, the proposed project is in alignment with the goals and policies of SCAG, SCAQMD and San Bernardino County by reducing GHG emissions overall. The proposed project directly relates to Measure Trans-9 Roadway

Management of the City of Ontario's Community Climate Action Plan. This measure's goal is to implement traffic and roadway management strategies to improve mobility and efficiency and reduced associated emissions. The proposed project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. Impacts associated with the proposed project are less than significant, and no mitigation is required.

### 3.2.9 Hazards and Hazardous Materials

The City has not established significance thresholds for use in evaluating the proposed project's hazardous materials-related impacts; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Hazards and Hazardous Materials***

#### **a, c, e, f, g) No Impact**

The proposed project would not create a significant hazard to the public or environment through transport, use, or disposal of hazardous materials because the Build Alternative involves improvements to an existing roadway only, and the transport, use, or storage of toxic materials or chemicals is not a proposed component of the project. Because Grove Avenue is a designated truck route, the widened roadway and projected increase in traffic volumes may lead to more trucks carrying hazardous materials or hazardous wastes using Grove Avenue. The transport of hazardous materials or wastes is regulated by Hazardous Materials Transportation Act (49 U.S.C. Chapter 51), Hazardous Materials Regulations (49 CFR 171-177), California Vehicle Code (Section 32000.5), California Health and Safety Code (Section 25167.1 *et seq.*), and the City's Traffic Regulations (Chapter 6 of the Ontario Municipal Code). Compliance with these regulations by truck drivers and haulers would prevent the creation of hazards associated with the transport of hazardous materials and wastes on Grove Avenue.

The project is located within 0.25 mile of Del Norte Elementary School and within 2 miles of Ontario International Airport, but associated roadway improvements would not result in the emissions of hazardous materials nor result in a safety hazard for people residing or working in the project area. The Airport Land Use Compatibility Plan (ALUCP) shows Grove Avenue within the Airport Influence Area but outside the designated Safety Zones, except for the southern end (south of Airport Drive) where land use restrictions have been established and aviation easements are required. The project does not propose a new land use, and roads are normally compatible with the designated Safety Zone. The entire project segment is within areas with allowable height limits ranging from 70 to 150 feet above the ground level. The proposed roadway improvements would largely be at-grade, except for retaining walls and soundwalls (6

to 12 feet high) and streetlights that would be 31.5 feet high and, thus, would not conflict with the ALUCP. No airport hazards would be created by the project. Also, the project would not change the exposure of residents or other persons in the area to airport noise.

While the proposed project may involve the handling of hazardous substances during construction, including fuel and degreasers for construction vehicles and equipment, and paints used for new lane striping, appropriate BMPs and industry standards would be utilized to protect workers and residents from potential impacts.

There is no risk associated with wildland fires because there are no wildlands in the project vicinity.

Lastly, there is no potential for the project to interfere with an adopted emergency response or evacuation plan because a TMP would be prepared to ensure appropriate emergency route planning and coordination during the construction period.

**b, d) Less Than Significant**

Construction and maintenance of the proposed project would utilize hazardous materials but the transport, use, handling, storage, and disposal of hazardous materials would be conducted in compliance with pertinent national, state, and local hazardous materials regulations. These include the transport of hazardous materials in accordance with the Hazardous Materials Transportation Act and California Vehicle Code; storage, handling, and disposal of hazardous waste in compliance with the California Hazardous Waste Control Act; protection of high-pressure and high-voltage utility lines and pipelines per the California Code of Regulations; and lead abatement and asbestos-containing material removal and disposal per SCAQMD Rules and the California Code of Regulations, among others. These regulations establish procedures and practices that would reduce the potential for accidental release of hazardous materials and minimize the adverse effects of accidental releases.

Construction of the proposed project has the potential to encounter hazardous materials at several locations. The removal of utility poles would be managed as treated wood waste (TWW), while the pole-mounted overhead transformers may contain polychlorinated biphenyls (PCBs), which need to be profiled and managed appropriately. The proposed project would require removal of multiple residential structures and, depending on the structures' age, they may contain asbestos-containing material (ACM) and lead-based paint (LBP); however, BMPs and industry standards would ensure that no significant hazards would be released to the public, some of which



are detailed in Standard Conditions SC-CI-18 through SC-CI-20 and Minimization Measure HW-1.

There are two properties identified for acquisition – 1194 E. Holt Boulevard and 1111 E. Holt Boulevard – that are considered an HREC and REC, respectively. Although there is potential for the presence of compromised soils at these locations, whether they exist has yet to be determined. As part of the ROW acquisition process, property to be acquired would be tested for ACM and LBP. Implementation of Standard Conditions SC-CI-18 through SC-CI-20 and Minimization Measure HW-1 would minimize potential impacts to a less than significant level.

### 3.2.10 Hydrology and Water Quality

The City has not established significance thresholds for use in evaluating the proposed project's impacts on hydrology and floodplains; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(i) result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
iii Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Hydrology and Water Quality***

#### **a, b, c, d, e) No Impact**

Construction of the project would include the implementation of BMPs to reduce pollutants in the stormwater runoff, including eroded soils and sediment. In the long-term, the increased number of vehicles on the roadway would generate the same pollutants that may be entrained by stormwater. Implementation of Minimization Measure WQ-3 would incorporate source control BMPs and BMP techniques (i.e., drainage swales, bioretention, and/or infiltration basins/trenches) as part of the project to reduce pollutant runoff into the West Cucamonga Channel. Also, the West Cucamonga Channel is not listed as an impaired water body per Section 303(d) of the CWA. In addition, the project would not include kitchen, toilet, or bathroom facilities nor generate wastewater that may violate the WDRs of wastewater treatment plants serving the area. Thus, it would not violate any water quality standards or WDRs.

No groundwater wells are proposed with the project, and irrigation water would be derived from reclaimed water sources. Also, the project area is urbanized and does not serve as a groundwater recharge area. Proposed excavations would not be deep enough to affect groundwater, which is estimated at 375 to 475 feet below the ground surface. Thus, the project would not substantially deplete groundwater resources or interfere with groundwater recharge, and no impact on local groundwater resources would occur with the project.

The limits of the 100-year floodplain in the project area are confined to the West Cucamonga Channel. Although the Build Alternative would geometrically encroach on the West Cucamonga Channel's floodplain at the culvert crossings, it would not alter the floodplain because the culvert crossings would only be extended to accommodate the roadway widening by a maximum of approximately 37 feet. Even with the increase in impervious areas due to the project, the 100-year flood event would still be contained in the channel under the proposed conditions. The encroachment to the channel has been minimized, and the proposed roadway surface would be above the water surface elevation in the channel. Thus, the limits of the 100-year floodplain would not change. Also, water in the channel would not lead to the interruption or termination of a transportation facility in the event of a 100-year rain event. No effects to the floodplain or risks to incompatible developments would occur. Also, no impedance or redirection of flood flows in the channel would occur.

No natural or beneficial uses for this floodplain have been identified in the Santa Ana RWQCB's Basin Plan for the Santa Ana River Basin. As such, West Cucamonga Channel's only use is for drainage conveyance. The evaluation of this resource is provided in Section 2.2.1.3, Environmental Consequences. Thus, no conflict with the Basin Plan for the Santa Ana River Basin would occur.

Construction of the Build Alternative would add 2.57 acres of additional impervious surface area, as estimated in the Final Water Quality Management Plan for the project. The additional impervious surface area would not alter the existing drainage patterns because stormwater runoff would continue to be conveyed to the concrete-lined West Cucamonga Channel that runs through and serves the project area. Localized changes in drainage patterns would not change the direction of flows in the West Cucamonga Channel and downstream channels. Also, source control BMPs and BMP techniques (i.e., drainage swales, bioretention, and/or infiltration basins/trenches) would be implemented through Minimization Measure WQ-3 and would reduce pollutants and runoff volumes and rates in compliance with the County MS4 Permit. The project would not result in runoff that would exceed the existing stormwater drainage system capacity of the West Cucamonga Channel because stormwater volume from a 100-year rain event would still be contained within the channel. Thus, no change to the potential release of pollutants into the channel from flood waters would occur.

The proposed project would geometrically encroach on the West Cucamonga Channel's floodplain at the culvert crossings. The proposed encroachment would not alter the floodplain because the culvert crossings would only be extended to accommodate the roadway widening by a maximum of approximately 37 feet.

Furthermore, the 100-year flood event would still be contained in the existing channel under the proposed conditions. Existing drainage patterns would not be altered. In addition, several minimization measures, HYD-1 through HYD-5, would be incorporated into the design and construction phases to avoid potential floodplain and water quality impacts.

The proposed project would add 2.57 acres of additional impervious surface area, resulting in a potential increase in stormwater runoff and water quality impacts. With incorporation of temporary construction site BMPs, source control BMPs, and BMP techniques (i.e., drainage swales, bioretention, and/or infiltration basins/trenches), no significant impacts are expected with implementation of the proposed project. In addition, Minimization Measures WQ-1 through WQ-3 and Standard Conditions SC-CI-8 through SC-CI-10 would be implemented to minimize potential water quality and hydrological impacts.

Lastly, the project area is underlain by the Chino Groundwater Basin, which is an adjudicated basin where groundwater pumping is monitored and regulated by the Chino Basin Watermaster. This groundwater basin is a very low priority basin under the Sustainable Groundwater Management Act, and no sustainable groundwater management plan is required. Because no impacts to groundwater resources are expected with the project, no conflict with a sustainable groundwater management plan would occur.

### 3.2.11 Land Use and Planning

The City has not established significance thresholds for use in evaluating the proposed project's consistency with related plans and policies; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## ***CEQA Significance Determinations for Land Use and Planning***

### **a) No Impact**

The proposed project would not physically divide an established community because the roadway already exists, and the project would provide improved accessibility for motorists, pedestrians, and bicyclists. In addition, there would be improved sidewalks, crosswalks, lighting, and landscaping. Overall, the proposed project is generally consistent with area local plans, including policies and goals for improving traffic operations and mobility.

### **b) Less Than Significant**

Overall, there is a less than significant impact associated with the proposed project's consistency with existing plans and policies. The project is consistent with the Ontario General Plan and Master Plan of Streets and Highways. The project is also consistent with SCAG's RTP/SCS. The proposed project would not conflict with habitat conservation plans because there are none that apply to the project area, and the project is generally consistent with area local plans, including policies and goals for improving traffic operations and mobility. However, the proposed project would require permanent removal of 0.11 acre of open space parkland and removal of approximately 174 trees, which would be inconsistent with SCAG's 2008 RCP policies focused on protection of open space. While the RCP was adopted to serve as a vision for promoting economic prosperity, natural resource sustainability, and quality of life in the region, some of its policies indirectly serve to avoid or mitigate environmental effects associated with the loss of open space and natural lands. However, the project would not affect natural lands and has been designed to preserve as many mature trees as practicable. In addition, the project's landscape plan would incorporate a tree replacement plan with a replacement ratio of 2:1 — for every mature tree removed, two trees would be planted. This would bring the project in line with SCAG 2008 policies regarding protection of open space.

### **3.2.12 Mineral Resources**

The City has not established significance thresholds for use in evaluating the proposed project's impact to mineral resources; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Mineral Resources***

#### **a, b) No Impact**

The proposed project would not result in impacts to mineral resources because none have been identified in the project area.

#### **3.2.13 Noise**

The City has not established significance thresholds for use in evaluating the proposed project's noise and vibration impacts; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used. Additionally, per Caltrans Traffic Noise Analysis Protocol, Section 7, CEQA and NEPA Considerations, a 12-dB increase between existing and design-year with-project conditions is considered a significant impact.

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of a project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project result in:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Noise***

#### **a) Less Than Significant**

In California, a substantial noise increase is considered to occur when the project's predicted worst-hour design-year noise level exceeds the existing worst-hour noise level by 12 dB or more. The evaluation of this resource is provided in Section 2.2.7, Noise and Vibration. Noise levels in the future design-year Build conditions are predicted to increase by a maximum of 8 dB at one receiver location over the existing noise conditions. Noise levels in the design-year Build conditions would increase from existing conditions; however, this increase in noise level is not considered to be substantial.

In the future design-year 2045 build conditions, most of the receiver locations have traffic noise levels that were found to approach or exceed the applicable NAC. Fifteen (15) soundwalls to provide noise abatement for affected receptors were evaluated on private property lines in the proposed project corridor, which was the optimum location for breaking the line of sight between Grove Avenue and impacted receiver locations. Of the 15 soundwalls evaluated, 8 (SW-1, SW-5C, SW-6, SW-7, SW-8, SW-9, SW-11, and SW-12) were found to be feasible and reasonable. Receptors (24 single-family and multi-family residences) where soundwalls were found to be unreasonable and/or infeasible would experience an increase in noise levels approaching or exceeding the applicable NAC, but a soundwall would not reduce noise levels by 7 dB or more and/or the cost of the soundwall would exceed the set cost per benefited receptor. Because increases in noise levels would be less than 12 dB, the impact on the 24 residences would not be substantial or significant.

Implementation of Minimization Measure N-1 would minimize noise impacts to more than 92 benefited receptors. In the event that any of the soundwalls are not constructed

(due to objections from the property owner and other factors), the increase in noise levels over existing and future design-year 2045 build conditions would be an unavoidable impact from the operation of the project, but this increase would not be more than 12 dB. Thus, long-term impacts would be less than significant.

During construction of the project, noise from construction activities may intermittently and temporarily dominate the noise environment in the immediate area of construction. Construction equipment is expected to generate noise levels ranging from 70 to 90 dBA at a distance of 50 feet, and noise produced by construction equipment would be attenuated over distance at a rate of approximately 6 dB per doubling of distance. To minimize the construction-generated noise, abatement measures in standard Specification 14-8.02, “Noise Control” and SSP 14-8.02 must be followed:

- Do not exceed 86 dBA at 50 feet from the job site activities from 9:00 p.m. to 6:00 a.m.
- Equip an internal combustion engine with the manufacturer-recommended muffler.
- Do not operate an internal combustion engine on the job site without the appropriate muffler.

No significant noise impacts from construction are anticipated because construction would be conducted in accordance with Standard Specification 14-8.02, SSP 14-8.02, and applicable local noise standards. In addition, the temporary and intermittent construction noise would cease to exist upon completion of the construction project.

**b) No Impact**

BMPs and industry standards would ensure that the project would have no to very little potential for groundborne vibration or noise levels during construction or operation of the project. These standards are further discussed in Section 2.2.7, Noise and Vibration.

**c) No Impact**

The project is within 2 miles of the Ontario International Airport, and the southern section of the project segment (south of G Street) is within the 60-65 dB CNEL and 65-70 dB CNEL noise impact zones of the airport. The project would not directly increase the number of vehicles on Grove Avenue, nor would it change the exposure of residents or other persons in the area to airport noise. Therefore, no impacts would occur.



### 3.2.14 Population and Housing

The City has not established significance thresholds for use in evaluating the proposed project's potential for growth inducement; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### ***CEQA Significance Determinations for Population and Housing***

#### **a) No Impact**

The proposed project would not induce substantial growth directly or indirectly. Widening of the Grove Avenue corridor would alleviate current congestion issues and would not contribute to growth. The evaluation of this resource is provided in Section 2.1.4.1, Community Character and Cohesion.

#### **b) Less Than Significant**

The proposed project would require the acquisition and displacement of 8 single-family housing units and 4 multi-family housing units. It is estimated that approximately 47 residents would be displaced as a result. As part of the relocation analysis, adequate resources for comparable decent, safe, and sanitary relocation sites can be found for all affected residents within the replacement area of the cities of Ontario, Upland, Rancho Cucamonga, and Montclair. There would not be a need to construct replacement housing for those affected by the proposed project.

### 3.2.15 Public Services

The City has not established significance thresholds for use in evaluating the proposed project's impact to public services; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Public Services***

#### **a) No Impact**

The proposed project would not result in impacts to public services. The improvements associated with the proposed project would have beneficial effects for law enforcement protection and emergency service access and response times.

#### **3.2.16 Recreation**

The City has not established significance thresholds for use in evaluating the proposed project's impact to recreational resources; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### ***CEQA Significance Determinations for Recreation***

#### **a) No Impact**

The project would result in small acquisitions of the existing Grove Memorial and John Galvin parks, but the widening of Grove Avenue would not result in an increase in use of the parks. The project would not result in any impacts to the level of use at the existing parks.

#### **b) Less Than Significant**

The proposed project would require the acquisition of approximately 0.06 acre of Grove Memorial Park and 0.06 acre of John Galvin Park to accommodate the roadway improvements. As discussed in detail in Appendix A, Section 4(f) Evaluation, the permanent acquisitions would be limited to unused landscaped and mulch-covered areas at Grove Memorial Park and John Galvin Park; therefore, they would not adversely affect the recreational activities, features, or attributes of either park.

### **3.2.17 Transportation**

The City has not established significance thresholds for use in evaluating the proposed project's transportation-related impacts; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle lanes and pedestrian paths?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) For a land use project, would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) For a transportation project, would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(2)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Transportation/Traffic***

#### **a, b, c, d, e) No Impact**

Implementation of the proposed project would result in no effect for each of the traffic- and transportation-related significance thresholds. The proposed project would not conflict with any applicable plan, ordinance, or policy focused on the performance of the circulation system. The roadway improvements associated with the Build Alternative would improve traffic operations along Grove Avenue and would be compatible with local and regional congestion management plans and transportation-related plans, policies, or programs. While the Grove Avenue/Holt Boulevard, Grove Avenue/State Street-Airport Drive, and Grove Avenue/Mission Boulevard intersections are forecast to continue to operate at LOS E or F in horizon year 2045 build conditions, the average delays are forecast to significantly improve with implementation of the Build Alternative compared to the No Build Alternative.

The proposed roadway improvements would be designed to meet all applicable roadway design and safety standards. Because the project would result in a slight decrease in VMT from the no-build to build conditions in 2025 and 2045, no conflict with CEQA Guidelines Section 15064.3 (b) would occur.

Because no arterial roadways would be permanently closed, there are no permanent impacts to access or circulation, and no indirect impacts are anticipated with implementation of the Build Alternative. A TMP would be implemented during

construction to ensure appropriate coordination with emergency response providers regarding construction activities. Emergency access through the project corridor would be maintained during project construction. Standard Conditions SC-CI-1 through SC-CI-3 and SC-CI-5 would also be implemented.

Grove Avenue is designated as a Bicycle Corridor by the City of Ontario Multipurpose Trails and Bikeway Corridor Plan. The project would include a new Class III bikeway along Grove Avenue in conformance with SBCTA's Non-Motorized Transportation Plan 2014. The Build Alternative would be designed to retain and improve the existing pedestrian sidewalk on the west side of Grove Avenue between I Street and G Street. The Build Alternative would improve pedestrian connectivity by constructing a new sidewalk that seamlessly connects with an existing walkway in Grove Memorial Park. Additionally, pedestrian sidewalks along the project area would include a landscaped median between traffic and pedestrians to enhance safety. There would also be a design element that provides a pedestrian connection across the West Cucamonga Channel to an existing trail leading to James Galanis Park. All pedestrian sidewalk changes would be ADA compliant. As such, no adverse effects with respect to nonmotorized and pedestrian features would occur as a result of implementation of the Build Alternative.

### 3.2.18 Tribal Cultural Resources

The City has not established significance thresholds for use in evaluating the proposed project's consistency with related plans and policies; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Tribal Cultural Resources***

#### **a, b) No Impact**

A sacred lands records search was requested for this project from the NAHC on March 27, 2015. The NAHC responded on April 22, 2015, that a search of the sacred lands file failed to indicate the presence of Native American cultural resources in the immediate project area. The NAHC requested that four Native American tribes or individuals be contacted for further information regarding the general project vicinity.

The following is a summary of the tribes contacted and their responses to the request for consultation:

- Gabrieleno/Tongva Band of Mission Indians – Archaeological monitoring should be conducted in case of subsurface archaeological material.
- Gabrielino/Tongva Nation – Letter sent May 13, 2015; e-mail sent June 5, 2015; and a follow-up phone call made June 12, 2015. On June 12, 2015, consultation was deferred to Mr. Sam Dunlap, who provides all cultural resource consultation comments for the Gabrielino/Tongva Tribe. See below for Mr. Dunlap's response.
- Gabrieliño Band of Mission Indians – No responses received to any of the three attempts at contact.
- Gabrielino/Tongva Nation Los Angeles – Mr. Sam Dunlap, Cultural Resources Director of the Gabrielino/Tongva Nation Los Angeles, responded by e-mail and recommended implementing Native American monitoring oversight during

construction and to be informed of any unanticipated discovery of prehistoric cultural material.

- San Manuel Band of Mission Indians – A comment was received noting that the ethnography section contained no discussion of the Serrano. Another comment was received to revise the report asking that the tribal territory match the description developed by the tribe, that nearby villages be mentioned, and that mention of the Vanyume be removed.
- Serrano Nation – Requested to be notified if any cultural resources are observed during construction activities and to be contacted immediately if any human remains are encountered.

While no tribal cultural resources were identified during the AB 52 process, Minimization Measures CR-1, CR-2, and CI-1 were identified to reduce any potential impacts to tribal cultural resources that may be encountered during construction.

Please see Chapter 4, Comments and Coordination, for more details on the AB 52 consultation results.

### 3.2.19 Utilities and Service Systems

The City has not established significance thresholds for use in evaluating the proposed project's impact to utilities; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### ***CEQA Significance Determinations for Utilities and Service Systems***

#### **a, b, c, d, e) No Impact**

The demolition of existing structures along Grove Avenue would result in the elimination of water demand and wastewater generation from existing land uses. Existing water and sewer lines serving these uses would be abandoned or relocated, and new water lines may be constructed for irrigation of landscaped parkways and medians; however, reclaimed water would be utilized and no new water supplies are needed. The proposed project would not result in an increase in demand for existing water and sewer utilities or require the construction of new water or sewer facilities to serve the project. Existing storm drainage facilities would be relocated, and drainage improvements would include installation of operational BMPs to reduce pollutant runoff and runoff volumes. Standard Condition SC-CI-4 would also be implemented. The impacts of these utility line relocations and improvements have been considered in this EIR/EA.

Short-term construction-related solid waste disposal would be made in accordance with existing regulations, such as the Ontario Integrated Solid Waste Management Ordinance, CalGreen Code, and applicable hazardous waste disposal regulations for TWW, ACM, LBP, and hazardous materials used for building construction. Construction and demolition wastes would also be accommodated by area landfills, such as the Mid-Valley Sanitary Landfill (accepts 7,500 tons per day and has 67.52



million cubic yards of remaining capacity) and San Timoteo Sanitary Landfill (accepts 2,000 tons per day and has 11.2 million cubic yards of remaining capacity).

The proposed improvements under the Build Alternative would result in the relocation of some major electrical and water utilities, but they would not adversely affect the long-term operations of these utilities.

### 3.2.20 Wildfire

The City has not established significance thresholds for use in evaluating the proposed project's impact related to wildfire; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### CEQA Significance Determinations for Wildfire

#### a, b, c, d) No Impact

Grove Avenue is located in an urbanized area of the city and is not located near a Very High Fire Hazard Severity Zone. Therefore, the project would not be exposed to

wildfire hazards. The project area is relatively flat and would have no effect on emergency response or evacuation in wildfire hazard areas that are located outside the city. No impacts related to wildfire would occur.

### 3.2.21 Mandatory Findings of Significance

The City has not established significance thresholds for use in evaluating the proposed project's consistency with related plans and policies; therefore, the thresholds presented in Appendix G of the CEQA Guidelines are used.

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### ***CEQA Significance Determinations for Mandatory Findings of Significance***

#### **a, b) Less Than Significant**

While the project would require the removal and/or trimming of trees and shrubs along the corridor, which could result in impacts to nesting birds in violation of the MBTA and CFG Code, the project does not have the potential to degrade the quality of the

environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

As discussed in Section 2.4, Cumulative Impacts, the project does not have impacts that are individually limited but cumulatively considerable. In several cases, the project would improve conditions, thus creating beneficial cumulative impacts.

### **c) Less Than Significant with Mitigation Incorporated**

During construction, there is a possibility to encounter hazardous materials. TWW and transformers containing PCBs may be encountered. During demolition of buildings, ACM and LBP could be present. Residual contamination could exist at the property located at 1194 E. Holt Boulevard where there was previously an LUST that contaminated soils and was cleaned up. Illicit disposal of hazardous liquids to soil occurred at 1111 E. Holt Boulevard. All of these potentially significant conditions would be reduced to less than significant with Standard Conditions SC-CI-18 through SC-CI-20 and Minimization Measure HW-1.

## **3.3 Mitigation Measures for Significant Impacts under CEQA**

Impacts are avoided or minimized through implementation of standard conditions, minimization measures and mitigation measures (identified at the end of each topic in Chapter 2). Implementation of the standard conditions is assumed prior to making the determination if an impact is significant because these are regulatory requirements or practices that Caltrans routinely applies to all projects. Other mitigation measures would reduce impacts identified as significant. Mitigation measures are listed below with a cross reference to the section where the mitigation measures can be found. In addition, all of the measures and standard conditions are listed in Appendix D. No mitigation measures would apply to the No Build Alternative because no improvements would be made.

### ***Mitigation Measures:***

#### ***Animal Species***

**AS-1:** To avoid effects to nesting birds, the Project Engineer will require the contractor to conduct vegetation removal or tree-trimming activities outside of the nesting bird season (i.e., February 15 through August 31).

If vegetation clearing is necessary during the nesting season, the Project Engineer will require the contractor to have a qualified biologist conduct a preconstruction survey within 150 feet of construction areas no more than 10 days prior to construction at the location to identify the location of nests, if any. A qualified biologist is one that has previously surveyed for nesting bird species within southern California.

Should nesting birds be found, an exclusionary buffer will be established by the qualified biologist around each nest site. The buffer will be clearly marked in the field by construction personnel under guidance of the contractor's qualified biologist, and construction or clearing will not be conducted within this zone until the qualified biologist determines that the young have fledged or the nest is no longer active.

The qualified biologist will monitor the nests on a weekly basis to ensure that construction activities do not disturb or disrupt nesting activities.

If the qualified biologist determines that construction activities are disturbing or disrupting nesting activities, then the biologist will notify the Project Engineer, who has the authority to stop or modify construction to reduce the noise and/or disturbance to the nests. Responses may include, but are not limited to, increasing the size of the exclusionary buffer, curtailing nearby work activities, turning off vehicle engines and other equipment wherever possible to reduce noise, installing a protective noise barrier between the nest and the construction activities, and/or working in other areas until the young have fledged. (Section 2.3.4)

### **3.3.1 Avoidance and Minimization Measures**

Standard conditions and minimization measures would reduce construction-related impacts to various resources described in the previous sections. These include:

#### ***Avoidance and Minimization Measures***

##### ***Consistency with State, Federal, and Local Plans and Programs***

**LU-3:** The remnant parking lot on the west side of John Galvin Park will be reconfigured to maintain as many parking spots at this location as possible. (Section 2.1.4)

- VA-2:** Where it is not feasible to save the existing trees, new tree and vegetation plantings shall be included in the final design of the roadway. Replacement trees shall be two 24-inch boxed trees for each tree removed by the project. All areas disturbed by the project shall be fitted with new landscaping, including trees, groundcovers, accent plants, and turf grass (in park areas adjacent to existing remaining turf). (Section 2.1.7)
- NC-1:** The project shall preserve as many mature trees as practicable. Although there is no City or County ordinance for tree removal, the project's landscape plan will incorporate a tree replacement plan with a replacement ratio of 2:1 – for every mature tree removed, two trees will be planted to be consistent with Measure VA-2. Mature trees (larger than 20 feet high) that are to be removed shall be replaced with two 24-inch box trees. Design plans shall indicate locations of existing mature trees (larger than 20 feet high) to be preserved in place. Tree replacement shall meet all Caltrans and City standards and policies, and near John Galvin Park, the replacement tree species will incorporate species that have been identified as those of the original planting of John Galvin Park in the 1930s. (Section 2.3.1)

### *Noise and Vibration*

- N-1:** Based on the studies completed, Caltrans and the City will incorporate noise abatement in the form of soundwalls that meet the criteria for reasonableness and feasibility. The recommended soundwalls would reduce the traffic noise by at least 5 dB at the impacted receivers, would meet the design goal by providing a 7-dB reduction for at least one receiver, and would cost less than the reasonable cost allowance. If, during final design, conditions have substantially changed, noise abatement may change or not be necessary, depending on the results of the updated noise analysis using final design information. The final decision of the noise abatement will be made upon completion of the project design and the public involvement process.

During circulation of the draft environmental document, soundwall surveys will be conducted with all property owners and residents of benefited receptors located within the footprint of the Build Alternative. If more than 50 percent of the responding benefited receptors oppose

the soundwall, then the soundwall would not be constructed.  
(Section 2.2.7)

### ***Parks and Recreation***

- LU-1:** Turf grass and rock curbs will be replaced in TCE areas within Grove Memorial Park to match pre-project conditions in consultation with the property owner (City) during and at completion of construction. (Section 2.1.1)
- LU-2:** Turf grass and rock curbs will be replaced in TCE areas within John Galvin Park to match pre-project conditions in consultation with the property owner (City) during and at completion of construction. (Section 2.1.1)
- LU-3:** The remnant parking lot on the west side of John Galvin Park will be reconfigured to maintain as many parking spots at this location as possible. (Section 2.1.1)

### ***Utilities/Emergency Services***

- UT-1:** During final design, the Project Engineer will prepare utility relocation plans in consultation with the affected utility providers/owners for those utility facilities that will need to be relocated, removed, or protected in-place. (Section 2.1.5)
- UT-2:** During final design, the Project Engineer will prepare utility relocation plans in consultation with the affected utility providers/owners for those utility facilities that will need to be relocated, removed, or protected in place. If relocation is necessary, the final design will focus on relocating utilities within the State ROW or other existing public ROWs and/or easements. If relocation outside of existing or the additional public ROWs and/or easements required for the project is necessary, the final design will focus on relocating those facilities in adjacent public ROWs and in a manner so as to not result in significant community, land use, or natural resource impacts. (Section 2.1.5)
- UT-3:** Close coordination with utility service providers and implementation of a public outreach program will be conducted, as needed, to minimize impacts to surrounding communities. (Section 2.1.5)

- UES-1:** Prior to and during any construction activities, the City will coordinate with emergency service providers to ensure that all providers are aware of temporary road closures and detours. (Section 2.1.5)
- UES-2:** Emergency service phone numbers (i.e., fire, emergency medical, police) will be posted in visible locations in all active construction areas. (Section 2.1.5)
- UES-3:** To avoid conflicts during construction, the project's Resident Engineer will notify all emergency and other essential service providers no less than 2 weeks prior to the start of construction. Agencies to be notified include:
- City of Ontario Police Department
  - City of Ontario Fire Department
  - San Bernardino County Sheriff's Department
  - San Bernardino County Fire Department (Section 2.1.5)

### *Community Impacts*

- COM-1:** Where acquisition and relocation are unavoidable, provisions of the Uniform Act and the 1987 Amendments, as implemented by the Uniform Relocation Assistance and Real Property Acquisition Regulations for Federal and Federally Assisted Programs adopted by USDOT (March 2, 1989) and where applicable, the California Public Park Preservation Act of 1971, will be followed. An appraisal of the affected property will be obtained, and an offer for the full appraisal will be made. (Section 2.1.4)
- COM-2:** Outreach activities targeted to low-income residents will be conducted during the planning, design, and construction phases of the Build Alternative. (Section 2.1.4)

### *Traffic and Transportation/Pedestrian and Bicycle Facilities*

- T-1:** Final TMP – A TMP (July 2015) was prepared during development of the preliminary engineering for the project. During final design, a Final TMP will be prepared. At a minimum, the Final TMP will include the detailing of any projected temporary street closures or expected traffic delays due to project construction activities. The Final TMP will include a public awareness program that will use an appropriate combination of

the HAR, local media, newsletters, and/or flyers. The following elements will be major components of the Final TMP: Public Awareness Campaign, particularly related to the scheduling of work; COZEEP; Utilization of portable CMSs; and notification to be sent to local cities and emergency responders, if applicable. (Section 2.1.6)

- T-2:** During project construction, the Project Engineer will ensure that the measures in the Final TMP are properly implemented by the contractor. (Section 2.1.6)
- T-3:** During final design and construction, the Project Engineer will work with affected property owners to identify means to avoid and minimize parking impacts, including space management, such as restriping of parking areas and identifying parking replacement options. (Section 2.1.6)
- T-4:** All pedestrian facilities will be designed to meet or exceed requirements of the ADA and current safety standards. Access to pedestrians and bicyclists shall be maintained to the extent practicable during the construction period. (Section 2.1.6)
- T-5:** Prior to and during construction, the Project Engineer will coordinate with Omnitrans, the Ontario-Montclair School District, and other affected transit providers to request and comply with applicable procedures for any required temporary bus stop relocations or other disruptions to transit service during construction, if necessary. (Section 2.1.6)
- T-6:** During final design and prior to and during construction, the Project Engineer will coordinate with the design and construction team for the I-10/Grove Avenue Interchange Project to ensure the Grove Avenue Corridor Project and the I-10/Grove Avenue Interchange Project are designed compatibly. (Section 2.1.6)

### *Visual/Aesthetics*

- VA-1:** The existing trees, particularly within the park area, provide scale, shade, and visual relief to the extent of roadway paving. Preserving existing trees to the extent feasible will help maintain the existing visual character of the roadway. (Section 2.1.7)



- VA-2:** Where it is not feasible to save the existing trees, new tree and vegetation plantings shall be included in the final design of the roadway. Replacement trees shall be two 24-inch boxed trees for each tree removed by the project. All areas disturbed by the project shall be fitted with new landscaping, including trees, groundcovers, accent plants, and turf grass (in park areas adjacent to existing remaining turf). (Section 2.1.7)
- VA-3:** To support the replacement of plantings, the project shall include a permanent irrigation system to all new plantings. Materials used or irrigation shall be as per City of Ontario standards. (Section 2.1.7)
- VA-4:** Decorative paving shall be employed for medians, islands, and parkway strips that are too narrow to plant. Paving color and texture/pattern shall match City of Ontario standards. (Section 2.1.7)

### *Cultural Resources*

- CR-1:** If cultural resources are discovered at the job site, all work activities shall stop within a 60-foot radius of the discovery, the discovery area shall be protected, and the Resident Engineer shall be notified. Cultural resources shall not be moved or taken from the job site until Caltrans investigates and determines the significance of the find. Work activities shall not resume within the discovery area until Caltrans provides written notification authorizing work activities to resume. (Section 2.1.8)
- CR-2:** **Human Remains.** If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities will cease in any area or nearby area suspected to overlie remains, and the County Coroner will be contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the NAHC, who will designate the MLD. At this time, the Caltrans District 8 Environmental Branch Chief, Andrew Walters (909) 383-2647, will be contacted so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable. (Section 2.1.8)

- CI-1:**       **Inadvertent Discoveries:** Should subsurface archaeological resources be discovered, a qualified archaeologist shall be contacted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, the archaeologist shall determine, in consultation with Caltrans, the City, and any local Native American groups expressing interest for prehistoric resources, appropriate avoidance measures or other appropriate mitigation. Per CEQA Guidelines Section 15126.4(b)(3), preservation in place shall be the preferred means to avoid impacts to archaeological resources qualifying as historical resources. Methods of avoidance may include, but shall not be limited to, rerouting or redesign, cancellation, or identification of protection measures such as capping or fencing. Consistent with CEQA Guidelines Section 15126.4(b)(3)(C), if it is demonstrated that resources cannot be avoided, the qualified archaeologist shall develop additional treatment measures, such as data recovery or other appropriate measures, in consultation with Caltrans, the City, and any local Native American representatives expressing interest for prehistoric archaeological resources. If an archaeological site does not qualify as a historical resource but meets the criteria for a unique archaeological resource as defined in Section 21083.2, then the site shall be treated in accordance with the provisions of Section 21083.2.

#### *Hydrology and Floodplain*

- HYD-1:**       Provide positive drainage during construction and refrain from filling designated floodplains. Construction site surface runoff will be channeled into existing drainage facilities so as to not cause water flow on neighboring properties. Offsite flows will be managed in a manner that will mimic the existing drainage network and will not inundate the roadway surface of any of the existing drainage systems. (Section 2.2.1)
- HYD-2:**       Implement standard BMPs as identified in the City of Ontario's Water Quality Management Plan, including temporary construction site BMPs to address site soil stabilization and reduce deposition of sediments to receiving waters. (Section 2.2.1)
- HYD-3:**       Include erosion control and water quality protection during construction at the West Cucamonga Channel. BMPs will be designed and

implemented to reduce the discharge of pollutants to the MEP. Typical measures that may be implemented include preservation of existing vegetation, use of soil binders or hydroseeding, and installation of silt fences or fiber rolls. (Section 2.2.1)

**HYD-4:** Contractor shall develop a contingency plan for unforeseen discovery of underground contaminants in the SWPPP. (Section 2.2.1)

**HYD-5:** Limit construction activities between October and May to those actions that can adequately withstand high flows and entrainment of construction materials. The Contractor shall prepare an REAP and discuss high flows mitigation. (Section 2.2.1)

#### *Water Quality and Stormwater Runoff*

**WQ-1: Implement Temporary Construction BMPs.** The project will be required to conform to the requirements of the NPDES Permit for Construction Activities, Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ, NPDES No. CAS000002. (Section 2.2.2)

**WQ-2: Prepare and Implement an SWPPP.** The Contractor will be required to develop an acceptable SWPPP. The SWPPP shall contain BMPs that have demonstrated effectiveness at reducing stormwater pollution. The SWPPP shall address all construction-related activities, equipment, and materials that have the potential to affect water quality. All Construction Site BMPs will be installed, maintained, and inspected to control and minimize the impacts of construction-related pollutants. The SWPPP shall include BMPs to control pollutants, sediment from erosion, stormwater runoff, and other construction-related impacts. In addition, the SWPPP shall include implementation of specific stormwater effluent monitoring requirements based on the project's risk level to ensure that the implemented BMPs are effective in preventing discharges from exceeding any of the water quality standards. (Section 2.2.2)

**WQ-3: Incorporate Design Principles into Final Roadway Design.** Design Principles are permanent measures to minimize pollution discharges by retaining source materials and stabilizing soils. The three objectives associated with Design Principle BMPs include maximizing vegetated

surfaces; preventing downstream erosion; and stabilizing soil areas. These design objectives will be applied to the entire project. (Section 2.2.2)

### *Paleontology*

**P-1:** Develop and implement a PMP, with monitoring in excavations more than 10 feet deep for sediments mapped as Holocene at the surface and more than 5 feet deep for excavations mapped as Pleistocene at the surface. The PMP will guide and facilitate the identification and treatment of paleontological resources, if any are found, during project construction to reduce adverse effects on significant resources. The PMP will summarize identified paleontologically sensitive areas within the APE, the organization and responsibilities of the paleontological team, the responsibilities of other parties, and the treatment and communications procedures to be implemented if paleontological resources are encountered during the project. (Section 2.2.4)

### *Hazardous Waste/Materials*

**HW-1:** Prior to property acquisition, limited soil investigations at 1194 E. Holt Boulevard and 1111 E. Holt Boulevard will be performed to determine the presence of compromised soils. If any compromised soils are present, they shall be removed and disposed of per regulatory requirements. (Section 2.2.5)

### *Natural Communities*

**NC-1:** The project shall preserve as many mature trees as practicable. Although there is no City or County ordinance for tree removal, the project's landscape plan will incorporate a tree replacement plan with a replacement ratio of 2:1 – for every mature tree removed, two trees will be planted to be consistent with Measure VA-2. Mature trees (larger than 20 feet high) that are to be removed shall be replaced with two 24-inch box trees. Design plans shall indicate locations of existing mature trees (larger than 20 feet high) to be preserved in place. Tree replacement shall meet all Caltrans and City standards and policies, and near John Galvin Park, the replacement tree species will incorporate species that have been identified as those of the original planting of John Galvin Park in the 1930s. (Section 2.3.1)

### ***Wetlands and Other Waters***

**WET-1:** Construction activities within the West Cucamonga Channel and Princeton Basin will be designed and conducted to maintain downstream flow conditions. All construction activities will be effectively isolated from water flows to the greatest extent feasible. This may be accomplished by working in the dry season or dewatering the work area in the wet season. When work in standing or flowing water is required, structures for isolating the in-water work area and/or diverting the water flow must not be removed until all disturbed areas are cleaned and stabilized. The diverted water flow must not be contaminated by construction activities. Structures used to isolate the in-water work area and/or diverting the water flow (e.g., coffer dam, geotextile silt curtain) must not be removed until all disturbed areas are stabilized. (Section 2.3.2)

### ***Invasive Species***

**IS-1:** In compliance with the Executive Order on Invasive Species (EO 13112), and guidance from FHWA, the landscaping and erosion control included in the project will not use species listed as invasive. In areas of particular sensitivity (i.e., near or adjacent to drainages), extra precautions will be taken if invasive species are found in or next to the construction areas. This includes the inspection and cleaning of construction equipment and eradication strategies, as required by the Caltrans Biological Monitor, to be implemented should an invasion occur. Any cleaning of equipment or site watering will be conducted in adherence to any applicable drought conditions and related regulations. A Caltrans biologist or landscape Architect will approve any seed lists (for planting).

### ***Standard Conditions***

#### ***Community Impacts***

**SC-CI-1:** To the extent practicable, street closures required during construction shall be scheduled to occur during nighttime hours. This requirement will be addressed in the TMP to be prepared during the final design phase of project development.

**SC-CI-2:** To the extent practicable, the contractor shall avoid blocking or limiting access to businesses during construction during normal business hours.

Businesses will be contacted and advised of nearby construction activities before their start.

- SC-CI-3:** Caltrans shall notify emergency service providers, such as fire, police, and ambulance services, in advance of construction of the timing, location, and duration of construction activities and the locations of detours and lane closures.

#### *Utilities and Emergency Services*

- SC-CI-4:** In accordance with the requirements in the CCR, prior to the initiation of construction, the contractor shall coordinate and notify the operators of underground or overhead utility and service lines prior to any excavation activities. This coordination will avoid damage to existing utility lines and will limit disruption to existing utility services to the existing developments near the proposed alignments.

#### *Traffic and Transportation/Pedestrian and Bicycle Facilities*

- SC-CI-5:** Caltrans shall require the contractor to provide motorist alert and awareness information during construction, as appropriate for the conditions, to include the following options: CMSs, stationary ground-mounted signs, traffic radio announcements, and the Caltrans Highway Information Network.

#### *Cultural Resources*

- SC-CI-6:** In accordance with Caltrans standard specifications, if cultural materials are discovered during construction, all earth-moving activities within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find. If human remains are discovered, Section 7050.5 of the State Health and Safety Code states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the county coroner shall be contacted. Pursuant to Section 5097.98 of the PRC, if the remains are thought to be Native American, the coroner will notify the Resident Engineer and the NAHC, who will then notify the MLD. At this time, the Resident Engineer will contact the District 8 Environmental Branch so that staff may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of Section 5097.98 of the PRC are to be followed as applicable.

- SC-CI-7:** It is Caltrans' policy to avoid cultural resources whenever possible. Further investigation may be needed if resources cannot be avoided by the project. Additional survey(s) will be required if the project changes to include areas not previously surveyed.

***Water Quality and Stormwater Runoff***

- SC-CI-8:** The project shall conform to and submit a Water Quality Management Plan to the City. In addition, the project shall conform to the requirements of the NPDES Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009- DWQ, NPDES No. CAS000002, as amended by 2010-0014-DWQ and 2012-0006-DWQ), also referred to as the Construction General Permit.
- SC-CI-9:** The contractor shall develop an acceptable SWPPP containing proven BMPs to minimize stormwater pollution that has the potential to affect water quality. All construction site BMPs will follow the latest edition of the Storm Water Quality Handbooks and the Construction Site Best Management Practices Manual. In addition, the SWPPP shall include implementation of specific stormwater effluent monitoring requirements based on the project's risk level to ensure water quality standards are met.
- SC-CI-10:** During construction, when dewatering is required, the contractor shall fully conform to the requirements specified in Order No. R8-2015-0004 (CAG 998001), General Waste Discharge Requirements for Discharges to Surface Water which Pose an Insignificant (*De Minimis*) Threat to Water Quality, from the RWQCB.
- SC-CI-11:** The contractor shall comply with all requirements of the Section 404 Permit issued by USACE for the discharge of dredged or fill material into waters of the U.S.
- SC-CI-12:** The contractor shall comply with all requirements of the Section 401 Certification issued by the RWQCB to ensure that all discharges comply with applicable federal and State effluent limitations and water quality standards.

**SC-CI-13:** The contractor shall comply with all requirements of the Streambed Alteration Agreement per Section 1602 of the CFG Code.

*Paleontology*

A PMP will be prepared prior to project construction. The plan will include the following mitigation measures:

**SC-CI-14:** Specifications for paleontological mitigation shall be included in the construction contract special provisions section for this project to advise the construction contractor of the requirement to cooperate with the salvage of paleontological resources, particularly fossil remains and associated locality data.

**SC-CI-15:** A principal paleontologist that meets the qualifications in Chapter 8 – Paleontology of the Caltrans Standard Environmental Reference shall prepare a detailed Paleontological Mitigation Plan before the start of construction. The paleontologist must have a Master of Science/Arts (M.S./M.A.) or Doctor of Philosophy (Ph.D.) degree in paleontology or geology and will be familiar with paleontological salvage or mitigation procedures and techniques. The Paleontological Mitigation Plan shall be certified by a California Professional Geologist.

**SC-CI-16:** If unanticipated fossils are discovered in an area of the project site not being actively monitored, the remains shall not be disturbed. The Resident Engineer shall direct that all work within a 60-foot radius of the discovery be stopped and that the area be protected. The Resident Engineer, in consultation with the paleontologist, will investigate and modify the dimensions of the protected area, if necessary. Paleontological resources will not be removed from the project site without authorization. Work will not resume within the specified radius of the discovery until authorized by the Resident Engineer.

**SC-CI-17:** The construction contractor shall attend a preconstruction meeting with the Paleontological Salvage Team and the Resident Engineer to establish procedures for cooperation in the event fossil remains are encountered and to provide for worker safety during monitoring and salvage activities. The Principal Paleontologist and the Caltrans paleontology coordinator will be present at pregrading meetings to consult with grading and excavation contractors.



### ***Hazardous Waste/Materials***

**SC-CI-18:** Appropriately manage, per regulatory compliance requirements, environmental AOCs including TWW and transformers if encountered prior to or during construction.

**SC-CI-19:** As part of the ROW acquisition process, property to be acquired will be tested for ACM and LBP. If ACM and LBP are found, the contractor will remove these materials per California Occupational Safety and Health Administration standards. Removal and/or disturbance of ACM must be conducted by a California Occupational Safety and Health Administration-registered and State-licensed asbestos removal contractor. At no time shall the identified asbestos-containing construction materials be drilled, cut, sanded, scraped, or otherwise disturbed by untrained personnel. Construction activities involving the potential for impacting asbestos-containing construction materials shall be conducted in accordance with the requirements of Title 8 of the CCR, Section 1529. Written notification shall be made to the California Occupational Safety and Health Administration at least 24 hours prior to the initiation of any construction activities that involve asbestos-related work of at least 100 square or linear feet.

**SC-CI-20:** Any compromised soils, if present, will be removed and disposed of per regulatory requirements.

### ***Air Quality***

**SC-CI-21:** The contractor shall implement all applicable measures that are feasible during construction. Examples of air quality control measures include:

- All disturbed areas, including storage piles that are not being actively used for construction purposes, shall be effectively stabilized of dust emissions using water or chemical stabilizer/suppressant, or they shall be covered with a tarp, another suitable cover, or vegetative groundcover.
- All onsite unpaved roads and offsite unpaved access roads shall be effectively stabilized of dust emissions using water or a chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill, and demolition activities shall be effectively

controlled of fugitive dust emissions by applying water or by presoaking.

- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported offsite, all material shall be covered or effectively wetted to limit visible dust emissions, and at least 6 inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each workday. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Use of blower devices is expressly forbidden.
- Within urban areas, an owner/operator shall prevent carryout and trackout, or immediately remove carryout and trackout when it extends 50 feet or more from the nearest unpaved surface exit point of the site.
- Any construction site with 150 or more vehicle trips per day shall prevent carryout and trackout.
- Limit traffic speed on unpaved roads to 15 miles per hour (mph) at construction sites with high emissions of fugitive dust. The following measures shall be implemented at large construction sites near sensitive receptors:
  - Install wheel washers for all exiting trucks, or wash off tires of trucks and equipment leaving the site.
  - Install wind breaks at windward side(s) of construction areas.
  - Suspend excavation and grading activities when wind exceeds 20 mph.
  - Limit areas subject to excavation, grading, and other earthwork activity at any one time.

**SC-CI-22:** The contractor shall comply with the following Caltrans' Standard Specifications and SCAQMD rules, ordinances, and regulations:

- The construction contractor must comply with SCAQMD Rule 403 (Fugitive Dust), which specifies actions or control measures to

prevent, reduce, or mitigate PM emissions generated from construction, demolition, excavation, extraction, and other earth-moving activities.

- Water or dust palliative will be applied to the site and equipment as frequently as necessary to control fugitive dust emissions.
- Soil binder will be spread on any unpaved roads used for construction purposes and all project construction parking areas.
- Trucks will be washed off as they leave the ROW as necessary to control fugitive dust emissions.
- Construction equipment and vehicles shall be properly tuned and maintained. Low-sulfur fuel shall be used in all construction equipment as provided in CCR Title 17, Section 93114.
- Equipment and materials storage sites will be located as far away from residential and park uses as practicable. Keep construction areas clean and orderly.
- Track-out reduction measures, such as gravel pads, will be used at project access points to minimize dust and mud deposits on roads affected by construction traffic.
- All transported loads of soils and wet materials will be covered prior to transport or adequate freeboard will be provided (i.e., space from the top of the material to the top of the truck) to reduce PM<sub>10</sub> and deposition of particulates during transportation.
- Dust and mud that are deposited on paved, public roads due to construction activity and traffic will be removed to decrease PM.
- The construction contractor must comply with Caltrans Standard Specifications in Section 14-9.
- Section 14-9.02 includes specifications relating to compliance with air pollution control rules, regulations, ordinances, and statutes of the local ordinances and air quality management district.
- Section 14-9.03 includes specifications relating to preventing and alleviating dust by applying water, dust palliative, or both and by covering active and inactive stockpiles.

### *Noise and Vibration*

**SC-CI-23:** The contractor shall be required to adhere to the following equipment noise-control measures:

- Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the job site without an appropriate muffler.
- Construction methods or equipment that will provide the lowest level of noise and ground vibration impact (e.g., avoid impact pile driving near residences and consider alternative methods that are also suitable for the soil condition) shall be used.
- Idling equipment shall be turned off.
- Construction activities shall be coordinated to build recommended permanent soundwalls during the first phase of construction to protect sensitive receivers from subsequent construction noise, dust, light, glare, and other impacts, to the extent feasible.
- Temporary noise barriers shall be used and relocated, as needed, to protect sensitive receptors against excessive noise from construction activities involving large equipment and by small items such as compressors, generators, pneumatic tools, and jackhammers. Noise barriers can be made of heavy plywood, moveable insulated sound blankets, or other best available control techniques.
- Newer equipment with improved noise muffling shall be used, and all equipment items shall have the manufacturers' recommended noise abatement measures (e.g., mufflers, engine covers, and engine vibration isolators) intact and operational. Newer equipment will generally be quieter in operation than older equipment. All construction equipment shall be inspected at periodic intervals to ensure proper maintenance and presence of noise-control devices (e.g., mufflers and shrouding).
- Construction activities shall be minimized to the extent possible in residential areas during evening, nighttime, weekend, and holiday periods. Noise impacts are typically minimized when construction activities are performed during daytime hours. However, nighttime construction may be desirable (e.g., in commercial areas where businesses may be disrupted during daytime hours) or necessary to avoid major traffic disruption. Coordination with the City or County shall occur before construction can be performed in noise-sensitive areas between 9:00 p.m. and 6:00 a.m.

**SC-CI-24:** The contractor shall be required to adhere to the following vibration control measures:

- Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source that could cause damage to that structure could be entitled to a preconstruction building inspection to document the preconstruction condition of that structure.
- Conduct vibration monitoring during vibration-intensive activities.

**SC-CI-25:** The contractor shall be required to adhere to the following administrative noise control measures:

- Once details of the construction activities become available, the contractor shall work with local authorities to develop an acceptable approach to minimize interference with the business and residential communities, traffic disruptions, and the total duration of the construction.
- Good public relations shall be maintained with the community to minimize objections to unavoidable construction impacts. Frequent activity updates of all construction activities shall be provided. A construction noise monitoring program to track sound levels and limit the impacts shall be implemented.
- In case of construction noise complaints by the public, the Resident Engineer shall coordinate with the construction manager, and the specific noise-producing activity may be changed, altered, or temporarily suspended, if necessary.

### *Energy*

**SC-CI-26:** The contractor shall identify specific measures that reduce the amount of refuse generated by construction of the proposed project, consistent with the waste reduction requirements established by the California Integrated Waste Management Act of 1989.

### *Invasive Species*

**SC-CI-27:** In compliance with the Executive Order on Invasive Species (EO 13112) and subsequent guidance from FHWA, Caltrans shall not use species listed as invasive as part of landscaping erosion control measures. In areas of particular sensitivity, extra precautions shall be taken if invasive species are found in or adjacent to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur. To adhere to this requirement, any landscape designs shall be submitted to Caltrans for review and concurrence by a qualified biologist during the project design phase. The review shall verify that no noxious weeds/invasive exotic plant species are in the proposed landscaping plan. If the plan contains noxious weeds/invasive species, the reviewing biologist shall coordinate suitable substitutes.

## **3.4 Project Alternatives and Significant Irreversible Environmental Changes**

### **3.4.1 Alternatives to the Proposed Project**

CEQA Guidelines Section 15126.6 states that an EIR shall describe and evaluate a range of reasonable alternatives to the project, including the “no project” alternative and alternative locations for the project. The No Build Alternative discussed in Section 1.3.1.3 is the “no project” alternative, which represents the continuation of existing conditions, and its impacts are discussed in Chapter 2 under each environmental issue. The No Build Alternative would generally not result in environmental changes and would be considered environmentally superior because no direct change to the existing environment would occur; however, it would not meet the project purpose and need and would have greater impacts related to traffic.

Due to the objectives of the project, as based on its purpose and need to improve operational deficiencies on Grove Avenue, an alternative site would not meet any of the project objectives and has been dismissed from consideration. Also, other alternatives to the project are constrained by the existing alignment of Grove Avenue. Consideration of reversible lanes in the design of the project was rejected because the project is not intended to increase capacity but to improve traffic flow.

During the initial design of this project, three alternatives were developed: widening Grove Avenue on both sides, widening Grove Avenue to the east, and widening Grove

Avenue to the west. Because widening Grove Avenue on both sides would lead to a displacement of existing land uses on both sides of the street, this alternative was rejected early. Instead, widening to the east or the west was further considered, with both alternatives including three through lanes in each direction along Grove Avenue, while avoiding impacts to the historic Jay Littleton Ballpark.

The alternative that would generally widen Grove Avenue to the east (i.e., widen Grove Avenue from 4<sup>th</sup> Street to I Street to the west [to avoid impacts to the historic Jay Littleton Ballpark]; widen Grove Avenue to the east between I Street and Holt Boulevard; and widen Grove Avenue on both sides between Holt Boulevard and State Street/Airport Drive) was subsequently chosen as the Build Alternative.

The rejected alternative, which would generally widen Grove Avenue to the west, would have had the same six lanes as the Build Alternative. Specifically, under this rejected alternative, Grove Avenue would be widened to the west north of the SPRR until north of G Street. North of G Street to 4<sup>th</sup> Street, the alignment would match that of the Build Alternative and would widen Grove Avenue to the east from G Street to I Street and to the west from I Street to 4<sup>th</sup> Street. With the same proposed six-lane configuration, impacts related to traffic, noise, and air quality would generally be the same as the Build Alternative.

On the other hand, the ROW impacts of widening Grove Avenue to the west would affect 17 residential parcels, 2 vacant parcels, 1 building at Sovereign Grace Baptist Church, and areas at Grove Memorial Park and John Galvin Park, as identified in Section 1.3.3.1. Due to the more extensive ROW requirements and associated property displacements and park impacts, this alternative was eliminated from further consideration. As such, this alternative cannot be considered an environmentally superior alternative to the proposed project.

Therefore, while the No Build Alternative will not result in environmental impacts, traffic conditions on Grove Avenue would deteriorate over time, leading to increased congestion and associated vehicle pollutant and GHG emissions. The impacts of the Build Alternative would be avoided by the No Build Alternative on all other issue areas. However, the Build Alternative (proposed project) would meet the project's purpose and need and would be environmentally superior compared to the other rejected alternatives.

### 3.4.2 Significant Irreversible Environmental Changes

CEQA Guidelines Section 15126.2(c) states significant irreversible environmental changes to nonrenewable resources which would be caused by the proposed project, should it be implemented, must be addressed. Construction of the Build Alternative would involve a modest irreversible commitment to the use of fossil fuels, labor, public capital, and construction materials (e.g., cement, aggregate). In addition to the costs of construction and ROW for the Build Alternative, there would be increased ongoing costs for facility maintenance, including pavement, roadside litter/sweeping, signs and markers, electrical, and stormwater control. Savings in travel time and improved transportation efficiency would offset this use of materials, labor, resources, and funds.

Generally, a project would result in potentially significant irreversible environmental changes if:

- The primary and secondary impact would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from any potential environmental accidents associated with the project;
- The project would involve a large commitment of nonrenewable resources; and
- The proposed consumption of resources is not justified.

Significant irreversible environmental changes are not anticipated for the following resources: aesthetics, agriculture and forest resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, growth, population and housing, public services, farmlands, community impacts, utilities and services, recreation, or transportation and traffic.

Primary impacts would result from the consumption of nonrenewable resources during construction and operation of the proposed project. Nonrenewable resources, such as sand, gravel, and steel, and renewable resources, such as lumber, would be consumed during project construction. Energy, fossil fuels, oils, and natural gas would be irreversibly committed during construction. These same resources are used for vehicles and heating/cooling equipment during operations. The continued use of these resources associated with project operations represents a long-term obligation.

The commitment of these resources to the Build Alternative is based on the concept that residents, workers, travelers, and others in the immediate area, region, and state



would benefit from the improved quality of the roadway facility. These benefits include improved accessibility, travel time, and safety. The benefit of the Build Alternative is expected to outweigh the commitment of resources to the project.

### **3.5 Climate Change**

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to GHG emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF<sub>6</sub>), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the United States, the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions. The dominant GHG emitted is CO<sub>2</sub>, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: “greenhouse gas mitigation” and “adaptation.” “Greenhouse gas mitigation” is a term for reducing GHG emissions to reduce or “mitigate” the impacts of climate change. “Adaptation” refers to planning for and responding to impacts resulting from climate change (e.g., adjusting transportation design standards to withstand more intense storms and higher sea levels).

#### **3.5.1.1 Regulatory Setting**

This section outlines federal and State efforts to comprehensively reduce GHG emissions from transportation sources.

### **Federal**

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

NEPA (42 U.S.C. Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

FHWA recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices.<sup>8</sup> This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.”<sup>9</sup> Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

**The Energy Policy Act of 1992 (EPACT92) (102<sup>nd</sup> Congress H.R.776.ENR):** With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

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<sup>8</sup> <https://www.fhwa.dot.gov/environment/sustainability/resilience/>

<sup>9</sup> <https://www.sustainablehighways.dot.gov/overview.aspx>

**Energy Policy Act of 2005 (109<sup>th</sup> Congress H.R.6) (2005–2006):** This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

**Energy Policy and Conservation Act of 1975 (42 U.S.C. Section 6201) and Corporate Average Fuel Standards:** This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

**EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, 74 *Federal Register* 52117 (October 8, 2009):** This federal EO set sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

**EO 13693, *Planning for Federal Sustainability in the Next Decade*, 80 *Federal Register* 15869 (March 2015):** This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. It sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in previous EOs to ensure agency operations and facilities prepare for impacts of climate change. This order revokes EO 13514.

EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in *Massachusetts v. EPA* (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing FCAA and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, EPA finalized an endangerment finding in December 2009. Based on scientific evidence, it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions.

EPA, in conjunction with the National Highway Traffic Safety Administration (NHTSA), issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010<sup>10</sup> and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 mpg by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 mpg by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 mpg by 2025 was appropriate. In March 2017, President Donald Trump ordered EPA to reopen the review and reconsider the mileage target.<sup>11</sup>

NHTSA and EPA issued a Final Rule for “Phase 2” for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to 2 billion barrels of oil and reduce CO<sub>2</sub> emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

**Presidential EO 13783, *Promoting Energy Independence and Economic Growth*, of March 28, 2017**, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, N<sub>2</sub>O, and CH<sub>4</sub>.

### ***State***

With the passage of legislation, including State Senate and Assembly bills and EOs, California has been innovative and proactive in addressing GHG emissions and climate change.

**AB 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002:** This bill requires ARB to develop and implement regulations to reduce automobile and light truck GHG

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<sup>10</sup> <http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq>

<sup>11</sup> <http://www.nbcnews.com/business/autos/trump-rolls-back-obama-era-fuel-economy-standards-n734256> and <https://www.federalregister.gov/documents/2017/03/22/2017-05316/notice-of-intention-to-reconsider-the-final-determination-of-the-mid-term-evaluation-of-greenhouse>

emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

**EO S-3-05 (June 1, 2005):** The goal of this EO is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of AB 32 in 2006 and SB 32 in 2016.

**AB 32, Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006:** AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

**EO S-20-06 (October 18, 2006):** This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and State agencies with regard to climate change.

**EO S-01-07 (January 18, 2007):** This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

**SB 97, Chapter 185, 2007, Greenhouse Gas Emissions:** This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the CEQA Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

**SB 375, Chapter 728, 2008, Sustainable Communities and Climate Protection:** This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The MPO for each region must then develop an SCS that integrates

transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

**SB 391, Chapter 585, 2009, California Transportation Plan:** This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

**EO B-16-12 (March 2012)** orders State entities under the direction of the Governor, including ARB, CEC, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

**EO B-30-15 (April 2015)** establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all State agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>e). Finally, it requires the California Natural Resources Agency (Resources Agency) to update the State's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.

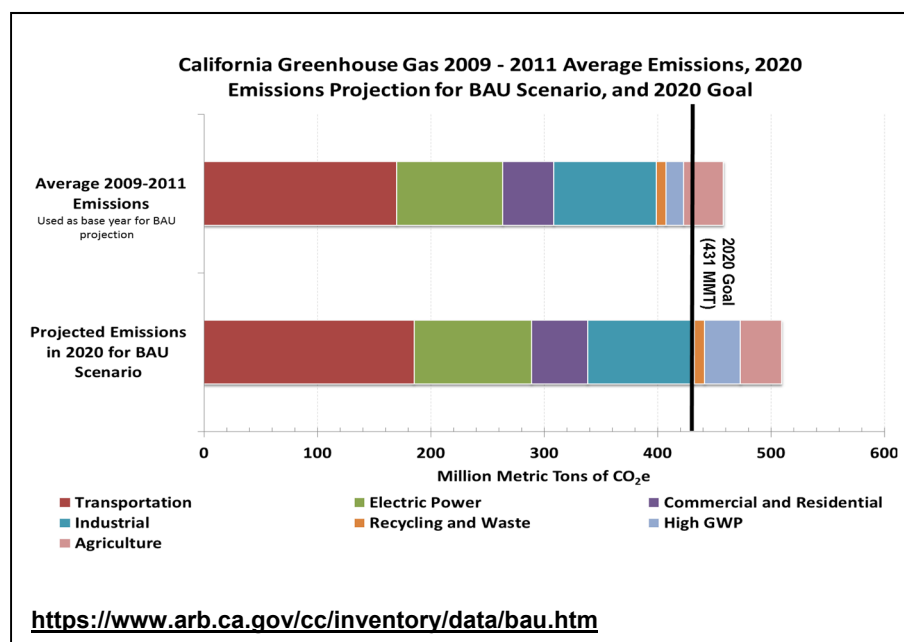
**SB 32 Chapter 249, 2016,** codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

### **3.5.1.2 Environmental Setting**

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. ARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. ARB is moving forward with a discussion draft of an updated Scoping Plan that will reflect the 2030 target established in EO B-30-15 and SB 32.

The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, ARB released the GHG inventory for California. ARB is responsible for maintaining and updating California's GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure 3-1 represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 MMTCO<sub>2</sub>e. The 2017 edition of the GHG emissions inventory (released June 2017) found total California emissions of 440.4 MMTCO<sub>2</sub>e, showing progress towards meeting the AB 32 goals.



**Figure 3-1. 2020 Business as Usual (BAU) Emissions Projection  
2014 Edition**

This projection accounts for updates to the economic forecasts of fuel and energy demand, as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity

Standard (30 MMTCO<sub>2</sub>e total). With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 MMTCO<sub>2</sub>e.

### **3.5.1.3 Project Analysis**

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its incremental change in emissions when combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

Four primary strategies can reduce GHG emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to lower GHG-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued concurrently.

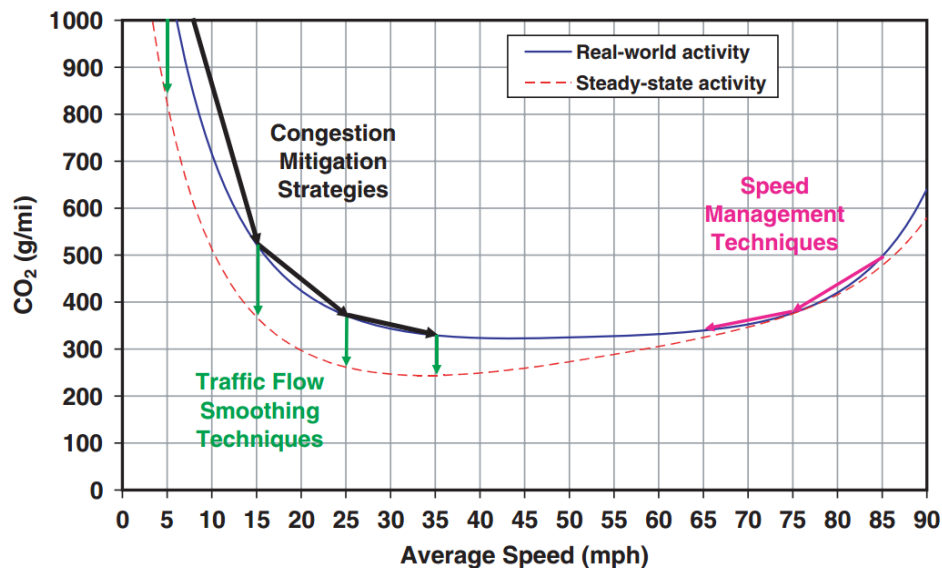
FHWA supports these strategies to lessen climate change impacts, which correlate with efforts that California is undertaking to reduce GHG emissions from the transportation sector.

The highest levels of CO<sub>2</sub> from mobile sources, such as automobiles, occur at stop-and-go speeds (zero to 25 mph) and speeds over 55 mph; the most severe emissions occur from zero to 25 mph (see Figure 3-2). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, GHG emissions, particularly CO<sub>2</sub>, may be reduced.

The purpose of the proposed project is to alleviate existing and anticipated future congestion along Grove Avenue between 4<sup>th</sup> Street and Airport Drive; improve traffic operations and mobility to and from Ontario International Airport, existing and future



cargo hub facilities near Grove Avenue and Holt Boulevard, and other planned uses; and to provide continuity along Grove Avenue.



Source: Matthew Barth and Kanok Boriboonsomsin, University of California, Riverside, May 2010  
(<http://uctc.berkeley.edu/research/papers/846.pdf>)

**Figure 3-2. Possible Use of Traffic Operation Strategies in Reducing On-Road CO<sub>2</sub> Emissions**

A quantitative analysis estimating CO<sub>2</sub> emissions for existing and future No Build Alternative and Build Alternative conditions was performed using ARB's EMFAC2011 emission model.

### ***Climate Change Significance Criteria***

According to the Resources Agency, “due to the global nature of GHG emissions and their potential effects, GHG emissions will typically be addressed in a cumulative impacts analysis.” According to Appendix G of the CEQA Guidelines, the following criteria may be considered to establish the significance of GHG emissions: Would the project:

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

As discussed in Section 15064.4 of the CEQA Guidelines, the determination of the significance of GHG emissions calls for a careful judgment by the lead agency, consistent with the provisions in Section 15064. Section 15064.4 further provides that

a lead agency should make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:

- 1) Use a model or methodology to quantify GHG emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model or methodology it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; and/or
- 2) Rely on a qualitative analysis or performance-based standards.

Section 15064.4 also advises a lead agency to consider the following factors, among others, when assessing the significance of impacts from GHG emissions on the environment:

- 1) The extent to which the project may increase or reduce GHG emissions compared to the existing environmental setting;
- 2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and
- 3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

Based on ARB's analysis that statewide 2020 BAU GHG emissions would be 596 MMTCO<sub>2</sub>e and that 1990 emissions were 427 MMTCO<sub>2</sub>e, local lead agencies have estimated that a reduction of 28.35 percent below BAU is required to achieve the AB 32 reduction mandate (ARB, 2010).

As previously discussed, the air quality for the proposed project area is regulated by SCAQMD, the agency principally responsible for comprehensive air pollution control in San Bernardino County; however, SCAQMD does not have specific Significance Thresholds for GHG emissions.

On February 18, 2010, the CEQ released draft guidelines on when and how agencies must consider GHG emissions and climate change in their proposed actions. The draft guidance explains how agencies should analyze the environmental impacts of GHG emissions and climate change when they describe the environmental impacts of a proposed action. It provides practical tools for agency reporting, including a

presumptive threshold of 25,000 metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>) emissions from the proposed action to trigger a quantitative analysis and instructs agencies how to assess the effects of climate change on the proposed action and their design.

### **Quantitative Analysis**

A quantitative analysis estimating CO<sub>2</sub> emissions for existing, No Build Alternative, and Build Alternative was performed using Caltrans' CT-EMFAC and is provided in Table 3-3. Inputs used to estimate CO<sub>2</sub> emissions were peak and off-peak total VMT, vehicle mix, and VMT distribution by speed.

**Table 3-3. Maximum CO<sub>2</sub> Emissions<sup>1</sup>**

<b>Pollutant</b>	<b>Existing</b>	<b>No Build 2025</b>	<b>Build 2025</b>	<b>No Build 2045</b>	<b>Build 2045</b>
CO <sub>2</sub> emissions	3,686	5,281	5,167	8,235	7,266
Note: CO <sub>2</sub> emissions are measured in tons.					

Source: Air Quality Report, Grove Avenue Corridor Project, February 2017.

CO<sub>2</sub> emissions are expected to increase from existing conditions to 2045 conditions due to increases in total VMT; however, as shown in Table 3-4, in future 2025 conditions, VMT slightly decreases from no-build to build conditions, resulting in a slight decrease of CO<sub>2</sub> emissions. Likewise, in 2045 conditions, the total VMT is expected to decrease from no-build to build conditions; therefore, a substantial increase of CO<sub>2</sub> emissions would not occur. Currently, there are no federal or State standards set for CO<sub>2</sub> emissions; therefore, the estimated emissions shown in Table 3-4 are only useful for a comparison between alternatives. The numbers are not necessarily an accurate reflection of what the true CO<sub>2</sub> emissions would be because CO<sub>2</sub> emissions are dependent on other factors that are not part of the model, such as the fuel mix (EMFAC model emission rates are only for direct engine-out CO<sub>2</sub> emissions, not full fuel cycle; fuel cycle emission rates can vary dramatically depending on the amount of additives such as ethanol and the source of the fuel components), rate of acceleration, and the aerodynamics and efficiency of the vehicles.

**Table 3-4. VMT Percentage Differences**

Intersection	VMT % Differences			
	Existing and 2025 No Build	Existing and 2045 No Build	2025 No Build and Build Alternatives	2045 No Build and Build Alternatives
Grove Avenue/Holt Boulevard	50	118	-1.6	-4.0
Grove Ave/State Street-Airport Drive	29	73	3.5	-2.1
Grove Avenue/Mission Boulevard	35	84	-5.5	-5.2

Source: Air Quality Report, Grove Avenue Corridor Project, February 2017.

### 3.5.1.4 Construction Emissions

Construction GHG emissions would result from material processing, onsite construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

### 3.5.1.5 CEQA Conclusion

While the project would result in a slight increase in GHG emissions during construction, it is anticipated that the proposed project would not result in an increase in operational GHG emissions in comparison to no-build conditions for each respective year. No specific GHG thresholds have been established for transportation projects. In the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, SCAQMD and its GHG CEQA Significance Stakeholder Working Group threshold of 10,000 MTCO<sub>2</sub>e was used to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, and to provide a comparison of the order of magnitude of project-generated emissions. The CT-EMFAC model was used to estimate CO<sub>2</sub> emissions for the existing and future no-build and build conditions. The increases in CO<sub>2</sub>e emissions between existing conditions and project years 2025 and 2045 are attributable to increases in daily traffic volumes; however, GHG emissions are lower in the build conditions than for the no-build conditions for future opening and design years. Furthermore, CO<sub>2</sub>e emissions for all project years, existing, no build,

and build, are far below SCAQMD and its GHG CEQA Significance Stakeholder Working Group threshold of 10,000 MTCO<sub>2</sub>e; therefore, operation of the project does not cause a significant impact to global climate change.

In addition, the City prepared a Health Risk Assessment (Appendix F) in accordance with CEQA guidelines.

### ***Consistency with Air Quality Management Plan***

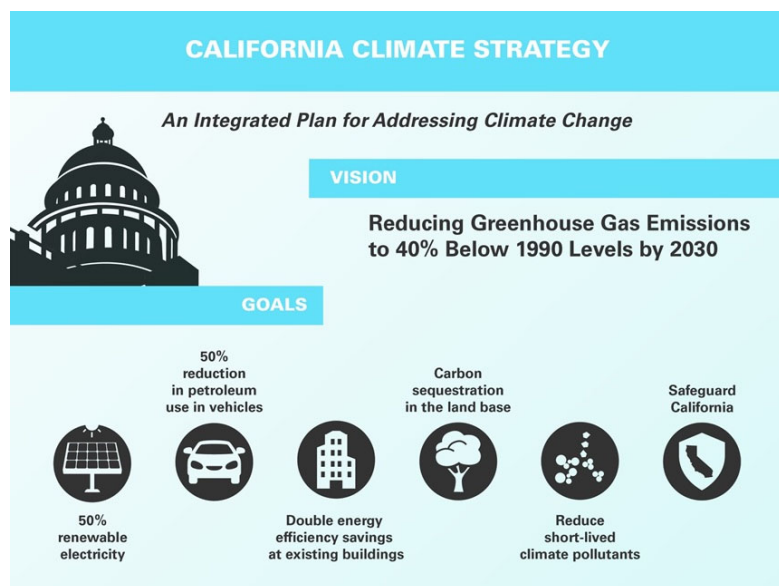
Consistency with the AQMP is typically determined by whether the project would increase the frequency or severity of existing air quality violations, contribute to new violations, or delay the timely attainment of air quality standards or interim reductions as specified in the AQMPs.

Based on the air quality emissions modeling contained in this report, with the implementation of Standard Conditions SC-CI-21 and SC-CI-22, the air pollutant and GHG emissions associated with the proposed project would be below the applicable thresholds of significance. Thus, it is expected that there would be no significant short-term construction impacts nor long-term operational impacts on climate change due to the proposed project.

#### **3.5.1.6 GHG Reduction Strategies**

##### ***Statewide Efforts***

To further the vision of California's GHG reduction targets outlined in AB 32 and SB 32, Governor Jerry Brown identified key climate change strategy pillars (concepts), as shown in Figure 3-3. These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of CH<sub>4</sub>, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the State's climate adaptation strategy, Safeguarding California.



**Figure 3-3. The Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals**

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of VMT. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove CO<sub>2</sub> from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

### ***City of Ontario Activities***

The City is committed to reducing GHG emissions in accordance with the City's own plans, as well as other local, State, and federal plans and regulations such as the County of Riverside Climate Action Plan, SCAQMD policies, and SCAG's RTP/SCS.

### ***City of Ontario General Plan***

The City of Ontario General Plan Air Quality Element addresses air quality concerns including GHG emissions. The City is working to develop strategies to minimize the City's future impacts associated with accumulation of GHGs. The California Global

Warming Solutions Act of 2006 requires a cumulative reduction of GHG emissions by City operations and on a project-by-project basis.

Two policies, in particular, are associated with reducing GHG emissions. ER4-1 is a policy associated with land use. This policy intends to reduce GHG emissions through compact, mixed-use, and transit-oriented development and development that improves the regional jobs-housing balance. ER4-3 is a policy associated with GHG emissions reductions. The policy states that the City will reduce GHG emissions in accordance with regional, State, and federal regulations.

#### ***City of Ontario Community Climate Action Plan***

The City committed to the development of a Community Climate Action Plan with the GHG emissions reduction goal of 30 percent below BAU 2020 levels. This goal is roughly equivalent to the Scoping Plan adopted by the State in 2008 that recommends a target of 15 percent below current emissions levels. The primary purpose of the Community Climate Action Plan is to design a feasible strategy to reduce GHG emissions generated from community activities that is consistent with statewide Scoping Plan GHG reduction efforts.

Approximately 64 percent of the reductions needed to achieve the City's GHG reduction goal are achieved through State- and County-level programs, and 36 percent is achieved through City-level programs. The largest GHG reductions are identified in the areas of building energy, agriculture, and transportation.

Several on-road transportation measures have been identified to assist in reducing GHG emissions associated with transportation activities. The proposed project directly relates to Measure Trans-9 Roadway Management. The goal of this measure is to implement traffic and roadway management strategies to improve mobility and efficiency and reduced associated emissions. The goal is to reduce community vehicle fuel consumption by 2 percent.

#### ***Project-Level GHG Reduction Strategies***

The following measures will also be included in the project to reduce the GHG emissions and potential climate change impacts from the project:

1. **Use of Reclaimed Water:** Currently, 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces GHG emissions from electricity production.

2. **Landscaping:** Reduces surface warming and, through photosynthesis, decreases CO<sub>2</sub>.
3. **Portland Cement:** Use of lighter colored surfaces, such as Portland cement, helps to reduce the albedo effect (i.e., measure of how much light a surface reflects) and cool the surface. Adding fly ash reduces the GHG emissions associated with cement production; it also can make the pavement stronger.
4. **Lighting:** Use of energy-efficient lighting, such as LED traffic signals.
5. **Idling Restrictions:** For trucks and equipment.

### **3.5.1.7 Adaptation Strategies**

“Adaptation strategies” refer to how to plan for the effects of climate change on California’s transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

### ***Federal Efforts***

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011, outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision makers manage climate risks.

USDOT issued the USDOT Policy Statement on Climate Adaptation in June 2011, committing to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that



taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions.”

To further the USDOT Policy Statement, in December 15, 2014, FHWA issued Order 5520 (Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events). This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation’s transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, State, and local levels.

### ***State Efforts***

On November 14, 2008, former Governor Arnold Schwarzenegger signed EO S-13-08, which directed several State agencies to address California’s vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all State agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability, and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report) was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (e.g., roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the Resources Agency, in coordination with local, regional, State, federal, and public and private entities, developed The California Climate Adaptation Strategy (December 2009), which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across State agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as Safeguarding California: Reducing Climate Risk (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring State agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how State agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi-agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance), produced by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided “guidance for incorporating sea-level rise projections into planning and decision-making for projects in California,” specifically, “information and recommendations to enhance consistency across agencies in their development of approaches to sea-level rise.” The March 2013 update finalizes the SLR Guidance by incorporating findings of the National Academy’s 2012 final Sea-Level Rise Assessment Report; the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of sea-level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels.

The proposed project is outside the coastal zone and is not in an area subject to sea-level rise. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

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# **Chapter 4** Comments and Coordination

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## **4.1 Early Coordination and Consultation**

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance, minimization, and/or mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including PDT meetings and interagency coordination meetings. This chapter summarizes the results of Caltrans and City efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

### **4.1.1 Notice of Preparation**

To fulfill CEQA requirements, a Notice of Preparation (NOP) of an EIR was written and circulated to announce the commencement of the EIR process for the Grove Avenue Corridor Project. The NOP is included as Figure 4-1.

Submittal of the NOP to the State Clearinghouse (SCH) officially initiated the scoping period, which began on November 5, 2014, and ended 30 calendar days later on December 4, 2014. After receiving the NOP, the SCH identified the project as SCH #2014101071 and distributed copies of it to State agencies with a potential interest in the proposed project.

Fifteen (15) additional copies of the NOP were provided to the SCH. The following agencies and departments received a copy of the NOP via the SCH:

- ARB
- Caltrans (District 8)
- Department of Conservation, Fish and Wildlife Inland Deserts Region
- NAHC
- Office of Historic Preservation
- Department of Parks and Recreation
- Public Utilities Commission
- Santa Ana RWQCB
- SWRCB (Water Quality)
- DTSC
- SCAQMD

California Environmental Quality Act  
**Notice of Preparation**

City of Ontario  
Planning Department  
303 East "B" Street  
Ontario, California  
Phone: (909) 395-2036  
Fax: (909) 395-2420



**TO:** Property Owners, Responsible Agencies & Interested Parties

**FROM:** City of Ontario, Planning Department, 303 East "B" Street, Ontario, CA 91764

**SUBJECT:** NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT  
FOR THE GROVE AVENUE CORRIDOR WIDENING PROJECT

NOTICE IS HEREBY GIVEN that the City of Ontario will be the Lead Agency and will prepare an Environmental Impact Report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the Environmental Impact Report prepared by our agency when considering your permit or other approval for the project.

The Project description, location and the probable environmental effects are contained in the attached materials.

The proposed project ☒ is, ☐ is not, considered a project of statewide, regional or area-wide significance. The proposed project ☒ will, ☐ will not, affect highways or other facilities under the jurisdiction of the State Department of Transportation. A scoping meeting ☒ will, ☐ will not, be held on:

**November 20, 2014 at 5pm at the Ontario Senior Center located at 225 East "B" Street, Ontario, CA 91764.**

Your response must be sent at the earliest possible date, but no later than December 4, 2014. Please send your response to Richard Ayala, Senior Planner at the address shown above or at [rayala@ci.ontario.ca.us](mailto:rayala@ci.ontario.ca.us). We will need the name for a contact person in your agency.

**Project Title:** Grove Avenue Corridor Widening Project

**Project Location:** The project site is generally located along Grove Avenue from north of 4<sup>th</sup> Street to Airport Drive in the City of Ontario, County of San Bernardino. Please refer to Figures 1 and 2.

**Project Description:** The proposed Grove Avenue Corridor Widening Project consists of widening Grove Avenue from four to six lanes from north of 4<sup>th</sup> Street to Airport Drive.

**Environmental Issues:** Based on an initial analysis of the Project, the following environmental topics will be analyzed further within the forthcoming Environmental Impact Report:

- Aesthetics;
- Air Quality, including potential Greenhouse Gas Emissions and Global Climate Change impacts;
- Biological Resources;
- Cultural Resources;
- Geology and Soils;
- Hazards/Hazardous Materials;
- Hydrology/Water Quality;
- Land Use;
- Noise;
- Population and Housing;
- Public Services and Utilities;
- Recreation; and
- Transportation and Circulation.


**Figure 4-1. Notice of Preparation (Page 1 of 3)**

**Project Sponsor:**

City of Ontario  
303 East "B" Street  
Ontario, CA 91764-4105  
Contact: Richard Ayala  
Phone: (909) 395-2036

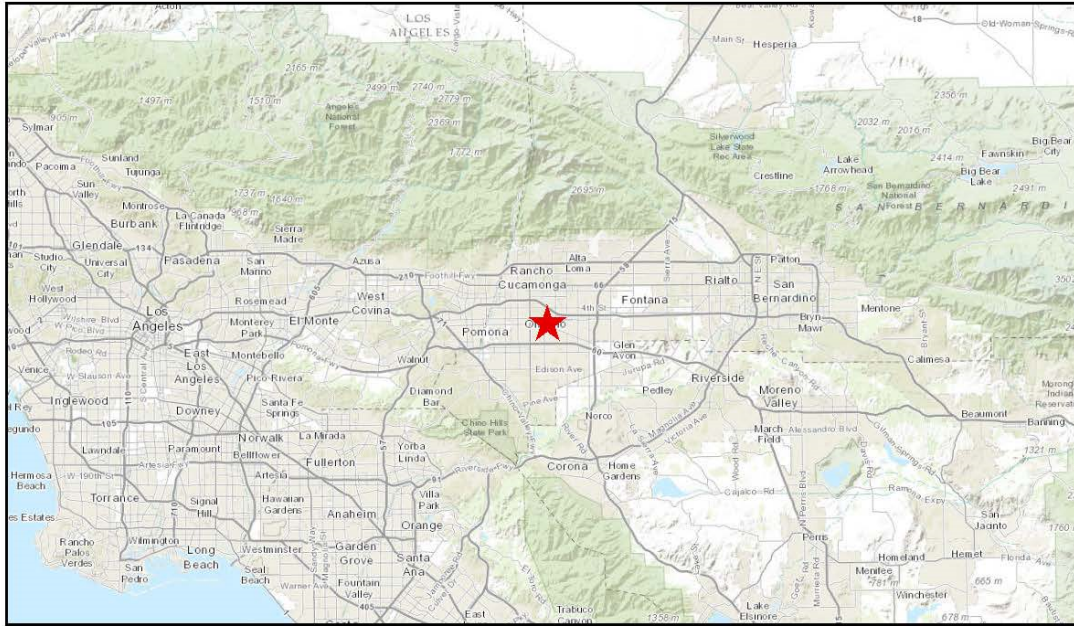
**Consulting firm retained to prepare draft Environmental Impact Report:**

Parsons  
3200 East Guasti Road, Suite 200  
Ontario, CA 91761  
Contact: Ernie Figueroa  
Phone: (909) 218-3560

Signature:  Date: 10/30/14  
Name (print or type): RICHARD AYALA Title: SENIOR PLANNER

**Reference:** California Code of Regulations, Title 14 (CEQA Guidelines) Sections 15082(a), 15103, 15375.

**Figure 4-1. Notice of Preparation (Page 2 of 3)**



**Figure 1**  
**Project Location Map**



**Figure 2**  
**Project Vicinity Map**

**Figure 4-1. Notice of Preparation (Page 3 of 3)**



In addition, the NOP was mailed to 26 local, State, and federal agencies with potential interest in or jurisdiction of the proposed project. This mailer to agencies included a Notice of Initiation of Studies (NOIS) for the Grove Avenue Corridor Project.

#### **4.1.2 Public Mailers and Newspaper Advertisement**

On November 5, 2014, the City sent 1,100 public notices to all property owners within 300 feet of the project corridor. The public notice included summary information about the project, a project location map, information on the scoping meeting, and contact information for more information. The purpose of the public notice was to inform the public of the initiation of studies, announce the public scoping meeting, and announce the opportunity to comment on the proposed project. The one-page notice was printed double-sided, with an English version on the front side and a Spanish version on the back side. In addition, each mailer included a double-sided print with English and Spanish versions of the public notice for the Grove Avenue Corridor Project.

In addition, a newspaper notice was published for the project in the *Inland Valley Daily Bulletin* on November 7, 2014.

#### **4.1.3 Scoping Meeting**

During the 30-day scoping period, one public scoping meeting was held at the Ontario Senior Center to encourage public participation in the environmental process. The meeting was held November 20, 2014, from 5:00 to 6:00 p.m. for agency representatives and from 6:00 to 8:00 p.m. for the general public. The scoping meeting was held concurrently with a public hearing for the I-10/Grove Avenue Interchange Project.

The public scoping meeting was conducted in open-house format with aerial maps and informational boards on display. The informational boards included content related to the project purpose; proposed alternatives; potential impacts; environmental process; and conceptual project schedule. In addition, a comment station was set up so meeting participants could submit comments at the meeting. A PowerPoint presentation of all of the boards was translated into Spanish and played on loop for Spanish-speaking attendees. Staff members from the City, Caltrans, and Parsons were on hand to answer questions and facilitate the meeting.

Details regarding the number and affiliation of participants that attended the scoping meeting are provided in Table 4-1. If no affiliation was listed on the sign-in sheet, then the meeting attendee was counted as “resident.”



**Table 4-1. Number and Affiliation of Participants at Scoping Meeting**

<b>Affiliation</b>	<b>November 20, 2014 Scoping Meeting Attendees</b>
Resident	29
Community-Based Organization	1
Business Owner	4
Public Agency	1
<b>Total</b>	<b>35</b>

Source: Parsons, 2014.

A *Scoping Summary Report* (February 2015) was prepared for the proposed project. The purpose of the scoping process under CEQA is to examine a proposed project early in the environmental analysis/review process to identify the range of issues pertinent to the proposed project and feasible alternatives or mitigation measures to avoid the potentially significant adverse environmental effects of those alternatives. The scoping process stresses early consultation with resource agencies, other State and local agencies, Tribal governments, and any federal agency whose approval or funding of the proposed project would be required for completion of the project, as well as interested members of the general public.

Under NEPA, the lead agency is required to conduct an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action (Section 1501. 7, 40 CFR). The scoping process is used to identify the range of alternatives to be addressed in the environmental document.

#### **4.1.3.1 Public Scoping Comment Period Summary**

A total of 24 comments were received during the scoping period. Fifteen (15) comment cards were completed and submitted at the scoping meeting. In addition, 2 letters were received from residents or property owners and 7 letters were received from notified agencies.

The following list summarizes the most common issues that property owners and residents identified during the scoping period. Most comments addressed more than one topic.

- Request to be added to project notification list for future updates – **6 comments**
- Noise impacts – **4 comments**
- Air quality impacts – **3 comments**
- Property value – **3 comments**

- Support for both projects – **2 comments**
- Requested poster slides in Spanish – **2 comments**
- Community impacts – **2 comments**
- Business impacts – **2 comments**
- ROW acquisition – **2 comments**
- Suggestions for design variations – **2 comments**
- Concerns over road closures and circulation during construction – **1 comment**
- Oppose both projects – **1 comment**
- Flood control facility impacts – **1 comment**

Finally, comments received from local, State, and federal agencies are summarized in Table 4-2.

**Table 4-2. Summary of Agency Comments  
Received during the Scoping Period**

Agency	Comment
CDFW	<ul style="list-style-type: none"> <li>• Requested that the environmental document contain sufficient biological resource analysis, quantification of impacts, cumulative impact analysis, and mitigation measures.</li> <li>• Confirmed that a Lake or Streambed Alteration Agreement would be necessary to construct the project.</li> <li>• Noted that special-status species surveys and an incidental take permit may be required.</li> </ul>
NAHC	<ul style="list-style-type: none"> <li>• Requested that a records search, Sacred Lands File check, and coordination with Native American groups be conducted.</li> <li>• Requested that mitigation measures for cultural resources be included in the environmental document.</li> <li>• Noted that an archaeological inventory survey may be required.</li> </ul>
SCAQMD	<ul style="list-style-type: none"> <li>• Provided guidance for air quality analysis and suggested quantification of construction and operational emissions.</li> <li>• Suggested use of SCAQMD regional and localized significance thresholds.</li> <li>• Recommended conducting a mobile source health risk assessment and analysis of all toxic air contaminant impacts.</li> </ul>
Ontario-Montclair School District	<ul style="list-style-type: none"> <li>• Provided a list of schools in the project vicinity.</li> <li>• Suggested specific content to be included in the project's TMP.</li> </ul>
San Bernardino County Department of Public Works	<ul style="list-style-type: none"> <li>• Requested that the environmental document examine hydrology and water quality impacts.</li> <li>• Requested the opportunity to review the draft environmental document and design plans when available.</li> </ul>
City of Rancho Cucamonga	<ul style="list-style-type: none"> <li>• Provided no comments, but requested to be included in future project-related correspondence.</li> </ul>

**Table 4-2. Summary of Agency Comments  
Received during the Scoping Period**

Agency	Comment
USACE	<ul style="list-style-type: none"> <li>Confirmed that a Section 404 permit would be necessary to construct the project.</li> <li>Indicated that the proposed project may also require a Section 408 permit and other real estate approvals issued through the USACE Asset Management Division.</li> </ul>
EPA	<ul style="list-style-type: none"> <li>On April 28, 2015, the TCWG, which includes EPA personnel, provided concurrence that the project was not a POAQC based on the PM<sub>2.5</sub> and PM<sub>10</sub> review forms that were submitted, as shown in Appendix A of the <i>Air Quality Report</i> (February 2017). Also provided in Appendix A of the <i>Air Quality Report</i> is the TCWG's confirmation that the proposed project is not a POAQC and does not require a hot-spot analysis to be performed.</li> </ul>

The comments received during the scoping period were shared with the PDT and were considered during the development of alternatives and evaluation of environmental impacts.

## 4.2 Native American Consultation and Coordination

On March 9, 2015, the NAHC was requested to review its sacred land records. The NAHC responded on April 22, 2015, stating that the search of the sacred land file failed to indicate the presence of Native American cultural resources in the immediate project area. However, six Native American Tribes, groups, and individuals were still contacted to solicit any concerns regarding cultural resources within the project vicinity. Table 4-3 shows all individuals who were contacted regarding consultation, title, organization, and responses to the project.

**Table 4-3. Native American Consultation**

Name	Title	Organization	Response
Anthony Morales	Chairperson	Gabrieliño/Tongva San Gabriel Band of Mission Indians	Requested that archaeological monitoring should be conducted to capture any subsurface archaeological material.
Sandonne Goad/ Sam Dunlap	Chairperson/ Cultural Resources Director	Gabrieliño/Tongva Nation	Consultation deferred to Mr. Sam Dunlap. Mr. Dunlap recommended archaeological monitoring and oversight during construction. He requested to be informed of any unanticipated discovery of prehistoric cultural material and have the option of implementing a Native American monitoring component.
Andrew Sales	Chairperson	Gabrieliño Band of Mission Indians	No response.

**Table 4-3. Native American Consultation**

<b>Name</b>	<b>Title</b>	<b>Organization</b>	<b>Response</b>
Daniel F. McCarthy	Cultural Resources Management	San Manuel Band of Mission Indians	Mr. McCarthy requested a copy of the record of findings and a copy of a draft cultural resources report.
Goldie Walker		Serrano Nation	Ms. Goldie Walker requested to be notified if any cultural resources are observed during construction activities related to the project; she emphasized she would like to be contacted no matter how small the artifact. She also requested to be contacted immediately if any human remains are encountered.

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## **Chapter 5** List of Preparers

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The following Caltrans staff and consultants contributed to preparation of the draft and final environmental documents.

### **5.1 Caltrans Staff**

Aaron Burton, Senior Environmental Planner

### **5.2 Consultant Staff**

#### ***Group Delta***

Glenn Burks, Director of Environmental Services. Bachelor of Science, Chemical Engineering, University of California, San Diego; Ph.D. Environmental Engineering, University of California, Los Angeles; Professional Chemical Engineer. 21 years of experience in Process Engineering; Phase II Soil Investigations; Environmental Compliance; Remedial Investigation, Remedial Design and Implementation including Green and Sustainable Remediation. Contribution: Oversight and author of the Site Investigation and the Aerially Deposited Lead Investigation.

Jack Packwood, Senior Project Manager. Bachelor of Science, Environmental Science, University of California, Riverside; Master of Science, Environmental Science, California State University, Fullerton. 12 years of experience in construction compliance, site assessment, remediation, water quality, stormwater, and waste management. Contribution: Project Manager for the Aerially Deposited Lead Study and Site Investigation.

#### ***Cogstone***

Sherri Gust, Qualified Principal Paleontologist. Bachelor of Science, University of California Davis; Master of Science, Anatomy (Evolutionary Morphology), University of Southern California, Los Angeles. 35 years of experience in California paleontology. Contribution: Author of Archaeological Survey Report, contributing author of the Paleontological Identification Report/Paleontological Evaluation Report.

John Harris, Paleontology Practice Leader. Ph.D., Geology with paleontology emphasis, University of Bristol. 40 years of experience. Contribution:

Contributing author of the Paleontological Identification Report/  
Paleontological Evaluation Report.

Kim Scott, Principal Paleontologist. Master of Science, Biology with paleontology emphasis, California State University, San Bernardino. 20 years of experience in California paleontology. Contribution: Contributing author of the Paleontological Identification Report/Paleontological Evaluation Report.

### ***Helix Environmental Planning***

Karl Osmundson, Principal Biologist/Biology Group Manager

Joshua Zinn, Ecologist and Regulatory Specialist

### ***Entech Consulting Group***

Zack Dennis, Environmental Scientist. G.D.E., Metallurgy, University of the Witwatersrand, Johannesburg, South Africa, 2004; Bachelor of Science, Chemistry, Harvey Mudd College. 16 years of experience performing TNM 2.5 noise modeling, noise monitoring and writing NSRs. Contribution: Co-author of NSR.

Michelle A. Jones, Principal Engineer. Bachelor of Science, Civil Engineering, University of Washington. 23 years of experience performing and managing the development of NSRs. Contribution: Co-author of NSR.

### ***Parsons***

Josephine Alido, Principal Planner. Bachelor of Science, Architecture, University of the Philippines and Masters in Planning, University of Southern California. 28 years of experience in CEQA documentation and processing. Contribution: Revised environmental document per City and Caltrans comments.

Joza M. Burnam, Senior Planner. Bachelor of Science, Environmental Sciences, University of California, Riverside. 9 years of air quality and noise experience. Contribution: Coordinated, assisted in preparation of, and reviewed NSR and Air Quality Study; contributing author of the draft environmental document; and review of the environmental document.

Monica Corpuz, Associate Planner. Master of Arts, Anthropology-Public Archaeology, California State University, Northridge. 3 years of environmental planning experience. Contribution: Author of Section 4(f) Report; coordinated, assisted in preparation of, and reviewed HPSR and HRER; reviewed ASR,

Paleontological Identification Report/Paleontological Evaluation Report; contributing author of the draft environmental document; and review of the environmental document.

Sidra Fatima, Associate Environmental Planner. Bachelor of Science, Urban and Regional Planning; Minor in Geographic Information Systems, California State Polytechnic University, Pomona. 2 years of planning experience. Contribution: Researched census data, created exhibits and assisted in preparation of Community Impact Assessment; contributing author of Section 4(f); contributing author of the draft environmental document; and review of the environmental document.

Ernie Figueroa, Principal Project Manager. Juris Doctorate, University of La Verne. 25 years of experience in project management and CEQA/NEPA document preparation oversight. Contribution: Peer review and quality assurance/quality control of the environmental document.

Melissa Gomez PE., Project Engineer. Bachelor of Science, Structural Engineering, University of California San Diego; MEng Civil & Environmental Engineering, Cornell University. 6 years of engineering experience. Contribution: Author of Noise Abatement Decision Report and Cost Estimates.

Emily Hoyt, Associate Planner. Bachelor of Arts, Urban Studies, Loyola Marymount University. 4 years of environmental planning experience. Contribution: Coordinated and assisted in preparation of the Community Impact Assessment, response to comments, and review of the environmental document.

Teak Kim. Bachelor of Science, Civil Engineering, Keimyung University, South Korea; Master of Science and PhD, Civil & Environmental Engineering, University of Louisville, Kentucky. 23 years of experience performing TNM 2.5 noise modeling, noise monitoring and writing NSRs. Contribution: Co-author of NSR.

Greg King, Senior Project Planner. Bachelor of Arts, History, University of California, Santa Barbara; Master of Arts, Public Historical Studies, University of California, Santa Barbara. 35 years of environmental planning experience. Contribution: Reviewed HPSR and contributed evaluations of properties for the HRER.



Liz Koos, Lead Technical Editor. 28 years of editing experience. Contribution: Technical Editor.

Jeffrey Lormand, Registered Landscape Architect (CA Number 3576). Masters in Landscape Architecture, University of Arizona. 10 years of visual impact assessment experience. Contribution: Review of the Visual Impact Assessment report.

Robert Malone, AICP, Project Planner. Bachelor of Science Management, Clemson University; Master of Regional Planning, University of Massachusetts, Amherst. 16 years of environmental planning experience. Contribution: Contributing author of the draft environmental document and review of the environmental document.

Eve Moir, Associate Planner. Bachelor of Arts, Political Science and Master of Urban Regional Planning, California State Polytechnic University, Pomona. More than 1 year of environmental planning experience. Contribution: Assisted in preparation of and reviewed Community Impact Assessment, HPSR, HRER; contributing author of Section 4(f); assisted with environmental document distribution production and review of the environmental document.

Arianne Preite, Principal Scientist. Master of Science, Environmental Science, Bachelor of Science, Biological Science, California State University, Fullerton. 16 years of environmental planning/biology experience. Contribution: Quality assurance/quality control review of Jurisdictional Delineation, Natural Environment Study, and biology section.

James Santos, Senior Planner. Bachelor of Arts, Urban Economics and Bachelor of Arts, English, University of Toronto. 10 years of experience in environmental and transportation planning. Contribution: Draft environmental document preparation and quality assurance/quality control.

Angela Schnapp, Principal Planner. Master of Science, Environmental Engineering and Bachelor of Science, Nuclear Engineering, University of Illinois Urbana-Champaign. 18 years of experience in environmental and transportation planning. Contribution: Draft environmental document preparation and quality assurance/quality control.

Veronica Seyde, Project Scientist. Certified Professional in Erosion and Sediment Control, Certified Professional in Storm Water Quality, Qualified SWPPP Developer. Master of Science, Environmental Studies, California State University, Fullerton. More than 25 years of experience in water quality sciences. Contribution: Preparer of sections of the Water Quality Technical Report.

Vincent Tong, Associate Planner. Bachelor of Science, Environmental Engineering, University of California, San Diego; Master of Urban and Regional Planning, University of California, Irvine. 1 year of environmental planning experience. Contribution: Assisted in preparation of Community Impact Report; contributing author of the draft environmental document.

Daniel Wagner, Professional Engineer, Senior Engineer. Bachelor of Science, Civil Engineering, San Diego State University. 9 years of roadway design, drainage design, and project management experience. Contribution: Engineering support, Section 4(f), and water quality.

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## **Chapter 6**   Distribution List

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### ***Federal Agencies***

Karin Cleary-Rose  
United States Department of the  
Interior  
Fish and Wildlife Service  
Ecological Services  
777 East Tahquitz Canyon Way  
Suite 208  
Palm Springs, CA 92262

Kaveh Sadeghzadeh, Director  
Public Affairs Division  
Natural Resources Conservation  
Service  
USDA Natural Resources  
Conservation Service  
Attn: Legislative and Public Affairs  
Division  
1400 Independence Avenue, SW  
Room 6121-S  
Washington, D.C. 20250

Veronica Li, Senior Project Manager  
Transportation and Special Projects  
Branch  
Los Angeles District Regulatory  
Division  
U.S. Army Corps of Engineers  
915 Wilshire Boulevard, Suite 930  
Los Angeles, CA 90017

Alexis Strauss,  
Environmental Review Office  
Communities and Ecosystems Division  
United States Environmental  
Protection Agency  
Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

### ***State Agencies***

Aaron Burton  
Branch Chief  
Caltrans District 8  
464 West Fourth Street  
6th Floor, MS 829  
San Bernardino, CA 92401-1400

Tay Dam  
Senior Transportation Engineer,  
District 8, 12 (State Program)  
FHWA  
650 Capital Mall, Suite 4-100  
Sacramento, CA 95814

Katy Sanchez  
Associate Government Program  
Analyst  
California Native American Heritage  
Commission  
1550 Harbor Boulevard, Room 100  
West Sacramento, CA 95691

Jeff Brandt  
Senior Environmental Scientist  
California Department of Fish and  
Wildlife  
Inland Deserts Region  
3602 Inland Empire Boulevard  
Suite C220  
Ontario, CA 91764

Gary Watts  
District Superintendent  
California Department of Parks and  
Recreation  
17801 Lake Perris Drive  
Perris, CA 92571

Director,  
Policy and Planning Division  
Public Utilities Commission  
Policy and Planning Division  
San Francisco Office  
505 Van Ness Avenue  
San Francisco, CA 94102

Ed Krusey  
Southern Division Lieutenant  
California Highway Patrol  
411 N. Central Avenue  
Glendale, CA 91203

John Lowrie, Acting Assistant Director  
Land Resource Protection  
California Department of  
Conservation, Division of Land  
Resource Protection  
801 K Street, MS 18-01  
Sacramento, CA 95814

Julianne Polanco  
State Historic Preservation Officer  
Office of State Historic Preservation  
1725 23<sup>rd</sup> Street, Suite 100  
Sacramento, CA 95816

***Regional Agencies***

Daniel Garcia  
Program Supervisor  
South Coast Air Quality Management  
District  
21865 Copley Drive  
Diamond Bar, CA 91765-4178

Art Yoon, Senior Regional Planner  
Southern California Association of  
Governments  
818 W. Seventh Street, 12<sup>th</sup> Floor  
Los Angeles, CA 90017

Mazin Kasey, Deputy Director,  
Transportation  
County of San Bernardino,  
Department of Public Works  
825 East Third Street  
San Bernardino, CA 92415-0835

Kevin Blakeslee, Director  
San Bernardino County  
Department of Public Works  
825 E. Third Street  
San Bernardino, CA 92415

Ray Wolfe  
Executive Director  
SBCTA/SBCOG  
1170 W. 3<sup>rd</sup> Street, 2<sup>nd</sup> Floor  
San Bernardino, CA 92410-1715

Wanda Cross  
Chief of Regional Planning Programs  
Regional Water Quality Control Board  
Region 8  
3737 Main Street, Suite 500  
Riverside, CA 92501

Terri Rahhal, Director  
County of San Bernardino,  
Land Use Services  
385 North Arrowhead Avenue  
San Bernardino, CA 92415-0182

David Doublet, Deputy Director,  
Flood Control District  
County of San Bernardino,  
Department of Public Works  
825 East Third Street  
San Bernardino, CA 92415-0835

***Local Agencies and Organizations***

Candyce Burnett, Planning Director,  
Construction and Development  
Department  
City of Rancho Cucamonga  
10500 Civic Center Drive  
Rancho Cucamonga, CA 91730

Michael Diaz, Planning Manager  
Community Development Department  
City of Montclair  
5111 Benito Street  
Montclair, CA 91763

James Q. Hammond, Ed.D.  
Superintendent  
Ontario-Montclair School District  
950 West D Street  
Ontario, CA 91762

Jason Welday, PE, TE  
Engineering Services Director  
City of Rancho Cucamonga  
10500 Civic Center Drive  
Rancho Cucamonga, CA 91729

Phil Hillman, Chief Business Official  
Ontario-Montclair School District  
950 West D Street  
Ontario, CA 91762

Harold Sullins  
Assistant Superintendent  
Upland Unified School District  
390 North Euclid Avenue  
Upland, CA 91786

Petrina Delman  
Ontario Heritage Society  
1007 N. Euclid Avenue  
Ontario, CA 91762

Michael Polland  
Development Services Director  
City of Upland  
460 North Euclid Avenue  
Upland, CA 91786

Janet Temkin, Superintendent  
Cucamonga School District  
8776 Archibald Avenue  
Rancho Cucamonga, CA 91730

Mathew Holton, Superintendent  
Chaffey Joint Union High School  
District  
211 West Fifth Street  
Ontario, CA 91762

### ***General Public***

Mayra Gomez  
932 E. Princeton Street  
Ontario, CA 91764

Bruce Wee  
1245 E. 4<sup>th</sup> Street  
Ontario, CA 91764

Terry Moore  
1205 East D Street  
Ontario, CA 91764

John Hernandez  
4732 Clair Street  
Ontario, CA 91762

Josefina Rodriguez  
719 North Alameda Avenue  
Ontario, CA 91764

Roberto Rosas  
510 North Grove Avenue  
Ontario, CA 91764

Elaine Naranjo  
849 East Princeton Street  
Ontario, CA 91764

Raul Naranjo  
849 East Princeton Street  
Ontario, CA 91764

Alex Duran  
1062 East Princeton Street  
Ontario, CA 91764

Petrina Delman  
1007 North Euclid Avenue  
Ontario, CA 91762

Dr. Shay Salehrbai  
1440 East 4<sup>th</sup> Street  
Ontario, CA 91764

Moises Redol  
416 North Grove Avenue  
Ontario, CA 91764

Danny Villanueva  
203 North Grove Avenue  
Ontario, CA 91764

David F. Stobaugh  
701 Fifth Avenue, Suite 6550  
Seattle, Washington 98104

Margaret Vermillion  
1355 North Council Avenue  
Ontario, CA 91764

Richard Martinez  
755 North Alameda Avenue  
Ontario, CA 91764

Paramjit Sohi  
1155 North Grove Avenue  
Ontario, CA 91764



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